Sept. 23, 1924.

1,509,258

J. A. REISER

DUPLEX WRENCH

Filed Feb. 10. 1923

Fig. 1.

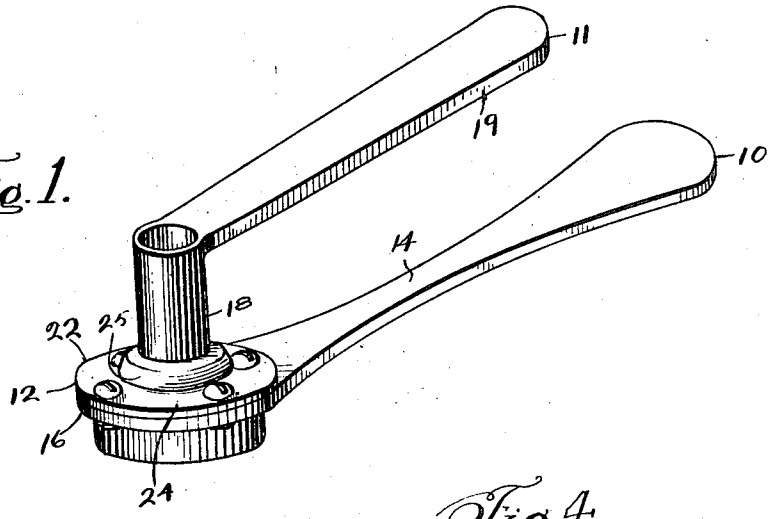


Fig. 4.

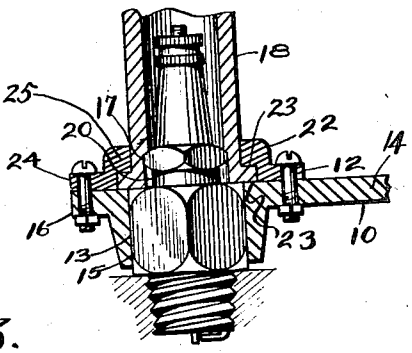


Fig. 2.

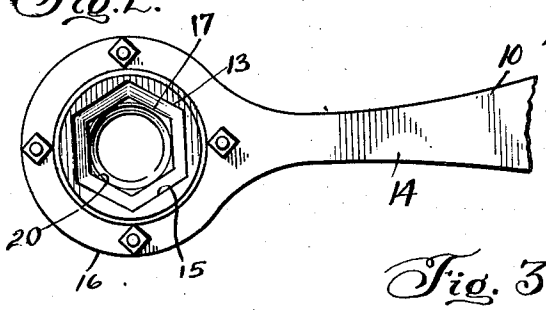
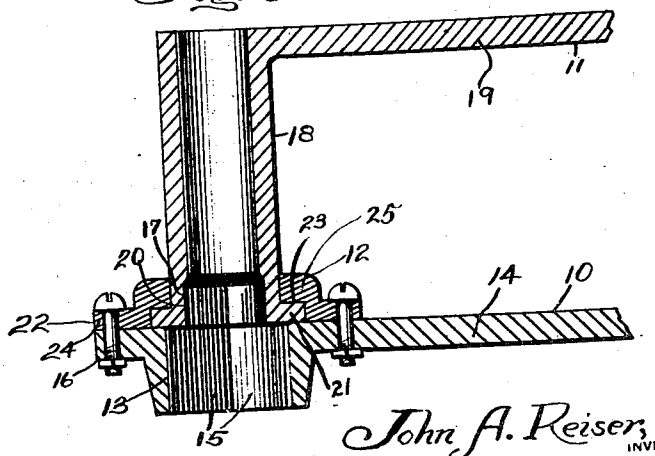


Fig. 3.



John A. Reiser, INVENTOR.

BY Victor J. Evans.

ATTORNEY

WITNESS: J. B. White.

Patented Sept. 23, 1924. 1,509,258

UNITED STATES PATENT OFFICE.

JOHN A. REISER, OF PORT JERVIS, NEW YORK.

DUPLEX WRENCH.

Application filed February 10, 1923. Serial No. 618,333.

To all whom it may concern:

Be it known that I, JOHN A. REISER, a citizen of the United States, residing at Port Jervis, in the county of Orange and State of New York, have invented new and useful Improvements in Duplex Wrenches, of which the following is a specification.

This invention relates to duplex wrenches.

Some of the objects of the present invention are: to produce a wrench having a holding unit and a turnable unit for holding a part of a thing against turning while turning or unscrewing a second part of the same thing; to produce a duplex wrench which is especially adapted for use in repairing, applying or replacing spark plugs and one which will obviate the breaking of the porcelain of the spark plug; to produce a simple and inexpensive article of the character mentioned; and with these and other objects in view the invention resides in the particular provision, construction and the relative disposition of parts hereinafter fully described and illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of the wrench of the present invention.

Figure 2 is a bottom plan view.

Figure 3 is a central longitudinal sectional view.

Figure 4 is a sectional view similar to that shown in Figure 3 and showing the application of the wrench to the parts of a spark plug.

Referring now more particularly to the several views of the drawing, it will be apparent that the wrench of the present invention is a duplex wrench in that it comprises two units; a holding unit, and a turnable unit. It will at once be obvious that either unit may be the holding unit and either unit may be the turnable unit. However, as shown in the drawing and as described hereinafter 10 designates the holding unit and 11 designates the turnable unit. Means 12 is employed for turnably and detachably connecting the units 10 and 11 together. The holding unit 10 as constructed has a nut-engaging-portion 13 and a handle 14 extending laterally therefrom and integral therewith or otherwise attached thereto. The nut-engaging-portion 13 has "flats" 15, which, in the present instance are six in number and so disposed as to conform to a hexagonal nut. The nut-engaging-portion 13 has a flange 16. The turnable unit 11 as constructed has a nut-engaging-portion 17, a tubular portion 18, and a handle 19, the latter extending laterally from the tubular portion and integral therewith or other wise attached thereto. The tubular portion 18 is in axial alinement with the nut-engaging-portion 17, and is integral therewith or otherwise attached thereto. The nut-engaging-portion 17 has "flats" 20, which, in the present instance are six in number and so disposed as to conform to a hexagonal nut. The nut-engaging-portion 17 has a flange 21. As before stated the units 10 and 11 are turnably and detachably connected together through the medium of a collar 22. The collar 22 is provided with an outwardly extending recess 23 formed between its attaching portion 24 and the flange 25 as shown in Figure 3 of the drawings. The collar 22 accommodates the tubular portion 18 in the application of the collar. Securing elements such as small screw-bolts are employed for effecting the attachment of the collar 22 to the flange 16 of the unit 10. In the application of the collar 22 the flange 21 of the unit 11 is disposed in the recess 23 and the flange 25 overlies the flange 21. In that way the unit 10 is detachably and turnably connected to the unit 11 and it therefore allows one unit to be turned with relation to the other or vice versa. As shown in Figure 4 the wrench is applied to a spark plug and the unit 10 is shown as holding the shell of the spark plug by virtue of the engagement of the "flats" thereof with the "flats" to the nut of said shell, whereas, the "flats" of the unit 11 are in engagement with the "flats" of the nut of the bushing of the spark plug, and by turning the unit 11 the bushing may be readily unscrewed from the said shell. It will be noted that the porcelain of the spark plug is disposed in the tubular portion 18 of the unit 11, and after the unscrewing operation, the porcelain and bushing can be separated from each other and from the shell of the spark plug.

What is claimed is:

A wrench of the character described comprising a holding unit, a flange formed thereon and being provided with diametrically oppositely arranged openings, a collar provided with openings aligned with openings of the flange, means passing

through the said openings for retaining the collar operatively associated with the flange, a flange formed on the collar and overlying the flange of the holding unit to provide a recess therebetween, a nut engaging portion formed at the lower end of the holding unit, a turnable unit rotatable in the said recess, a tubular portion formed thereon and being provided with a nut engaging portion aligned with the first mentioned nut engaging portion as and for the purpose specified.

In testimony whereof I hereby affix my signature.

JOHN A. REISER.