

No. 886,210.

PATENTED APR. 28, 1908.

H. HESTAND & C. RENAS.

WRENCH.

APPLICATION FILED JULY 26, 1906.

Fig 1

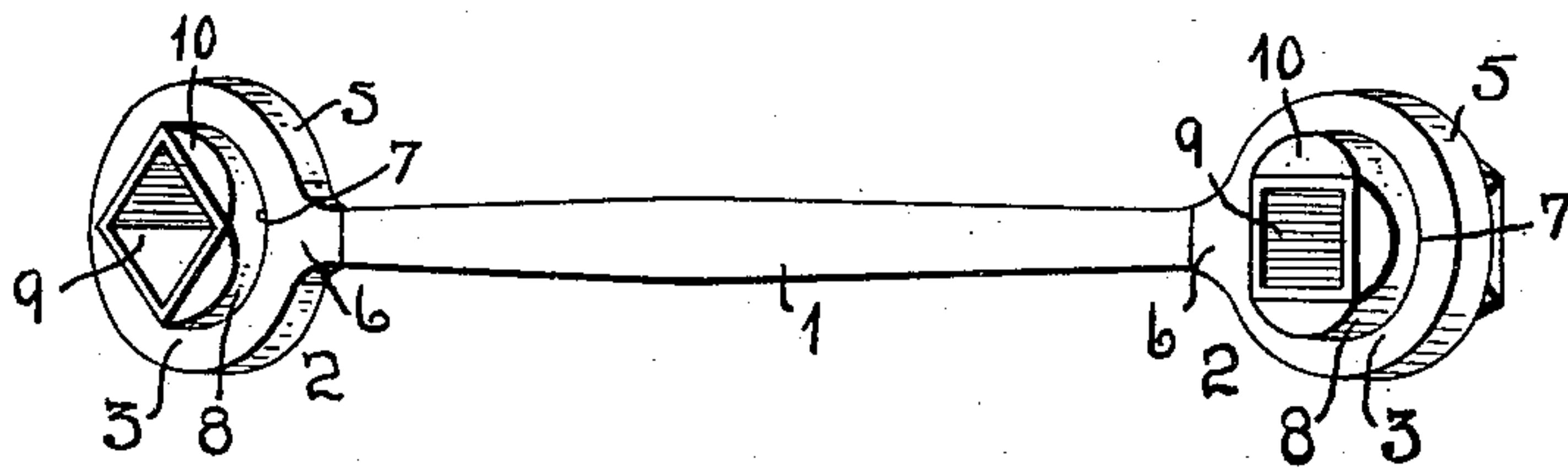


Fig 2

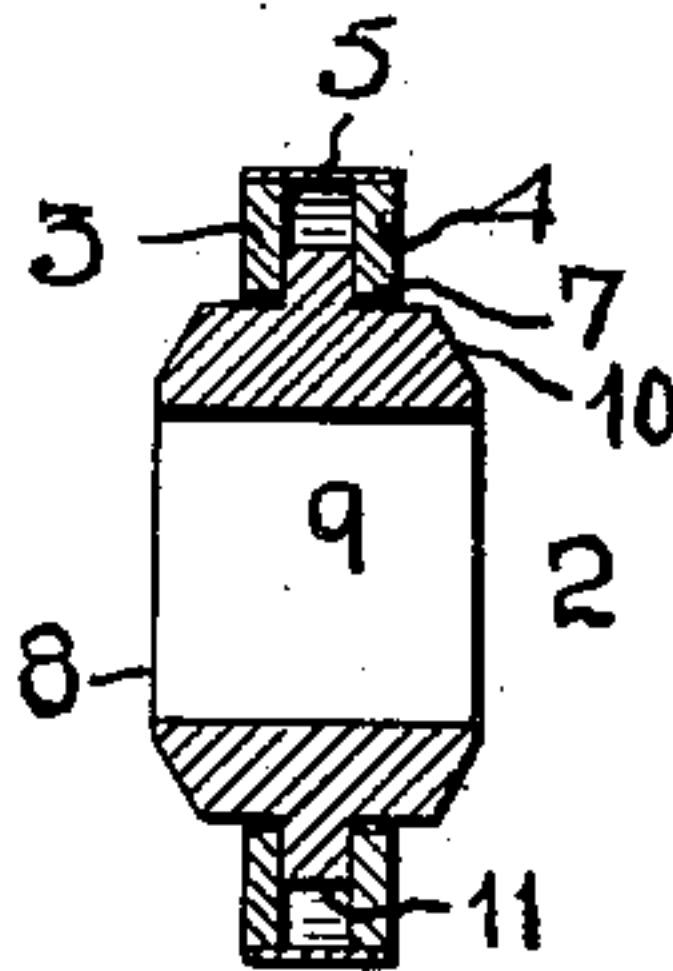
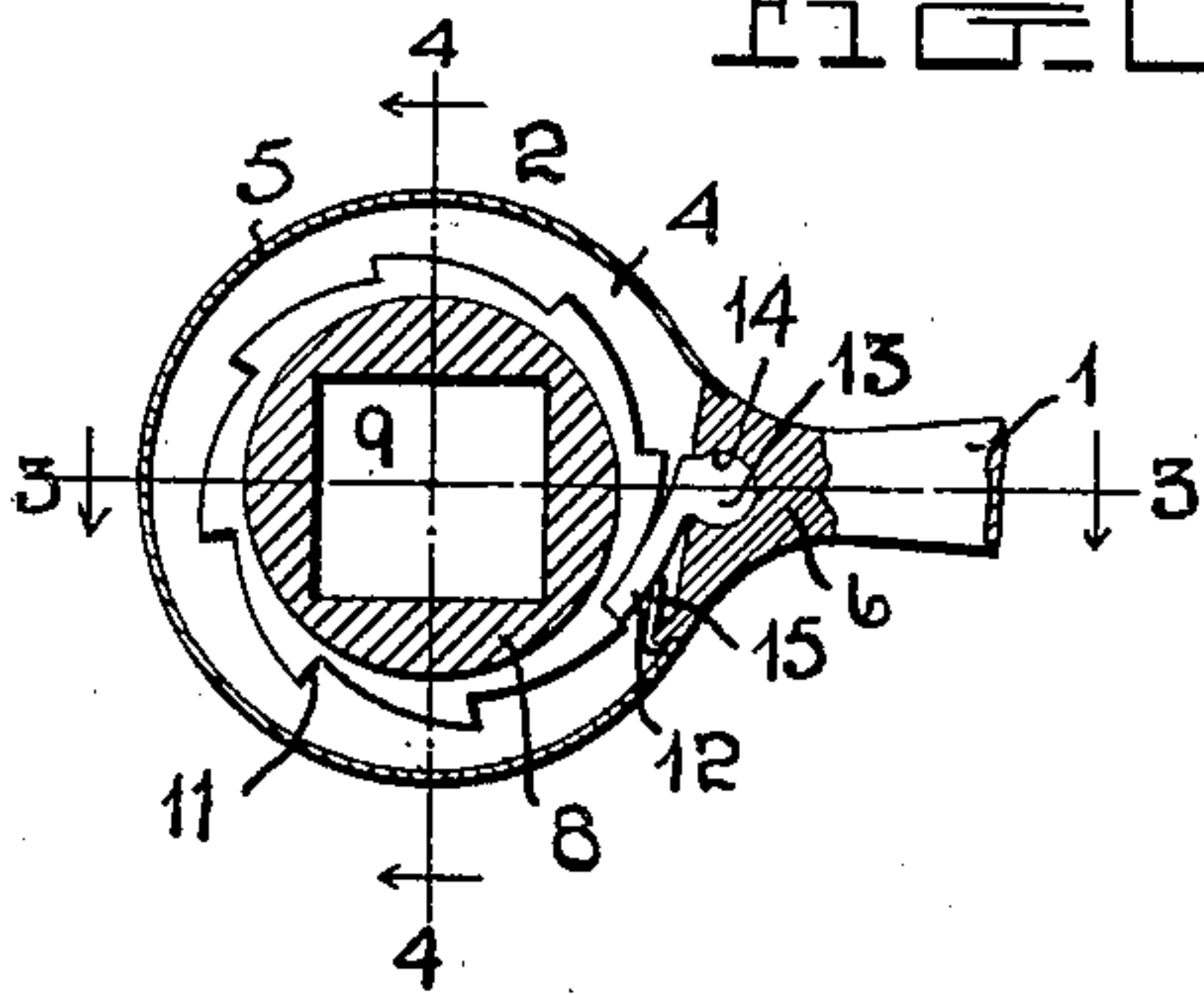


Fig 4

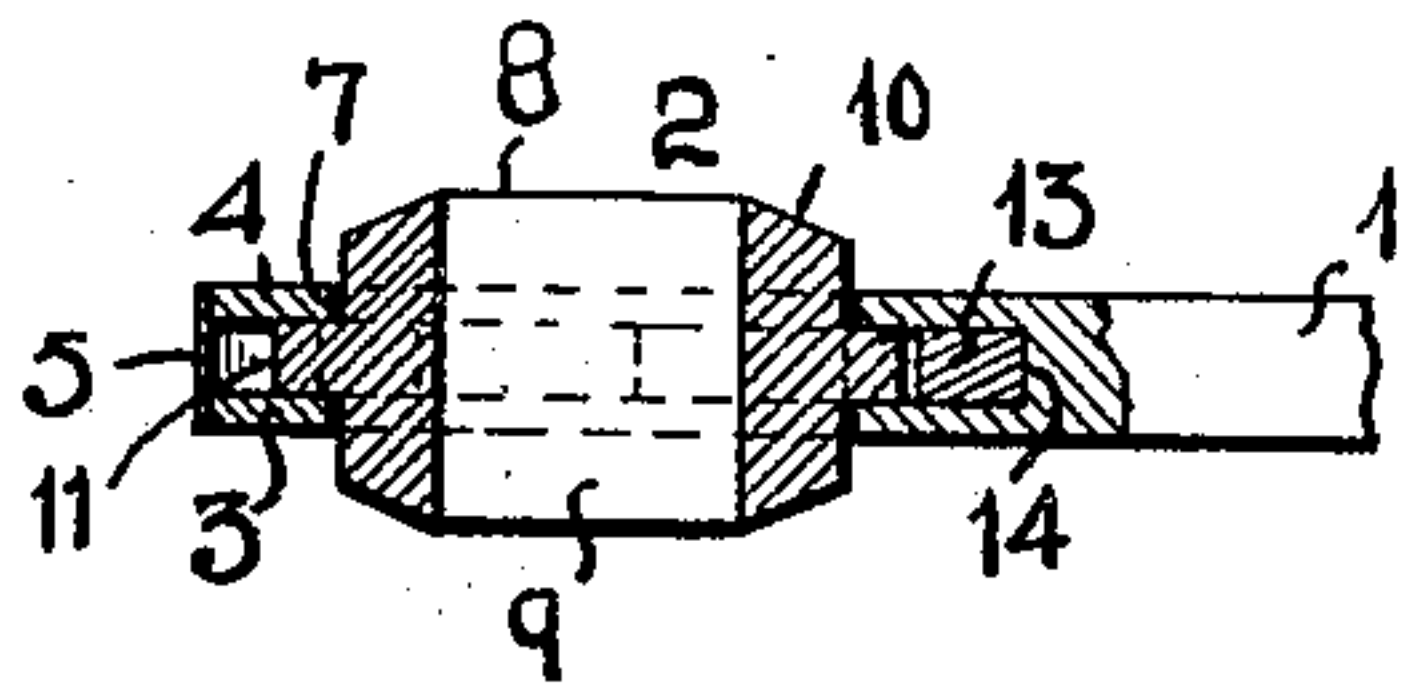


Fig 3

Witnesses

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UNITED STATES PATENT OFFICE.

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WRENCH.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, HARDY HESTAND and CHRIST RENAS, citizens of the United States, residing at Comanche, Oklahoma, have invented certain new and useful Improvements in Wrenches; and we 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 wrenches, and consists in the construction, combination, and arrangement of parts hereinafter described and claimed.

The object of the invention is to provide a device of this character, which will be of simple, durable and comparatively inexpensive construction, and by means of which a nut may be screwed on or off a bolt or the like without removing the wrench from the nut.

The above and other objects, which will appear as the nature of the invention is better understood, are accomplished by means of the construction illustrated in the accompanying drawings, in which,—

Figure 1 is a perspective view of the improved wrench; Fig. 2 is a longitudinal sectional view through one end of the wrench; Fig. 3 is a similar view, taken on the plane indicated by the line 3—3 in Fig. 2; and Fig. 4 is a transverse sectional view, taken on the plane indicated by the line 4—4 in Fig. 2.

Referring to the drawings by numeral, 1 denotes a hand-lever, which has at each of its ends one of the improved ratchet wrenches 2. These wrenches are adapted to receive nuts or the like of different sizes, but they are similar in construction, hence the description of one will suffice for both. Each of the devices 2 comprises a casing consisting of two spaced plates 3, 4, here shown circular in form and connected together by an annular band 5. These plates 3, 4, are removably secured to opposite sides of an enlargement 6, at the end of the lever 1 and they are provided with alining circular openings 7, in which is rotatably mounted a cylindrical bushing or head 8 formed with a socket opening 9 of rectangular or other form, adapted to engage a nut, bolt-head, or the like.

As shown, the socket 9 is in the form of a

squared opening extending through the cylindrical head 8, whereby nut engaging sockets are formed at each end of the bushing and the ends of said bushing project beyond the outer faces of the plates 3, 4, whereby said plates are held out of contact with the article through which the bolt extends on which said nut is to be screwed or unscrewed and its edges beveled as shown at 10. The head 8 is of slightly less diameter than the opening 7 in which it rotates and it is retained therein by an annular series of ratchet teeth 11 formed centrally upon its outer face and disposed between the two plates 3, 4. These ratchet teeth are engaged by a pawl 12, also arranged between the two plates and having at one of its ends a circular portion 13, seated in a similar-shaped recess 14 formed in the enlargement 6 of the lever 1. A flat leaf spring 15 secured in the enlargement 6 has its free end bearing against the pawl 12 to force its free end normally in engagement with the ratchet 11.

The construction, use and advantages of the invention will be readily understood from the foregoing description taken in connection with the accompanying drawings. It will be seen that this construction permits the head 8 to rotate in one direction independently of the hand-lever and that the engagement of the pawl 12 with the ratchet 11 causes the head to turn with the lever in the opposite direction. The ratchet and pawl and the operating spring of the latter are well protected, since they are entirely inclosed by the casing.

Having thus described our invention, what we claim as new, and desire to secure by Letters-Patent, is,—

In a wrench, a handle having a terminal enlargement provided with a circular recess open at its forward side, a hollow casing attached to said enlargement and comprising a pair of spaced detachable side plates and an edge band marginally connecting said plates, the latter being provided with opposed circular bearing openings, a rotary head journaled in said openings and provided between its ends with a marginally toothed flange housed in the casing to bear between the side plates thereof, a pawl arranged tangentially to the head for engage-

ment with said teeth and having at one end
a circular enlargement seated in the recess
within the enlargement for pivoting the
pawl, and a spring disposed to bear behind
5 the free end of the pawl for throwing the
same to engaging position.

In testimony whereof we have hereunto

set our hands in presence of two subscribing
witnesses.

HARDY HESTAND.
CHRIST RENAS.

Witnesses:

J. N. MORRIS,
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