B. DOBAZENECKI.

WRENCH.

APPLICATION FILED MAY 7, 1920.

1,377,758.

Patented May 10, 1921.

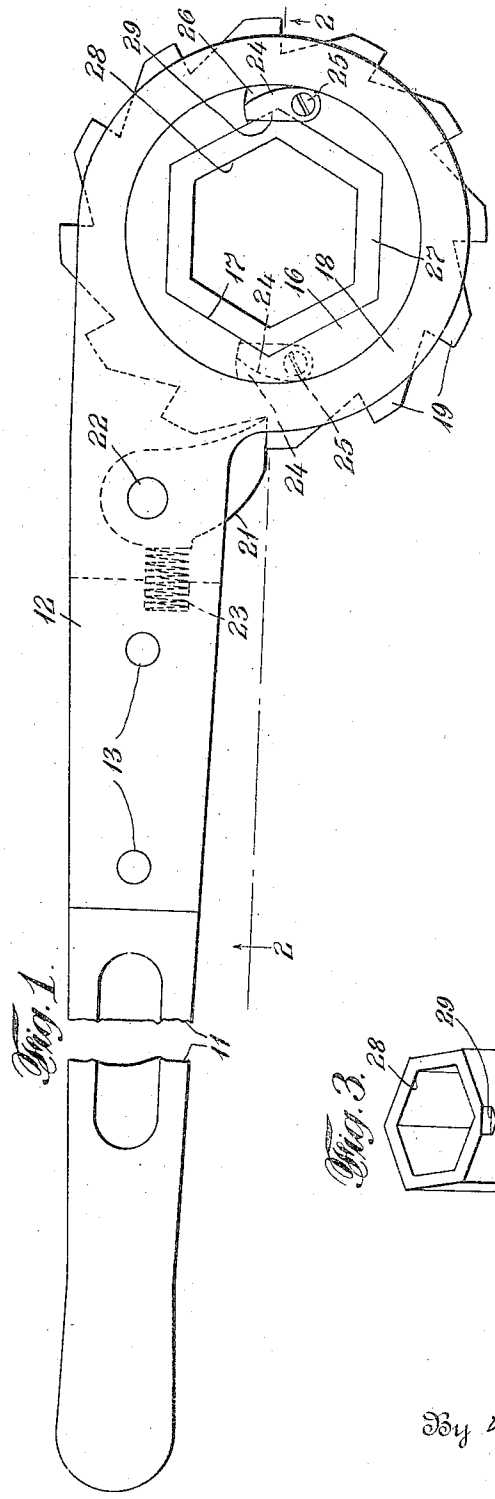


Fig. 1.

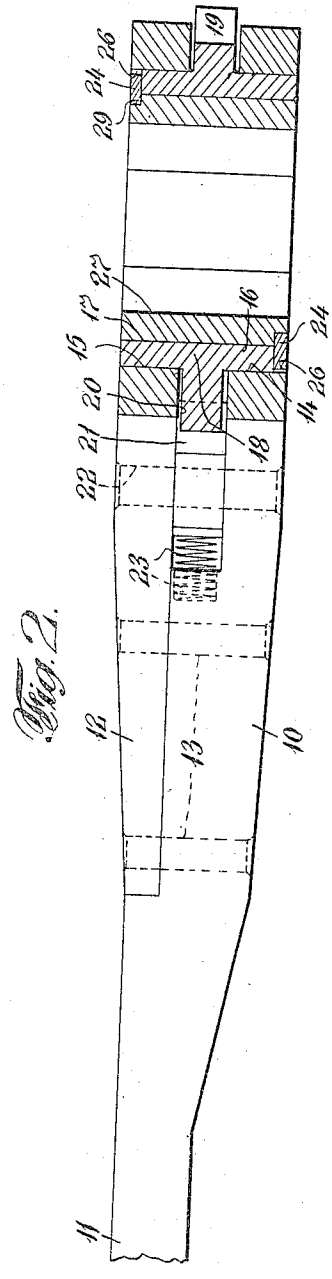


Fig. 2.

Fig. 3.

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UNITED STATES PATENT OFFICE.

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WRENCH.

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To all whom it may concern:

Be it known that I, BRONISLAW DOBAZENECKI, a citizen of Poland, residing in the city of Roslyn, county of Nassau, and State of New York, have invented certain new and useful Improvements in Wrenches, of which the following is a full, clear, and exact specification.

My invention relates to wrenches and refers particularly to a wrench adapted for use upon various sized nuts or bolt heads.

The device of my invention is a wrench capable of acting upon nuts, or bolt heads, of various sizes and shapes and further capable of causing reverse movements of such nuts, or heads, both of which properties are of great value in a device of this character.

My device, therefore, presents a novel and useful form of wrench capable of varying and wide applications and is strong in construction and efficient in operation.

In the particular form of the device of my invention, shown in the accompanying drawings, similar parts are designated by similar numerals.

Figure 1 is a side elevation through one form of my device.

Fig. 2 is a view in the direction of the arrow 2 of Fig. 1.

Fig. 3 is a perspective view of the removable member.

The particular form of a wrench of my invention, shown in the accompanying drawings, comprises a body member composed of the member 10, having the extended handle 11, and the member 12 fixedly attached to the member 10 by means of the stud bolts 13, 13. The member 10 has the annular opening 14, and the member 12 has the annular opening 15, in alinement with the opening 14.

Revolubly carried by the body member is an annular ratchet member 16, having an angular opening 17, having the extended annular flange 18 carrying the teeth 19, 19, and fitting within the annular recess 20 of the body member. The angular opening 17 is of such a size and shape as to fit simply over a nut, or bolt head.

Within the recess 20 is a pawl 21, pivotal upon the bolt 22, and capable of engagement with the teeth 19, 19 of the ratchet 16, and retained in such engagement by the action of the spiral spring 23.

Carried upon the faces of the member 16 are two catch arms 24, 24, pivotal upon the pivots 25, 25, for purposes to be described later, the arms 24, 24 being situated within recesses 26, 26.

Capable of insertion within the opening 17 is member 27, having an angular opening 28, carrying a recess 29 upon each of its two end faces, the catch arms 24, 24 being capable of insertion therein, thus maintaining the member 27 within the opening 17. The opening 28 is of such a size and shape as to fit snugly over a nut, or bolt head.

The operation of the device, with the member 27 withdrawn, is as follows:—

The opening 17 is placed over a nut, and the wrench revolved by means of the handle 11, the pawl 21 engaging a tooth 19 of the revoluble member 16, thus rotating the nut. When the handle is given a reverse movement, the pawl 21 will move over the teeth 19, 19, while the member 16 and the engaged nut will remain stationary. If the nut is to be rotated in the opposite direction, the wrench is reversed, and the upper face thereof converted into the lower face, thus giving the pawl and ratchet a reverse movement.

When it is desired to employ a wrench upon a nut of smaller size than can be engaged by the opening 17, a proper size member 27 is inserted into the opening 17 and retained in position by means of the catch-arms 24, 24.

It is to be noted that while the opening 17 is fitted for a hexagon nut, the member 27 can convert it into employment upon a square nut by having the opening 28 of the member 27 square instead of hexagonal, as shown.

I do not limit myself to the particular size, shape, number or arrangement of parts as shown and described, all of which may be varied without going beyond the scope of my invention as shown, described and claimed.

What I claim is:—

In a wrench, in combination, a body, a revoluble member carried by the body, an

angular opening of uniform size within the revoluble member, a removable member capable of insertion within the opening, a pivotal member carried by the revoluble member and below the face of the revoluble member to retain a removable member in said opening, teeth carried by the outward periphery of the revoluble member, a pawl carried by the body capable of insertion within said teeth and a spiral spring within a recess of the body tending to maintain the pawl within the teeth preventing the revolution of the revoluble member in one direction.

Signed at New York city in the county of New York and State of New York this 6th day of May, 1920.

BRONISLAW DOBAZENECKI.