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J. L. CHRISTLIEB

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PLIERS

Filed Feb. 6, 1924

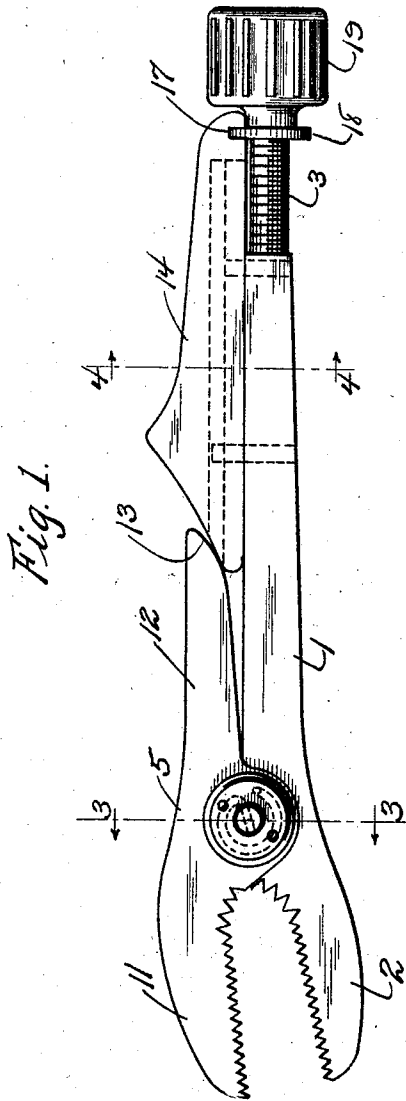
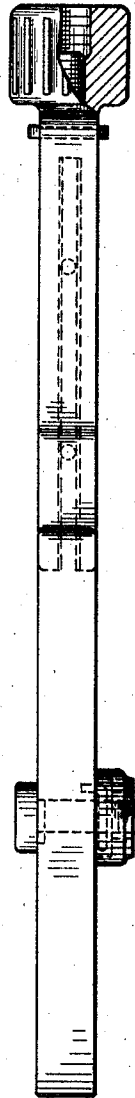
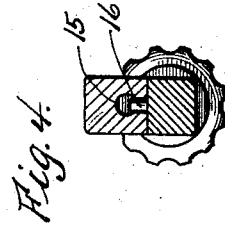
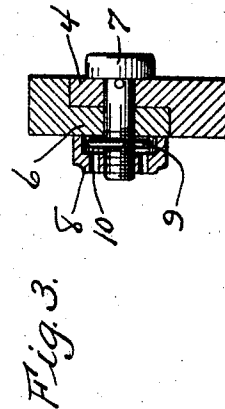


Fig. 2.



WITNESSES

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JOSEPH L. CHRISTLIEB, OF GRANTS PASS, OREGON.

PLIERS.

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To all whom it may concern:

Be it known that I, JOSEPH L. CHRISTLIEB, a citizen of the United States, residing at Grants Pass, in the county of Josephine and State of Oregon, have invented certain new and useful Improvements in Pliers, of which the following is a specification.

The present invention relates to tools generally and more particularly to pliers, and has for its principal object to provide means for holding the gripping elements thereof in firm engagement with an object.

Another important object of the invention is to provide a tool of this nature utilizing a wedging action for holding the gripping members in engagement with an object.

A still further important object of the invention is to provide a tool of this nature having a simple and efficient construction which is reliable, durable, comparatively inexpensive to manufacture, capable of ready manipulation, and otherwise well adapted to the purpose for which it is designed.

With the above and numerous other objects in view as will appear as the description progresses, the invention resides in certain novel features of construction, and in the combination and arrangement of parts as will be hereinafter more fully described and claimed.

In the drawing:

Figure 1 is a side elevation of the tool embodying my invention.

Fig. 2 is an edge elevation thereof, a portion being shown in section, and

Figs. 3 and 4 are transverse sections taken through the tool substantially on the lines 3—3 and 4—4 of Figure 1 respectively looking in the direction of the respective arrows,

Referring to the drawing in detail it will be seen that the tool embodies a shank 1 which is formed at one end with a rigid jaw 2, and a stud 3 is securely fixed at the other end of said shank. An apertured reduced portion 4 extends from one edge of the shank adjacent jaw 2 and a movable member 5 is also provided with an apertured reduced portion 6 in registry with the reduced portion 4 so that a pin or bolt 7 may be passed therethrough. A nut 8 is threadedly engaged with this pin or bolt 7 and the inner end thereof is recessed for housing a spring element 9, which tends to hold the two reduced portions 4 and 6 together. The nut is also provided with orifices 10 for lubricating purposes.

The movable member 5 includes a jaw 11 confronting the jaw 2, and an integral extension 12 the inner edge of which is curved as at 13 for a purpose which will be hereinafter more fully described.

A wedge member 14 is slidably mounted on the shank 1 so as to move longitudinally along the edge thereof which is disposed adjacent the movable member 5. The preferred manner of mounting this wedge is to construct one edge with a groove 15 for the reception of pins 16 projecting from the shank 1. As is seen to advantage in Figure 1 this wedge 14 extends over the stud 3 and is provided with a transversely extending groove 17 engageable by a ring or annular collar 18 provided on a knurled knob 19 which is threadedly mounted on the stud 3. By rotating this knob 19 the wedge 14 may be moved along the shank 1 so as to slidably engage between the shank 1 and the extension 12 of the pivoted jaw member. When the knob 19 is screwed onto the stud 3 the wedge acts to move the extension 12 away from the shank 1, thereby moving the jaw 11 toward the jaw 2. It will thus be seen that an object may be firmly gripped between these two jaws and the tool used as an ordinary pair of pliers or as a wrench.

While the preferred embodiment of my invention has been described in detail, it will be understood that I do not wish to be limited to the particular construction set forth, its various changes in the form, proportions, and arrangement of parts, and in the details of constructions may be resorted to without departing from the spirit and scope of the invention as hereinafter claimed or destroying any of its advantages.

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

1. A tool of the class described including a shank formed with a rigid jaw at one end thereof, a stud securely fixed at the other end of said shank, a jaw pivoted to the shank and confronting the first-named jaw, an extension formed integral with said pivoted jaw, a wedge member slidable longitudinally of and along one edge of the shank for slidable engagement between the shank and the extension of the pivoted jaw, said wedge member being provided with a transverse groove, a threaded knob engaging the stud, said knob having an annular collar engaging the transverse groove of the wedge member whereby upon rotation of the knob

the wedge member may be moved along the shank towards the jaws for swinging the extension of the pivoted jaw outwardly and thereby forcing the pivoted jaw towards the
5 jaw of the shank.

2. A tool of the class described including a shank formed with a rigid jaw at one end thereof, a stud securely fixed at the other end of said shank, a jaw pivoted to the shank
10 and confronting the first-named jaw, an extension formed integral with said pivoted jaw, a wedge member slidable longitudinally of and along one edge of the shank for slidable engagement between the shank and the
15 extension of the pivoted jaw, said wedge member being provided with a transverse groove, a threaded knob engaging the stud, said knob having an annular collar engaging

the transverse groove of the wedge member whereby upon rotation of the knob the
20 wedge member may be moved along the shank towards the jaws for swinging the extension of the pivoted jaw outwardly and thereby forcing the pivoted jaw towards the
25 jaw of the shank, said wedge member being provided with a longitudinal groove, and pins rigid with and projecting laterally from the shank into the longitudinal groove of the wedge member for guiding the latter
30 in its movements on the shank.

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

JOSEPH L. CHRISTLIEB.

Witnesses:

CHAS. CISLEY,
CAROLINE BEST.