Oct. 13, 1953 O. W. SIMON ET AL 2,655,064

RATCHETING WRENCH

Filed Nov. 29, 1951

Fig. 1

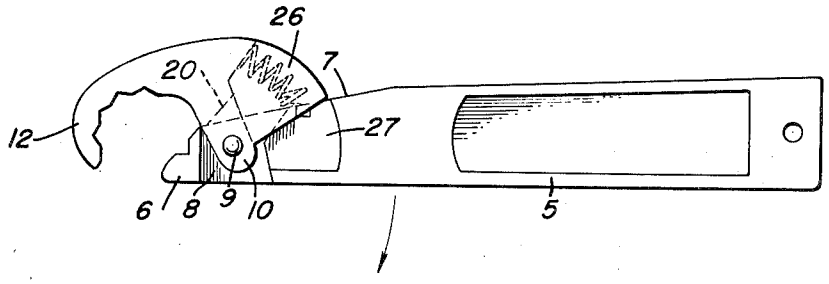


Fig. 2

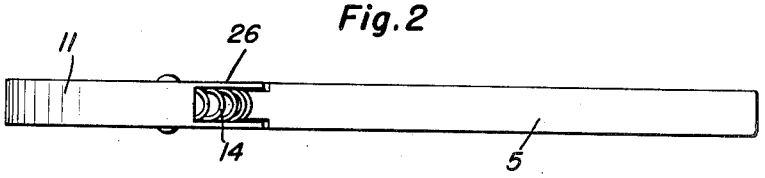


Fig. 3

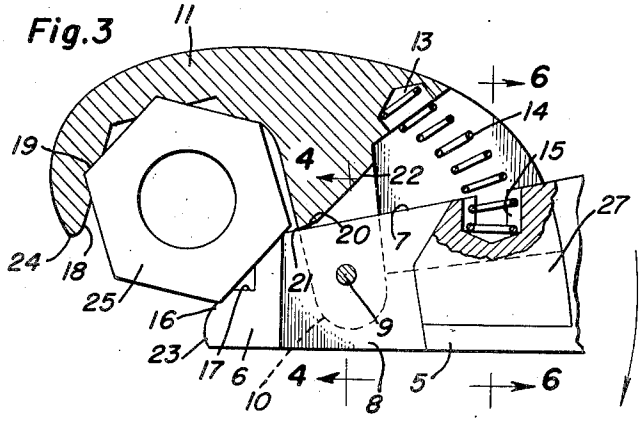


Fig. 4

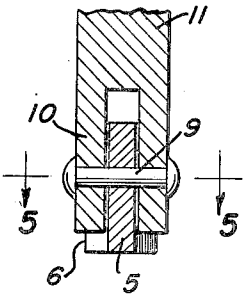


Fig. 6.

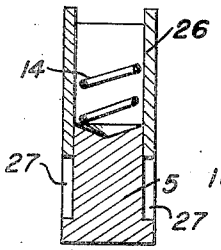
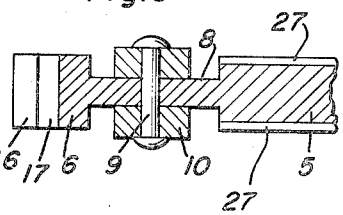


Fig. 5



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RATCHETING WRENCH

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1 Claim. (Cl. 81—99)

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The present invention relates to new and useful improvements in wrenches and more particularly to a tool of this character embodying a ratcheting action.

An important object of the invention is to provide a wrench including a fixed jaw and a spring biased pivoted jaw coacting with the fixed jaw and wherein both jaws are formed with jaw faces having flat sides to grip the flat sides of a nut and also having V-shaped notches to receive the corners of the nut, to thus provide a more effective gripping action on the nut, the fixed and movable jaws being provided with coacting stop faces to control the stress subjected to the nut to thus prevent damage to either the nut or to the wrench when applying too great a force thereto.

A still further object is to provide a tool of this character of simple and practical construction, which is strong and durable, efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, references being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view;

Figure 2 is a top plan view;

Figure 3 is an enlarged vertical sectional view of the movable jaw;

Figure 4 is a transverse sectional view taken on the line 4—4 of Figure 3;

Figure 5 is a sectional view taken on the line 5—5 of Figure 4; and

Figure 6 is a sectional view taken on a line 6—6 of Figure 3.

Referring now to the drawing in detail wherein for the purpose of illustration we have disclosed a preferred embodiment of the invention, the numeral 5 designates a handle having a fixed jaw 6 formed at its front end. The upper edge of the handle 5 slopes forwardly adjacent its front end as shown at 7, and the sides of the handle immediately rearwardly of the jaw 6 are recessed as shown at 8 and provided with a transverse pin 9 to receive the leg portions 10 of a bifurcated or U-shaped connector for pivotally mounting on the pin 9.

The legs 10 of the connector are formed at the lower rear portion of a hook-shaped movable jaw 11 having its bill portion 12 positioned forwardly of the fixed jaw 6.

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The rear edge of jaw 11 overlies the upper edge 7 of the handle 5 and is formed with a recess 13 to receive the upper end of a coil spring 14 which has its lower end positioned in a recess 15 in the upper edge of handle 5.

The fixed jaw 6 is formed with a flat sloping jaw face 16 having a V-shaped notch 17 therein and the inside of the bill portion 12 of movable jaw 11 is formed with a plurality of flat jaw faces 18, each of which is formed with a V-shaped notch 19.

The front crotch portion of the U-shaped or pivoted connector legs 10 is formed with a flat stop area 20 adapted to abut the sloping upper edge 7 of handle 5 to limit opening movement of the jaw 11, and with a stop portion 21 positioned forwardly of pivot pin 9 to limit the closing movement of jaw 11. Rearwardly of the flat portion 20, the crotch of the U-shaped or pivoted connector legs 10 slopes upwardly to permit a wide opening movement of the jaw 11.

The extremities of the fixed and movable jaws 6 and 11 are rounded as shown at 23 and 24 to facilitate entrance of a nut 25 between the jaws for gripping thereby.

The sides of the movable jaw 11 rearwardly of legs 10 are formed with shielding plates 26 for spring 14, the plates being movable into recesses 27 which are provided in opposite sides of the handle 5.

In the operation of the tool, the spring biased pivoted jaw 11 provides a ratcheting action for the wrench, and the stop portions 20, 21 provided on the pivoted jaw forwardly of its pivot 9, limit closing movement of the jaw to prevent mutilation of brass or other soft nuts or fittings when subjected to excessive pressure by handle 5.

Having described the invention, what is claimed as new is:

A wrench comprising a handle having a fixed jaw integrally formed at one end thereof, the sides of said handle being recessed adjacent said fixed jaw, a movable jaw including a bill portion and a bifurcated connector portion, said bill portion extending forwardly of said fixed jaw, the bifurcated connector portion straddling the recessed sides of said handle and being pivoted thereto, a rearwardly, upwardly sloping crotch formed between the furcations of said bifurcated connector, the forward edge of said crotch being provided with an angulated flat portion constituting a stop for limiting the closing movement of said movable jaw, shield plates extending rearwardly of the movable jaw in spaced rela-

tion to one another, a spring disposed between said shield plates, the rear edge of said movable jaw and the upper surface of said handle being provided with corresponding recesses, the ends of said spring being guidingly disposed in said recesses, said shield plates having curved edges aligned with the edges of said movable jaw.

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