No. 804,611. PATENTED NOV. 14, 1905.

G. A. LOW, Jr.

WRENCH.

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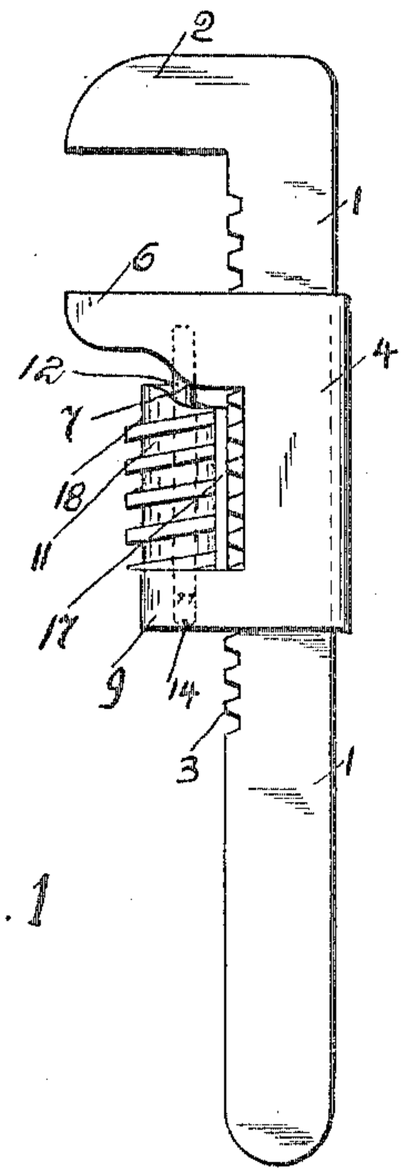


Fig. 1

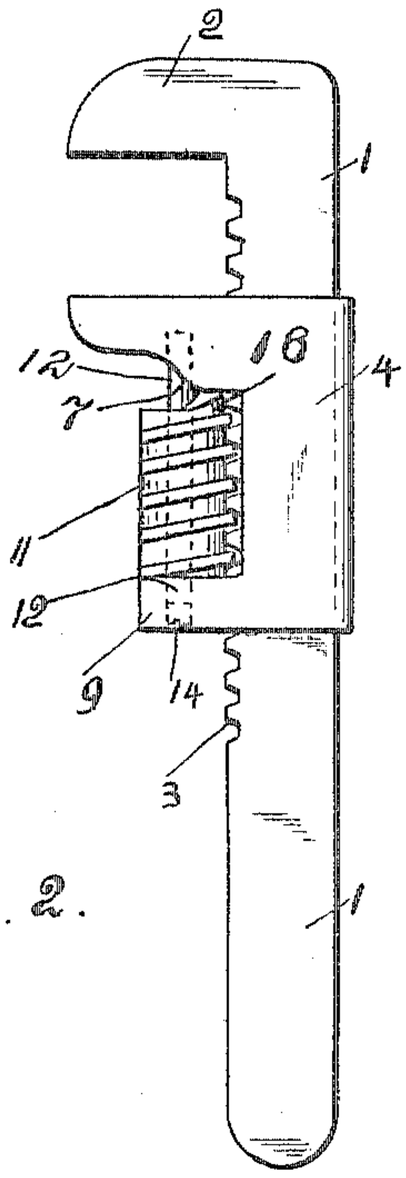


Fig. 2.

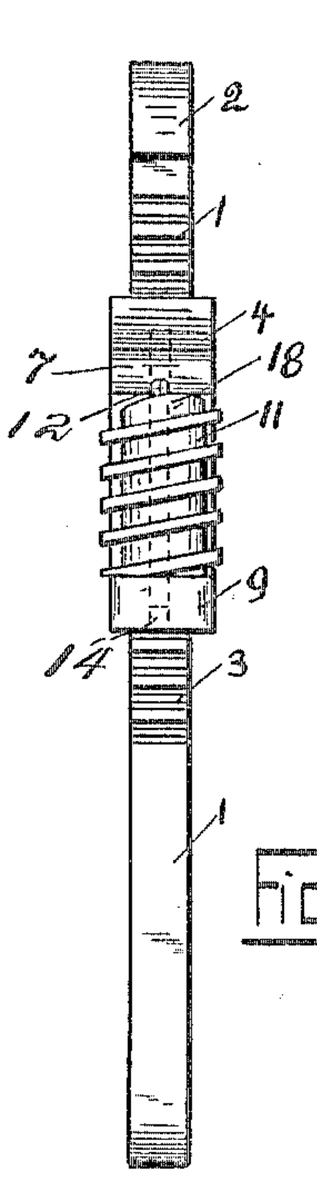
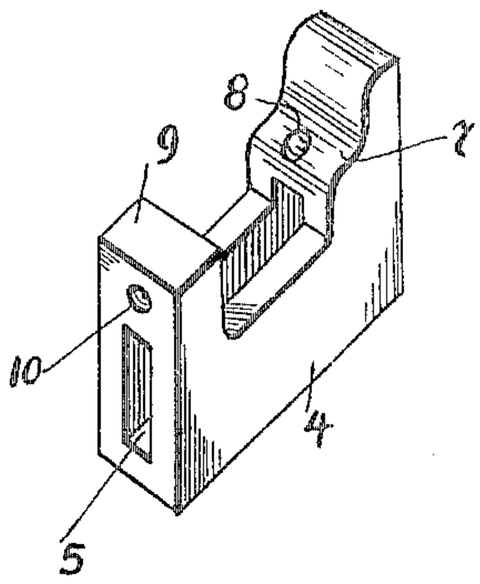


Fig. 3.

Fig. 4.



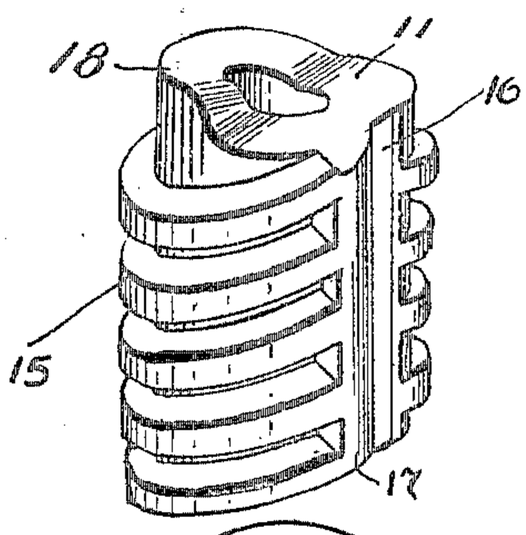


Fig. 5.

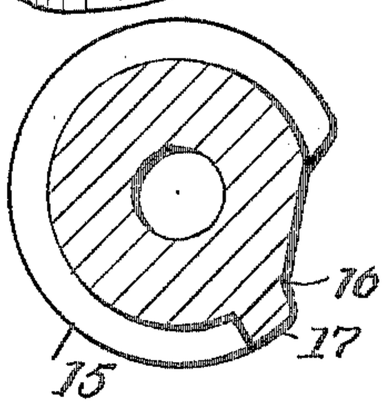


Fig. 6.

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UNITED STATES PATENT OFFICE.

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WRENCH.

No. 804,611. Specification of Letters Patent. Patented Nov. 14, 1905.

Application filed January 18, 1904. Serial No. 189,506.

To all whom it may concern:

Be it known that I, GEORGE A. LOW, Jr., a citizen of the United States of America, residing at Wilkinsburg, in the county of Allegheny 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.

This invention relates to certain new and useful improvements in wrenches, and relates more particularly to that type wherein a movable jaw is adapted to slide upon a shank and be adjusted thereon by a locking-screw engaging with teeth formed on this shank.

The object of the invention is to provide a wrench of this type wherein means are provided to further assist the adjusting of the jaw to its desired position, and means is also provided whereby the jaw may be rapidly moved along the shank to its desired position and then further advanced by the rotation of the locking-screw carried by the moving jaw.

Another object of this invention is to provide a wrench of this type which will be extremely simple in construction, strong, durable, and highly efficient to the many usages to which it is applied.

The invention consists in the novel construction, combination, and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claim.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this application, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a plan view of my improved wrench, showing the locking-screw in the unlocked position. Fig. 2 is a similar view showing the adjusting-nut or locking-screw in an operative or locked position. Fig. 3 is an edge view of my improved wrench. Fig. 4 is a detached enlarged detail perspective view of the sliding jaw. Fig. 5 is a detached perspective view of the adjusting and locking screw, and Fig. 6 is a horizontal sectional view of the adjusting locking-screw.

To put my invention into practice, I provide a wrench having a shank 1, and formed integral with said shank at one end thereof is the jaw 2, which is formed at right angles to the shank. Upon the front edge of the shank I provide the same with teeth 3, and adapted to slide on the shank is the jaw 4, and this jaw is preferably cast and has an aperture 5 formed therein longitudinally of said jaw, whereby the same may be placed upon the shank 1. This jaw 4 comprises a gripping-head 6, the under face of which is beveled, as indicated at 7, and has formed therein a recess 8, the object of which will be hereinafter more fully apparent. The lower portion of the jaw 4 has an extension 9, provided with an aperture 10, and between the gripping portion 6 of the jaw and the extension 9 I mount a locking-screw 11, which carries the spindle 12, the ends of which project beyond the adjusting-nut or locking-screw, and which ends are received, respectively, in the recess 8 and the opening 10, a plug 14 being threaded into said opening 10, the plug 14 being threaded into said opening 10 to hold the spindle in position. This screw 11, as illustrated in Figs. 5 and 6 of the drawings, carries the threads 15, a portion of said threads being cut away, as indicated at 16, producing a plain or unthreaded portion extending the length of the screw 11, and formed integral with said nut I provide the raised portion 17 to act as a stop in the rotation of the locking-screw. On the top of this locking-screw I provide an inclined raised portion 18, which acts substantially as a cam the contour of which is shaped to correspond with the beveled face 7 of the jaw 4.

The operation of my improved wrench is as follows: When it is desired to adjust the jaw upon the shank of the wrench, the locking-screw 11 is rotated until the space 16 is brought adjacent to the threads 3 of the shank, when the sliding jaw may be adjusted to any desired position, and when this position has been reached the screw is again rotated until the threads 15 thereof have engaged the threads 3 of the shank, as illustrated in Fig. 2 of the drawings, and when in this position the inclined portion 18 will be brought into engagement with the inclined surface 7 of the jaw 4, causing, as the nut or flange 11 is further rotated, a slight further movement to be imparted to the jaw 4, whereby to obtain a finer adjustment. It will thus be seen by this construction that a finer adjustment may be obtained after the jaw has been approximately set or is in en-

gagement with the piece of work upon which it is to be used. It will be observed that complete rotation or revolution of the nut or locking-screw is prevented owing to the stop 18, formed at one end of the threads. When the screw or locking-screw is engaged with the teeth of the wrench-shank and is given substantially a half-turn, the flattened or plain face 16 is then at the front of the wrench and the cam 18 is underlying in engagement with the cam-face 7 of the jaw, and when the nut or knurl is turned so as to bring the plain or flattened face 16 adjacent or opposite to the teeth of the shank the cam 18 is out of engagement with the cam-face 7 and the jaw 4 is free to be moved to a desired adjustment upon the shank.

It will be readily apparent from the above description that the many advantages of this improvement will be easily seen by those skilled in the art of handling this type of wrenches, and it will be noted that the pitch of the threads of the screw and the contour of the beveled surfaces of the jaw and of the screw may be changed to the advantages of the wrench and that other slight changes may be made without departing from the general spirit of the invention.

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

A wrench embodying a toothed shank having a fixen jaw at one end, a sliding jaw mounted on said shank and cut away on the side adjacent the teeth of the shank, the said movable jaw having a cam formed on one wall of the opening, and said cam having an opening extending therein, the opposite wall of said opening having an aperture extending therethrough, a spindle mounted in said aperture and in the opening in the cam, a jam-screw threaded into said aperture and holding the spindle in position in the jaw, a lock-screw rotatably mounted on said spindle, a cam formed integral with the upper end of said lock-screw at one side of the opening therethrough and adapted to coact with the cam on the movable jaw, the said lock-screw being cut away on the side opposite the cam, and having a rib extending the length of the screw, substantially as described.

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

GEORGE A. LOW, JR.

Witnesses:
JOHN M. BRUCE,
K. H. BUTLER.