

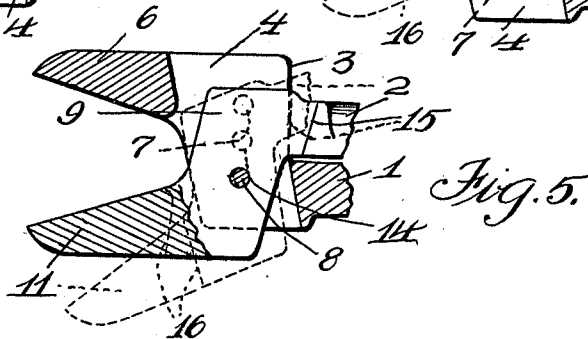
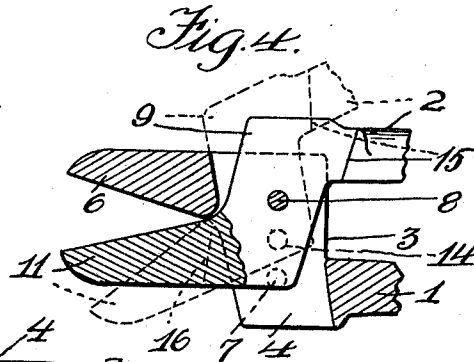
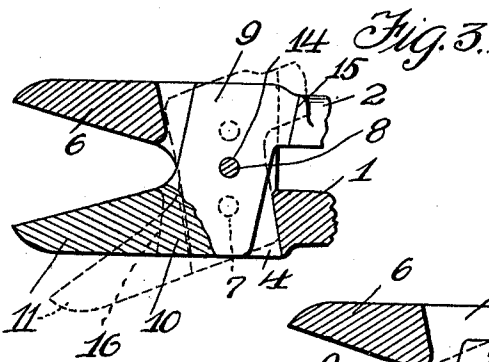
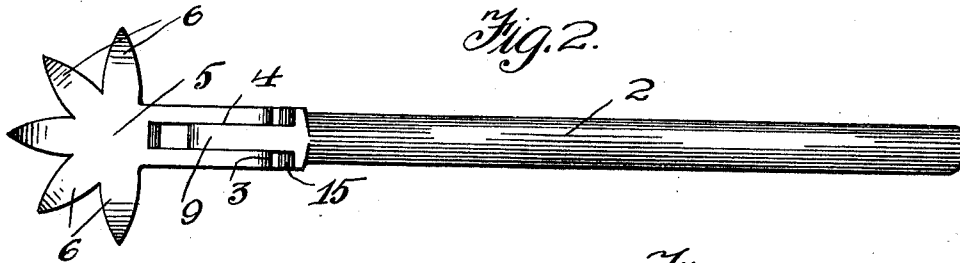
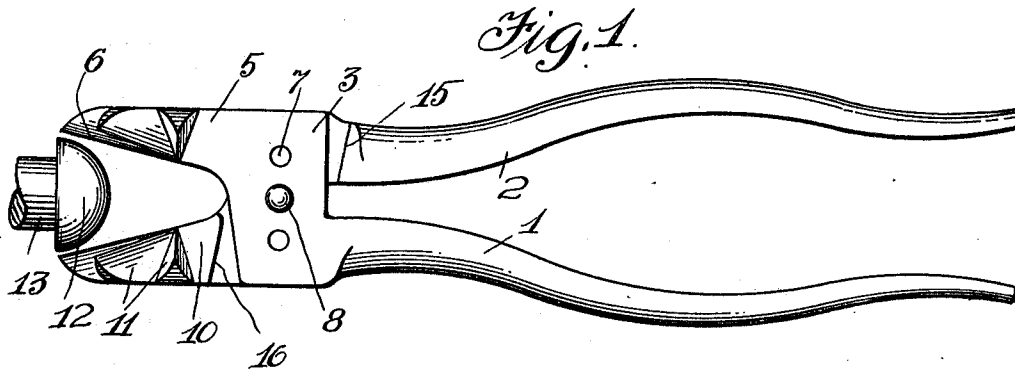
J. W. GIFFEN.

WRENCH.

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993,052.

Patented May 23, 1911.



WITNESSES

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JOHN W. GIFFEN, OF GREENSBURG, PENNSYLVANIA.

WRENCH.

993,052.

Specification of Letters Patent.

Patented May 23, 1911.

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To all whom it may concern:

Be it known that I, JOHN W. GIFFEN, a citizen of the United States of America, residing at Greensburg, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to wrenches, and the object of my invention is to provide a wrench or pair of pliers for gripping the heads of bolts, rods or similar structures to hold a bolt stationary while a nut is being removed from the same.

My wrench is constructed upon the principle of a pair of pliers and provision is made for adjusting the jaws of the pliers whereby small or large heads can be easily gripped. The jaws of the pliers are branched to provide auxiliary gripping jaws that will permit of the wrench being used at an angle to the bolt to be gripped, thus increasing the usefulness of the wrench and facilitating the operation of gripping the bolt in a small space where an ordinary pair of pliers could not be used.

My invention will be hereinafter specifically described and then claimed, and reference will now be had to the drawing forming a part of this specification, wherein there is illustrated a preferred embodiment of the invention, but it is to be understood that the structural elements thereof can be varied or changed, as to the size, shape and manner of assemblage without departing from the spirit of the invention.

In the drawing:—Figure 1 is a side elevation of a wrench or pair of pliers constructed in accordance with my invention, Fig. 2 is a plan of the same, Fig. 3 is a partial longitudinal sectional view of a portion of the wrench showing the gripping jaws thereof adjusted for gripping a medium size piece of work, Fig. 4 is a similar view with the jaws adjusted for a small piece of work, and Fig. 5 is a similar view showing the jaws adjusted for a large piece of work.

A wrench constructed in accordance with my invention comprises two handles or shanks 1 and 2. The forward end of the handle 1 is provided with a right angular housing 3 having a slot 4 formed therein, and the outer end of the housing 3 is provided with a forwardly extending jaw 5,

said jaw being cut-away to form a plurality of radially disposed auxiliary gripping jaws or members 6, each auxiliary jaw or member being V-shaped in cross section and gradually tapering to the outer end of said jaw. The opposing walls of the housing 3 are provided with oppositely disposed and transversely alining openings 7 and mounted in one of said openings is a detachable pivot pin 8, the purpose of which will presently appear.

The handle 2 is provided at its forward end with a right angular web 9 having its outer end terminate in a jaw 10 similar to the jaw 5. The jaw 10 is provided with a plurality of radially disposed auxiliary jaws 11, V-shaped in cross section, with the apex of each auxiliary jaw confronting the apex of each of the jaws 6, whereby the sharp edges of the jaws 6 and 11 can cooperate in gripping the head 12 of a bolt or rod 13. The web 9 is provided with an opening 14 adapted to receive the transverse pivot pin 8. The web 9 is of less thickness than the handle 2 whereby at the junction of the web with the handle the shoulders 15 will be provided. The web 9 is of less thickness than the jaw 10 whereby at the junction of the jaw 10 with the web 9, the shoulders 16 will be provided. The shoulders 15 engage the rear edge of the housing 3 and the shoulders 16 engage the forward edge of said housing when the jaws are open, these shoulders limiting the movement of said jaws irrespective of the position of the pin 8.

The jaws have beveled working faces and the jaws extend at right angles with respect to the pivot. The jaw 5 also extends at right angles with respect to the housing 3 while the jaw 10 extends at right angles with respect to the web 9.

Either set of the confronting auxiliary jaws 6 and 11 can be used for gripping the head 12, consequently the wrench can be used in the position in longitudinal alinement with the bolt or rod 13 or at an angle of forty-five or ninety degrees, thus permitting of the wrench being used in a small space where an ordinary wrench or pair of pliers could not be placed.

The handle 2 and the web 9 are made of separate pieces so that the tool can be readily assembled and in this connection it will be stated that after the web 9 is placed in the housing the handle 2 is welded or otherwise connected to the web.

The wrench is made of strong and durable metal with the auxiliary and gripping jaws thereof hardened whereby a firm purchase can be obtained upon the head of a bolt or
5 rod.

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

1. A wrench comprising a pair of handles, a slotted housing carried by one of the handles, a jaw projecting from the housing and having a beveled working face, said jaw cut-away to provide a set of radially disposed gripping members each V-shaped in cross-section, a web projecting from the other of
10 said handles and extending through said housing, means for adjustably pivoting the web to the housing, a jaw carried by said web and having a beveled working face, opposing the other jaw having a beveled working face and cut-away to provide a set of
15 radially disposed gripping members, each V-shaped in cross-section and opposing the other set of members, said jaws disposed at

right angles with respect to said web and housing. 25

2. A wrench comprising a pair of handles, a slotted housing carried by one of the handles, a web projecting from the other of said handles and extending through said housing, means for pivoting the web to the housing, complementary jaws carried by said housing and said web, each of said jaws cut-away to provide a radially-disposed set of gripping members, each substantially V-shaped in cross-section, the apices of the
20 gripping members of one set opposing the apices of the gripping members of the other set, said jaws disposed at right angles with respect to said web and housing. 30 35

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

JOHN W. GIFFEN.

Witnesses:

JAMES C. LAUFFER,
ALICE G. KIMMELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
