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M. E. BRAGUE

2,541,196

CHUCK WRENCH

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Fig. 1.

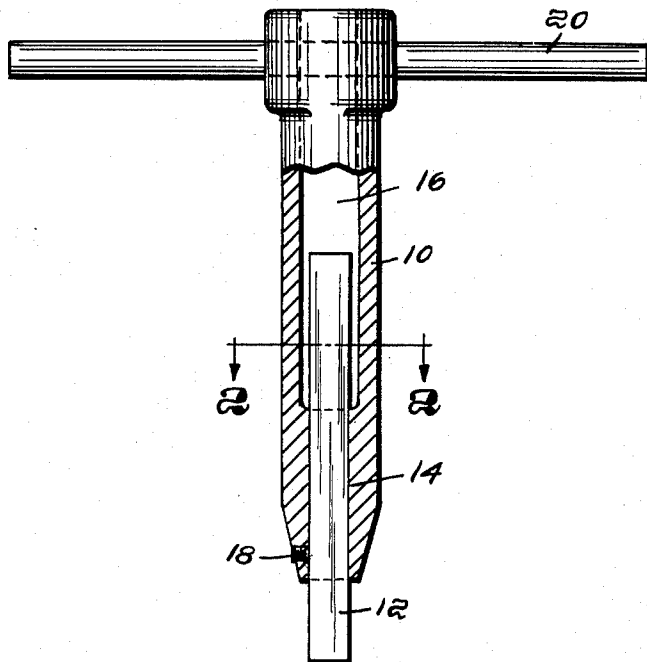


Fig. 2.

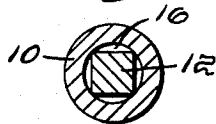
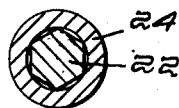


Fig. 3.



Inventor:
Milford E. Bague,
By **Kenway, Tenney, Witter & Hildreth**
Attorneys

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CHUCK WRENCH

Milford E. Brague, Wellsville, N. Y.

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2 Claims. (Cl. 279—9)

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This invention relates to a new and improved chuck wrench particularly adapted for use by machinists. The wrench comprises a work engaging tool or driver and a body portion for receiving and supporting the driver in working position, the driver being a separate piece or part and being constructed independently of the body and adjustable and replaceable in the body. This independence permits the driver to be manufactured, machined and hardened independently of the body and furthermore eliminates the necessity for discarding the entire wrench when one part is broken. The driver of my improved wrench extends in a straight line and is uniform in cross section throughout its entire length thereby permitting full axial adjustment of the driver in the body including adjustment forwardly to provide a new work engaging end whenever the forward end becomes broken, thereby effecting easy repair and considerable savings.

A further feature of my invention relates to a novel wrench body having a two-part driver receiving and supporting bore extending axially therein from its forward end. The forward portion of the bore is of polygonal cross section corresponding to the driver and the rear portion is circular in cross section and of a diameter corresponding to the maximum diameter of the driver. The forward portion of the bore thus serves non-rotatably to engage the driver and the rearward portion gives full lateral support to its portion of the driver, thereby providing ample length for a relatively long driver. It will furthermore be apparent that the body as thus constructed can be conveniently bored to provide the rearward portion of the opening and the forward portion can be conveniently broached to the desired shape.

These and other features of the invention will be best understood and appreciated from the following description of preferred embodiments thereof selected for purposes of illustration and shown in the accompanying drawings in which,

Fig. 1 is an elevation of my improved chuck wrench, partially in longitudinal section,

Fig. 2 is a cross sectional view taken on line 2—2 of Fig. 1, and

Fig. 3 is a cross sectional view of a modified construction.

In the drawing 10 indicates the body portion of the wrench and 12 indicates the driver. A driver receiving bore extends axially through the body. The forward portion 14 of the bore is square in cross section corresponding to that of the driver and the remaining portion 16 is cir-

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cular in cross section and of a diameter corresponding to the maximum diameter of the driver. A set screw 18 is provided in the forward end of the body for engaging and securing the driver. A rod 20 extending transversely through the rear end portion of the body provides a manipulating handle.

It will now be apparent that my improved wrench embodies two independent elements 10 and 12 adapted to be readily assembled in a novel relation providing a superior chuck wrench. The driver extends in a straight line and is of uniform cross section throughout its entire length to fit the bore 14. The driver can be constructed and tempered independently of the body and if the work engaging end breaks the operator merely releases the set screw 18, squares off the broken end and replaces the driver to the desired working position. The bore 14 together with the set screw 20 firmly supports the driver non-rotatably and the rearward portion of the driver disposed within the bore 16 is given full lateral support at the corners of the driver.

It will be apparent that the driver can be of any desired cross sectional shape, as the hexagonal driver 22 shown in a body 24 in Fig. 3. It will also be understood that my improved wrench is adapted for use in many tools such as a screw driver, drill bit, etc., all of which can be made to fit the body like the driver 12.

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

1. A chuck wrench comprising an elongated body having an axially disposed opening extending therein rearwardly from its forward end, a forward end portion of said opening being of polygonal cross section and the portion rearwardly thereof being of circular cross section, an elongated driver disposed within said polygonal portion of the opening and projecting beyond both ends thereof, the driver being of a cross sectional shape and size closely and non-rotatably fitting said polygonal portion of the opening and of a maximum diameter substantially equal to the diameter of the circular portion of the opening, means for securing the driver against longitudinal movement in the opening, and a turning handle on the rear end of said body.

2. A chuck wrench comprising an elongated body having an axially disposed opening there-through polygonal in cross section at its forward end and of a larger circular cross sectional area rearwardly thereof, an elongated driver disposed within the opening and projecting outwardly be-

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yond its forward end, the driver being straight throughout its length and of a uniform cross sectional shape and size throughout its length closely and non-rotatably to fit said polygonal portion of the opening, a set screw threaded into the body and into holding contact with the driver at the forward end of the body in opposed relation to an oppositely disposed driver engaging wall of the opening, and a turning handle on the rear end of the body.

MILFORD E. BRAGUE.

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