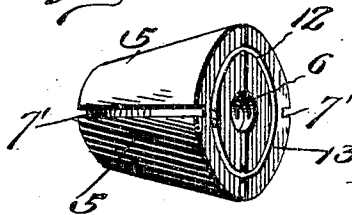
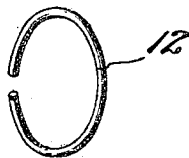
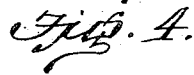
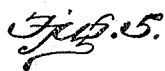
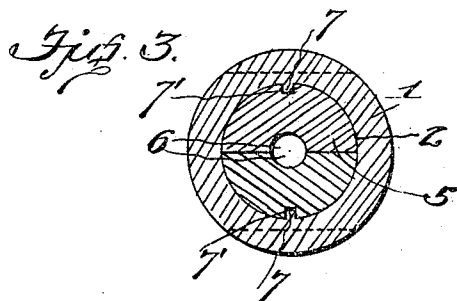
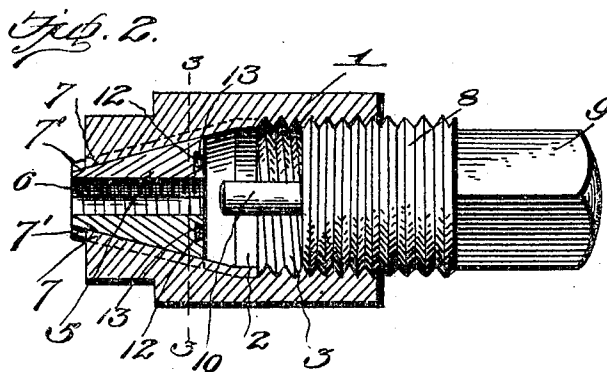
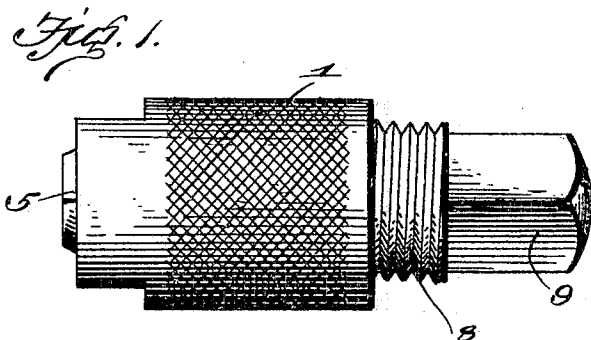


No. 801,767.

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F. L. CLEVELAND.
STUD WRENCH.

APPLICATION FILED AUG. 25, 1904.



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UNITED STATES PATENT OFFICE.

FRED LOYD CLEVELAND, OF MARQUETTE, MICHIGAN.

STUD-WRENCH.

No. 801,767.

Specification of Letters Patent.

Patented Oct. 10, 1905.

Application filed August 25, 1904. Serial No. 222,169.

To all whom it may concern:

Be it known that I, FRED LOYD CLEVELAND, a citizen of the United States, residing at Marquette, in the county of Marquette and State of Michigan, have invented certain new and useful Improvements in Stud-Wrenches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in stud-wrenches.

The object of the invention is to provide a wrench of this character whereby studs may be applied to or removed from a casting or other surfaces on which it is desired to place the same.

A further object is to provide means whereby threaded studs may be applied to castings and the like without injuring threads on said studs and which will be simple in construction, strong, durable, and well adapted to the purpose for which it is designed, said wrench being of such size and construction as to be readily carried about in the pockets of the person using the same.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a side elevation of a stud-wrench constructed in accordance with the invention. Fig. 2 is a longitudinal vertical sectional view of the same. Fig. 3 is a transverse sectional view on the line 3 3 of Fig. 1. Fig. 4 is a detail perspective view of the bolt-engaging chuck-blocks, showing the same removed from the body of the wrench; and Fig. 5 is a similar view of the spring for holding the sections of the chuck-block together.

Referring more particularly to the drawings, 1 denotes the body or shell of the wrench, which may be of any suitable shape, but which is preferably cylindrical in cross-section and is provided with a centrally-disposed bore 2, which at one end of said shell is cylindrical in shape and has formed on the walls thereof screw-threads 3. The opposite end of the bore 2 is in the form of a conical-shaped seat, into which is adapted to be arranged the members or parts of a conical-shaped stud-engaging

chuck-block 5. The block 5 may be formed of two or more parts or sections, the same being here shown as formed of two sections or parts, in the meeting faces of which are formed registering semicircular-shaped grooves or channels 6. The channels 6 when said parts or sections are brought together form a cylindrical-shape hole. In the walls of the grooves or channels 6 are formed screw-threads, which are adapted to be engaged with the threads of the studs with which said block is engaged, thereby permitting said blocks to grasp said threaded studs without injuring the threads on the same.

If desired, two or more longitudinally-disposed ribs 7 may be formed on the inner walls of the conical seat. Said ribs form guides and are adapted to enter diametrically oppositely arranged grooves or channels 7', formed in the outer sides of the block or section 5 of the chuck-block. Into the opposite threaded end of the bore 2 is adapted to be screwed a plug 8, on the outer end of which is formed a wrench-engaging head 9. On the inner end of said plug is arranged an inwardly-projecting pin 10, which when the parts are assembled and applied to a stud will engage said stud, thereby facilitating the driving or placing of the same.

When using the tool, the stud is screwed into the hole formed by the longitudinally-disposed grooves 6 of the clutch-block. The plug 8 is now screwed into the opposite end of said shell until the inner end of the pin 10, carried thereby, is in engagement with the inner end of the stud. The shell or casing 1 is now taken and the stud screwed into the hole formed for the same, after which a wrench is applied to the square portion 9 of the plug 8, by which means said plug is further screwed inwardly and the shell or casing turned thereby to screw the stud in place. After said stud has been screwed in place the plug 8 may be given a turn in the opposite direction, thereby disengaging the pin 10 from the end of the stud, thus permitting the shell or body 1 to be slipped down on the chuck-block 5 and permitting the sections of said block to fall away from said stud and permitting the body or shell to be removed from said stud.

While I have shown and described the device as arranged for inserting or applying studs, it is obvious that by forming the threads on the shell 1 and plug 8 to run in the oppo-

site direction, or as left-hand threads, the device may be used for removing plugs, as will be understood.

5 In order that the parts of the chuck-block
5 may be yieldingly held together when removed from the shell, a circular spring 12 is provided, said spring being adapted to be arranged in a circular dovetail-shaped groove 13, formed in the inner or larger ends of the
10 parts or sections of the chuck-block, as clearly shown in Fig. 4.

The spring 12 tends to hold the sections of the block slightly apart, but will readily permit the same to be brought together and into
15 engagement with a stud when forced into the conical-shaped seat 4 of the shell 1.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.
- 20

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of
25 this invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A stud-wrench comprising a hollow shell 30 provided at one end with interior threads and at its opposite end with a conical-shaped seat, a conical-shaped chuck-block arranged in said opposite end, said chuck-block being formed in separate parts to engage studs of various sizes, 35 an annular groove in the end of said parts, a spring-ring in said groove, guide-ribs formed on said conical seat to engage guide-grooves formed in the sides of said block, a threaded plug adapted to be screwed into the threaded 40 end of said sleeve, a stud-engaging pin arranged on the inner end of said plug, and a squared wrench-engaging head formed on the outer end of the same, substantially as described. 45

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRED LOYD CLEVELAND.

Witnesses:

JNO. R. GORDON,
THOMAS G. MAYS.