J. B. BAUM.

WRENCH.

APPLICATION FILED APR. 11, 1921.

1,404,828. Patented Jan. 31, 1922.

Fig. 1.

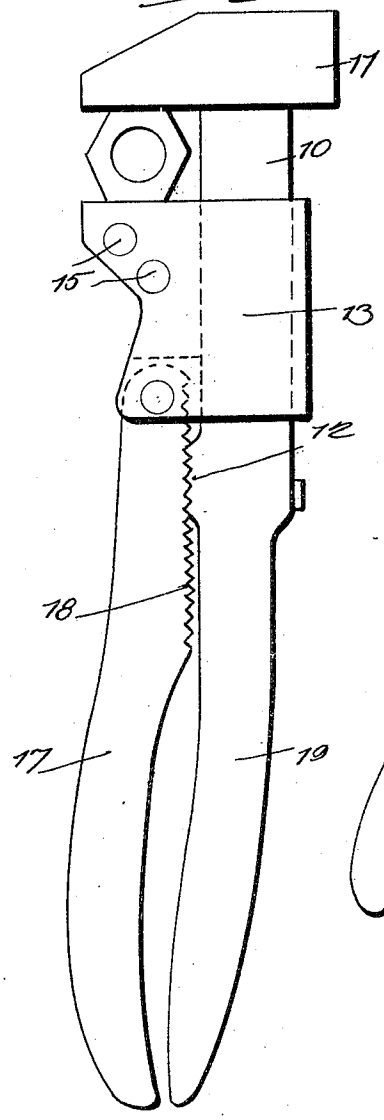


Fig. 2.

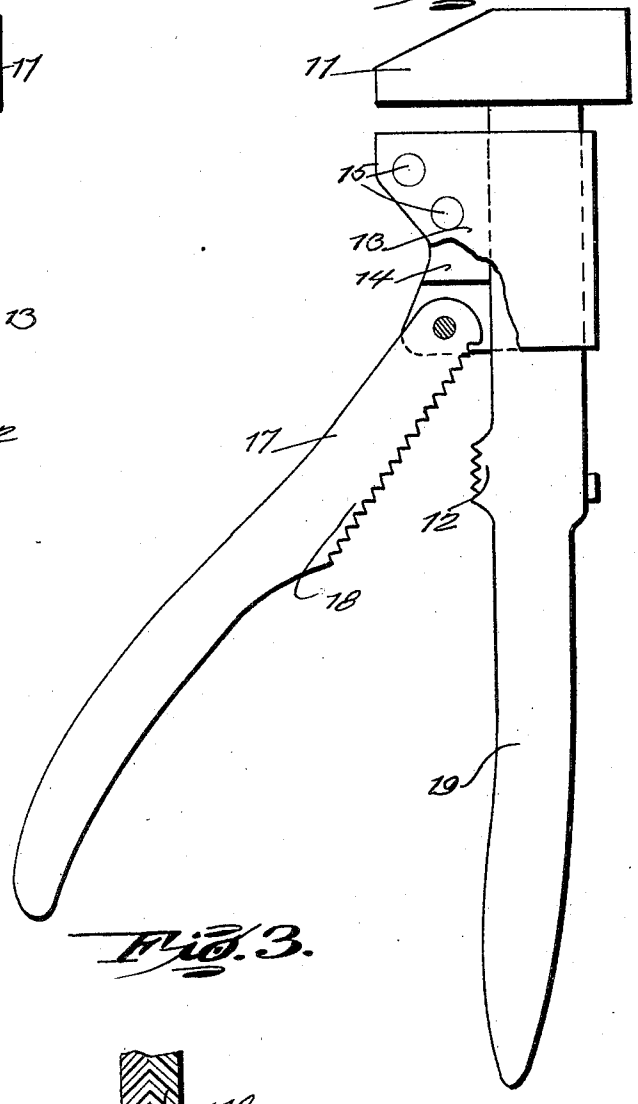


Fig. 3.

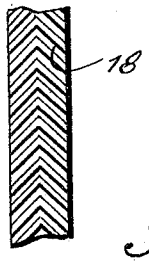
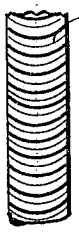


Fig. 4.



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UNITED STATES PATENT OFFICE.

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WRENCH.

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Application filed April 11, 1921. Serial No. 460,153.

To all whom it may concern:

Be it known that I, JAMES B. BAUM, a citizen of the United States, residing at Grand Junction, in the county of Mesa and State of Colorado, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in wrenches and has for an object thereof the provision of a wrench of the quick adjustable type.

An important object of the invention is to provide a wrench embodying the usual shank and stationary jaw, and a slidable jaw mounted upon the shank, the shank being provided with gripping teeth and a handle pivoted to the yoke and likewise having gripping teeth which coact with the gripping teeth of the handle.

A further object of the invention is to provide a gripping tooth construction in a wrench of the above character which will prevent the strain placed upon the movable jaw from causing the pivoted portion of the handle to shift after the teeth have become slightly worn.

Other objects and advantages of the invention will become apparent throughout the course of the following description.

In the accompanying drawings wherein for the purpose of illustration are shown preferred embodiments of my invention, and wherein like reference characters designate like parts throughout,

Figure 1 is a side elevation showing the movable jaw locked against movement;

Figure 2 is a similar view showing the movable jaw freed for movement, parts being broken away, and

Figures 3 and 4 are fragmentary plan views showing the shaping of the teeth of the racks of the stationary and movable handle members, two different forms of teeth being illustrated.

Referring now more particularly to the drawings, the numeral 10 indicates a shank provided at one end thereof with a stationary jaw 11. The shank has formed upon a side face thereof at a point spaced from the stationary jaw 11, a short rack 12, the teeth of which are either V-shaped as shown in Figure 3, or arcuate as shown in Figure 4. In either form the angularly disposed portions of the teeth will connect approximately centrally of the shank and will be disposed at approximately the same angle to the sides thereof.

The numeral 13 indicates a yoke slidably mounted upon the shank 10 intermediate the rack 12 and the stationary jaw 11. This yoke forms a mounting for the movable jaw 14 which is secured to the yoke by rivets 15 or the like. The yoke has pivotally connected thereto a pivotal handle member 17 provided upon the face thereof, next adjacent to the shank 10, with an elongated rack 18, the gripping teeth of which are shaped to conform to the shaping of the teeth of the rack 12. The shank 10 is extended beyond the rack 12 and forms a stationary handle with which the pivotal handle 17 coacts. In the use of my wrench, when it is desired to change the spacing between the stationary and movable jaws 11 and 14, the pivotal handle member 17 is shifted away from the handle member 19 of the shank 10. By reason of the peculiar curvature of the teeth of the racks 12 and 18, the strain placed upon the movable jaw will be transferred to the shank 10 not only longitudinally of the shank but transversely thereof, and furthermore, the shaping of these teeth will cause the pivotal handle member 17 to be maintained in parallelism with the handle member 19 when the teeth are engaged. This curvature furthermore tends to overcome the tendency of the teeth under pressure to wedge themselves out of engagement, eliminating the necessity of providing teeth of great depth. Placing the short rack 12 upon the shank 10 instead of upon the handle member 17, permits of the yoke 13 having a smooth and even bearing surface upon which to slide, and this surface will obviously hold the yoke and movable jaw through a much longer time than would be possible were the yoke sliding upon the upper surface of the teeth of a rack formed on the shank.

Many changes being possible in the shape, size and construction of the various parts hereinbefore set forth without in any manner departing from the spirit of my invention, I do not limit myself to the specific structure thereof except as hereinafter claimed.

What I claim is:

In a wrench, a shank provided with a stationary jaw, a short rack of gripping teeth formed upon one side of said shank at a point spaced from said stationary jaw, a

yoke slidably mounted upon said shank, a jaw carried by said yoke and a member pivotally mounted upon said yoke and provided upon the face thereof next adjacent the shank with an elongated rack of gripping teeth, said gripping teeth each comprising divergent portions having approximately the same angular relation to the sides of the rack, the rack of said shank forming a stop limiting the movement of the yoke in one direction.

In testimony whereof I hereunto affix my signature.

JAMES B. BAUM.