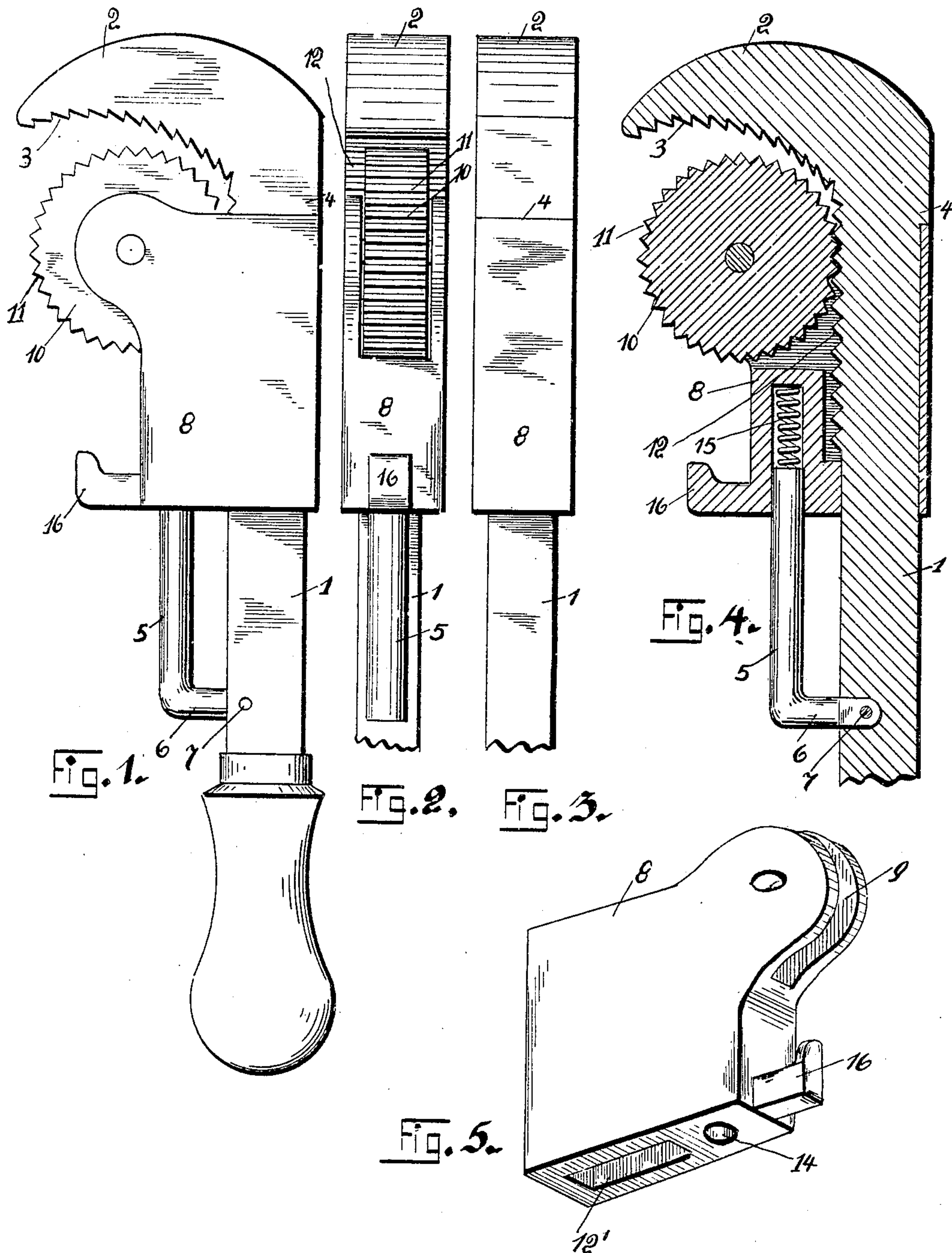


No. 778,572.

PATENTED DEC. 27, 1904.

G. E. DORNON.  
WRENCH.

APPLICATION FILED SEPT. 9, 1904.



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# UNITED STATES PATENT OFFICE.

GEORGE E. DORNON, OF NEW BRIGHTON, PENNSYLVANIA.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 778,572, dated December 27, 1904.

Application filed September 9, 1904. Serial No. 223,841.

*To all whom it may concern:*

Be it known that I, GEORGE E. DORNON, a citizen of the United States of America, residing at New Brighton, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention has relation to certain new and useful improvements in wrenches, and relates more particularly to monkey-wrenches, pipe-wrenches, and the like.

15 The invention has for its object the provision of novel means whereby the sliding jaw of the wrench may be readily and easily operated.

20 My invention further contemplates to provide a wrench that will effectually grasp the object to be operated and one that will be easily released when desired.

25 The present invention further contemplates to provide a wrench which will be extremely simple in construction, strong and durable, and highly efficient in operation.

30 With the above and other objects in view reference will be had to the accompanying drawings, forming a part of this application, wherein like numerals of reference designate corresponding parts throughout the several views, in which—

35 Figure 1 is a side elevation of my improved wrench. Fig. 2 is a front view of the same, partly broken away. Fig. 3 is a rear elevation thereof. Fig. 4 is a vertical sectional view of Fig. 1, showing the handle partly broken away; and Fig. 5 is a perspective view of the sliding-jaw casing.

40 In the drawings the shank 1 of the wrench carries at its upper end a fixed jaw 2, having formed on its inner face teeth 3. The rear portion of the shank, near the upper end thereof, has formed thereon a shoulder 4. A shaft 5 has formed at its lower end an arm 6, bent at right angles, which is rigidly secured at 7 to the shank 1 of the wrench. The slid-

ing jaw member 8 is bifurcated, as shown at 9, and has journaled therein a rotary jaw 10, having teeth 11, the latter meshing with teeth 12, formed on the inner face of the shank 1. 50 The sliding jaw member 8 has also formed therein an opening 12' for the reception of the shank 1 and also has formed therein an opening 14, in which is seated a spiral spring 15, the lower end of said spring resting upon 55 the upper end of the shaft 5, which end also partly extends into the opening 14 and forms a guide for the latter. The sliding jaw member is further provided with a lug 16 for the purpose of a finger-hold whereby the sliding 60 jaw member may be easily operated.

The operation of my improved wrench is as follows: The sliding jaw member is operated downwardly until the object is firmly engaged between the rotary and stationary 65 jaws. The spring 15 being depressed will effectually take up any lost motion that would otherwise be present. The wrench is then operated in the usual manner, and when it is desired to release the grip the sliding jaw is 70 further operated by the lug 16, which will effectually release the hold upon the object engaged by the wrench. The shoulder 4 serves to limit the upward movement of the wrench. When the article to be operated 75 upon is securely placed between the jaws of the wrench, the rotary jaw will exert a vise-like action upon the article and said jaw will be locked by reason of frictional contact with the teeth portion of the shank. 80

The many advantages obtained by my improved wrench will be readily apparent from the foregoing description, taken in connection with the drawings.

85 It will be noted that various changes may be made in the details of construction without departing from the spirit and scope of the invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters 90 Patent, is—

In a wrench, the combination of a shank

having teeth on its edge and a fixed jaw, with  
a sliding-jaw casing mounted on the shank  
and having an opening in its end, a spiral  
spring seated in said opening, a shaft fitting  
5 said opening and bearing against said spring,  
said shaft having an arm at its end extending  
at right angles to the shaft and rigidly se-  
cured to the shank, and a rotary toothed jaw

mounted in the casing and meshing with the  
teeth on the shank.

In testimony whereof I affix my signature in  
the presence of two witnesses.

GEORGE E. DORNON.

Witnesses:

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