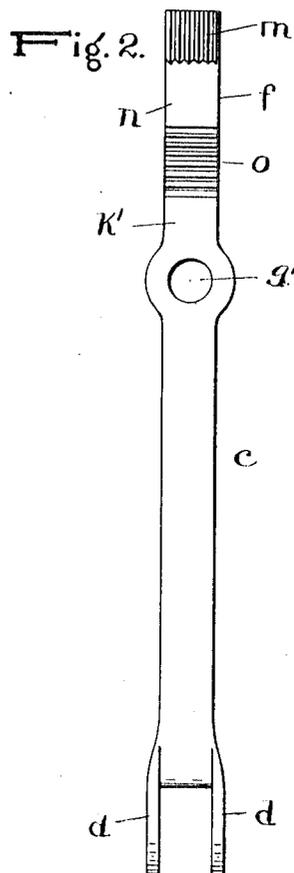
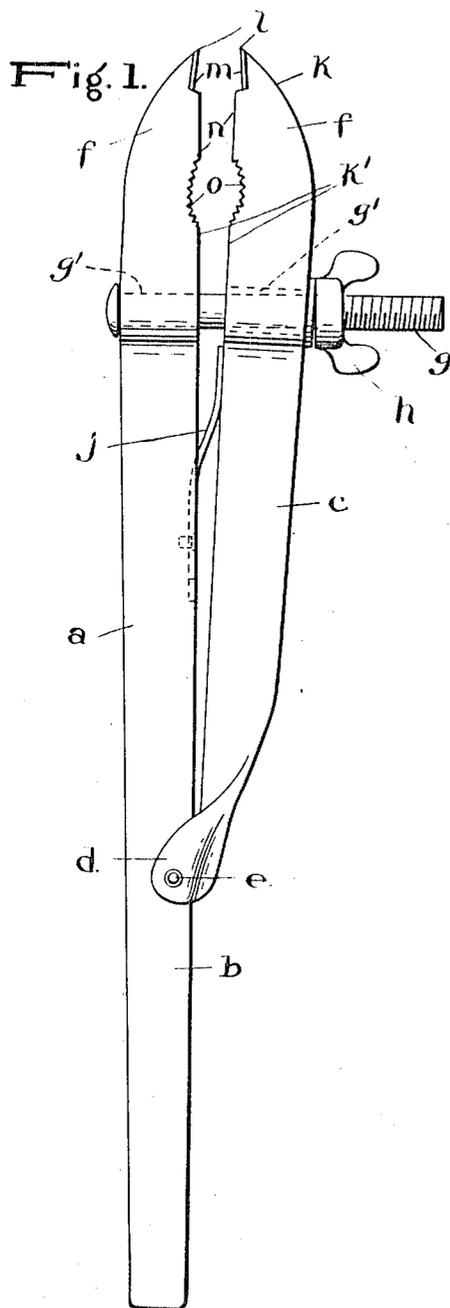


F. L. WALKER.
 COMBINED WRENCH AND VISE.
 APPLICATION FILED NOV. 30, 1910.

1,105,473.

Patented July 28, 1914.



Witnesses
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UNITED STATES PATENT OFFICE.

FRED L. WALKER, OF BURLINGTON, IOWA.

COMBINED WRENCH AND VISE.

1,105,473.

Specification of Letters Patent.

Patented July 28, 1914.

Application filed November 30, 1910. Serial No. 594,966.

To all whom it may concern:

Be it known that I, FRED L. WALKER, a citizen of the United States, resident of Burlington, in the county of Des Moines and State of Iowa, have made a certain new and useful Invention in Combined Wrenches and Vises; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a side view of the invention. Fig. 2 is a detail end view taken from the inner side of the movable member.

The invention has relation to a tool or bolt holder primarily adapted for holding the round head of a carriage bolt so that the nut thereof may be removed by the application of a wrench thereto.

Other objects and advantages will hereinafter appear.

In the accompanying drawings, illustrating the invention, the letter *a*, designates the main or body member of the tool, said member being entirely straight throughout its length, and having a prismatic handle end *b*, in line therewith and adapted at its end for the stroke of a hammer.

c, is the pivotal member of the tool, also entirely straight throughout its length and having end lugs *d*, *d*, embracing the body member and pivotally connected therewith by a pivot bolt *e*, in line with the body member and close to the pivotal member.

Both the body member and the pivoted member are formed with jaw ends *f*, *f*, of similar character, adapted for adjustment with relation to each other by means of a threaded bolt *g*, passing through perforations *g'*, *g'*, of the two members and having a thumbscrew nut *h*, engaging the threads of said bolt.

A spring *j*, may be interposed between the two members to automatically expand the same with relation to each other when the thumb nut is unscrewed.

Both members of the tool are provided with beveled outer lateral faces, and said members when adjusted together, are designed to have their inner lateral faces substantially in contact. Both members have at their ends, rectangular straight inward-

offset, longitudinally-parallel toothed jaw faces *m*, *m*, in substantial alinement with the longitudinal axes of the straight tool members, and located within and having an oblique relation to the inner lateral faces of said members, and meeting the beveled outer lateral faces of the members in acute angle edges *7*, *7*. In this way the sharp acute angle edges are adapted to be driven into the wood around a sunken carriage bolt head, the straight parallel-toothed rectangular jaw faces *m*, *m*, providing for an efficient grip upon the bolt head so that it may be readily held while the nut at the end of the bolt is being turned. The jaw faces *m*, *m*, being in substantial alinement with the axes of the straight tool members, the hammer impulse in driving will be communicated in a direct manner to the acute angle edges.

The handle of the tool is adapted to be pounded with a hammer at its end, to sink the acute ends of the jaws and the jaw faces *m*, *m*, in the wood in case the bolt head is even with or sunk into the wood.

The jaws *f*, *f*, have concave transversely-toothed jaw faces *o*, *o*, located within the inner lateral faces of the two members below the straight toothed jaw faces referred to, for use as gas pliers or for a pipe wrench or for other purposes, and between the concave-toothed jaw faces and the straight toothed jaw faces are located plane portions *n*, *n*, which are adapted for convenient use as a wrench for ordinary nuts, and are located in line with the inner lateral faces of the tool members.

When the slightly tapered prismatic shank or handle of the body member of the tool is seated upright in a polygonal or squared socket to hold the tool firmly in position, it may be conveniently used as a vise, to hold work for sawing, planing or other purpose.

The members of the tool, being straight and each of nearly the same dimensions throughout, may be conveniently made of bar metal stock, and the application of a hammer to the end of the shank or handle will act to sink the acute jaw ends and the straight longitudinally toothed jaw faces into engagement with a sunken nut or carriage-bolt head carrying the carriage bolt, the impulse of the hammer stroke being directly transmitted through the straight members.

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Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

5 In a wrench, a straight body member, and a straight supplementary member having an offset end provided with a direct pivotal connection with the body member, both members being adapted, when adjusted together, to have their inner lateral faces substantially in contact, said members having at their ends beveled outer lateral faces, and substantially straight inward-offset, longitudinal parallel-toothed jaw faces in substantial alinement with the longitudinal axes
10 of the members and located within and hav-

ing an oblique relation to the inner lateral faces of the members, and meeting said beveled outer lateral faces in sharp acute-angle edges, and stop shoulders at the inner ends of said jaw faces between the same and the inner lateral faces of the members, and means for adjusting the members with relation to each other. 20

In testimony whereof I affix my signature in presence of two witnesses.

FRED L. WALKER.

Witnesses:

H. F. KUHLEMEIER,
C. H. MOHLAND.
