J. E. FISHER.

WRENCH ATTACHMENT.

APPLICATION FILED AUG. 31, 1920.

1,412,205. Patented Apr. 11, 1922.

FIG. 1.

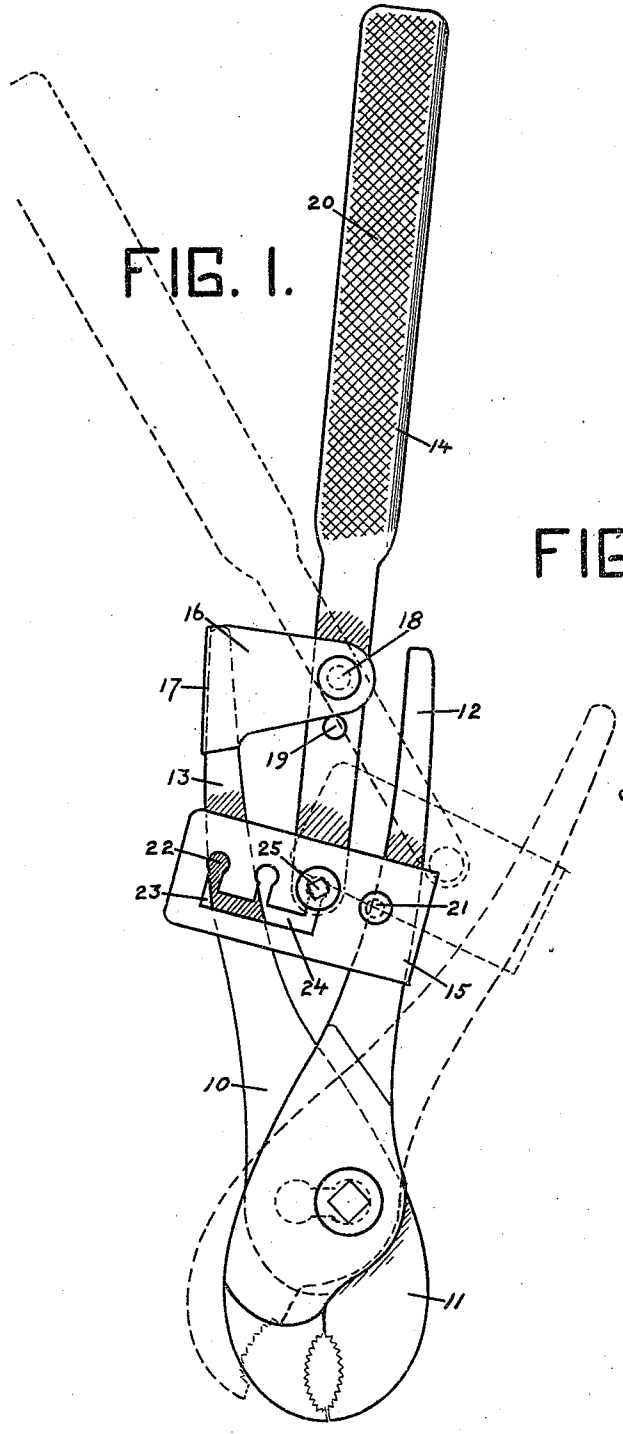


FIG. 2.

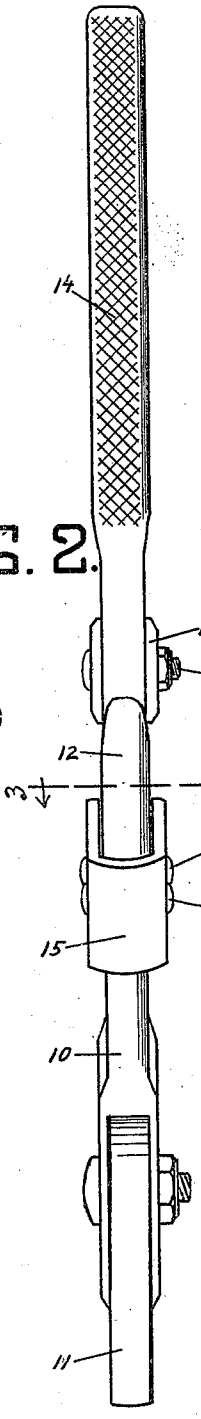


FIG. 3.

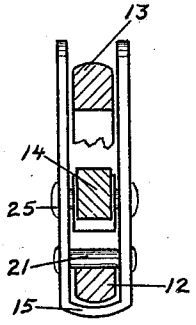
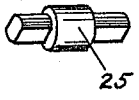


FIG. 4.



INVENTOR

Joseph E Fisher

UNITED STATES PATENT OFFICE.

JOSEPH E. FISHER, OF OCEANSIDE, CALIFORNIA.

WRENCH ATTACHMENT.

1,412,205. Specification of Letters Patent. Patented Apr. 11, 1922.

Application filed August 31, 1920. Serial No. 407,134.

To all whom it may concern:

Be it known that I, JOSEPH E. FISHER, a citizen of the United States of America, residing at Oceanside, in the county of San Diego and State of California, have invented new and useful Improvements in Wrench Attachments, of which the following is a specification.

The object in view is to provide a simple and efficient wrench for general use and more especially adapted for work in connection with machine shops, automobile engines and the like, and more especially to provide means for increasing the range or scope of utility of tools of the pliers type by giving an increased leverage with means of adjustment to suit the conditions under which the device is to be used; and with these objects in view the invention consists in the construction and combination of parts of which a preferred embodiment is shown in the drawing, wherein:

Figure 1 is a view of a device constructed in the form of an attachment applied in the operative position to a tool of the gas pliers type, the same being shown in full lines in its closed and in dotted lines in its open position.

Figure 2 is an edge view of the same.

Figure 3 is a detail section on the plane indicated by the line 3—3 of Figure 2.

Figure 4 is a detail view of one end of the operating lever to show the flat sided pivot pin with which the same is provided.

The device embodying the invention is shown in the drawings as applied to a tool of the gas pliers type as shown at 10, said tool having the usual jaws 11 and handles 12 and 13, and the attachment consists essentially of an operating lever 14 having terminal and intermediate means for engagement respectively with the handles of the pliers, the terminal means in the construction illustrated consisting of a yoke 15 adapted for example for engagement with the handle 12, and the intermediate means consisting of a bracket 16 for engagement with or attachment to the handle 13.

As illustrated the bracket 16 is of a looped form designed at the closed end of the loop to form a seat 17 for the reception of the terminal of the handle 13 of the pliers, but it will be understood that other means of attachment of the bracket to the pliers' handle may be adapted or the same may be formed as an extension or rigid part of said handle. Said bracket serves as the means for supporting the fulcrum pin 18 of the operating lever, the latter being extended between the parallel sides of the bracket and having a plurality of openings 19 for selective engagement by the fulcrum pin 18 so as to provide for a variation in the leverage of the operating member. The lever is preferably provided with a suitable sheet and roughened grip portion 20.

The means of connection of the terminal of the operating lever with the handle 12 of the pliers consists in the construction illustrated of a yoke of looped form as shown in detail in Figure 3, the looped end of the same engaging the handle 12 and being held against accidental displacement by transverse retaining pin 21, and the sides or arms of the loop are provided with transversely registering seats 22, preferably having reduced inlet slots 23 in communication with a longitudinal connecting slot 24, said seats being adapted for engagement by the terminal pivot pin 25 carried by the lever of which the extremity fits between the sides or arms of the yoke, said pin being transversely flattened or reduced to adapt it to pass through the inlet slots or necks 23 of the seats and into the longitudinal communicating slot 24, so that the point of connection of the operating lever with the yoke may be varied to afford any desired opening of the jaws of the pliers. Obviously the flattened pivot pin 25 may be disengaged from a seat and moved into the communicating slot only when the parts are in the prescribed relative position. When the tool is in use the pin is efficiently retained with the seat with which it is engaged so as to provide against accidental displacement.

With the construction described it will be obvious that the attachment may be applied to gas or other pliers when required while permitting of the ordinary use of such pliers under other conditions, and that when so applied the attachment affords an increased leverage whereby round or greasy objects frequently in machine work may readily and efficiently be grasped and turned, and the utility of the device with the attachment will be particularly apparent in connection with bolts and nuts which have become worn or rounded and perhaps jammed or rusted in place so as to resist the efforts to remove or loosen the same when applied through the ordinary agencies. The leverage of the op-

erating member moreover may be varied to suit the conditions under which the work is to be performed and it is obxious that the attachment may be applied to the pliers merely by a hand-wise relative movement thereof sufficient to slip the looped portions of the yoke and bracket into engaging relation respectively with the handles of the pliers.

Having described the invention, what I claim as new and useful is:—

1. An operating attachment for gas pliers having a lever and means for intermediately fulcruming the same to one of the handles of the pliers, and a looped yoke for engaging the other handle of the pliers, said yoke being provided with a plurality of pivot pin seats having reduced neck portions in communication with a connecting slot, and said lever having a transversely flattened pivot pin for selective engagement with said seats.

2. An operating attachment for gas pliers having a lever, a bracket adapted for engagement with one handle of the pliers and having said lever fulcrumed at an intermediate point thereto, and a looped yoke for engagement with the other handle of said pliers and provided with a transverse retaining pin for securing the looped end of said yoke in engagement with the handle, said yoke being provided in its sides or arms with a plurality of connected transversely registering seats, and the lever being terminally provided with a pivot pin for selective engagement with said seats.

In testimony whereof he affixes his signature.

JOSEPH E. FISHER.