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P. MATUSAK & G. SLAINE.

WRENCH.

APPLICATION FILED JAN. 2, 1906.

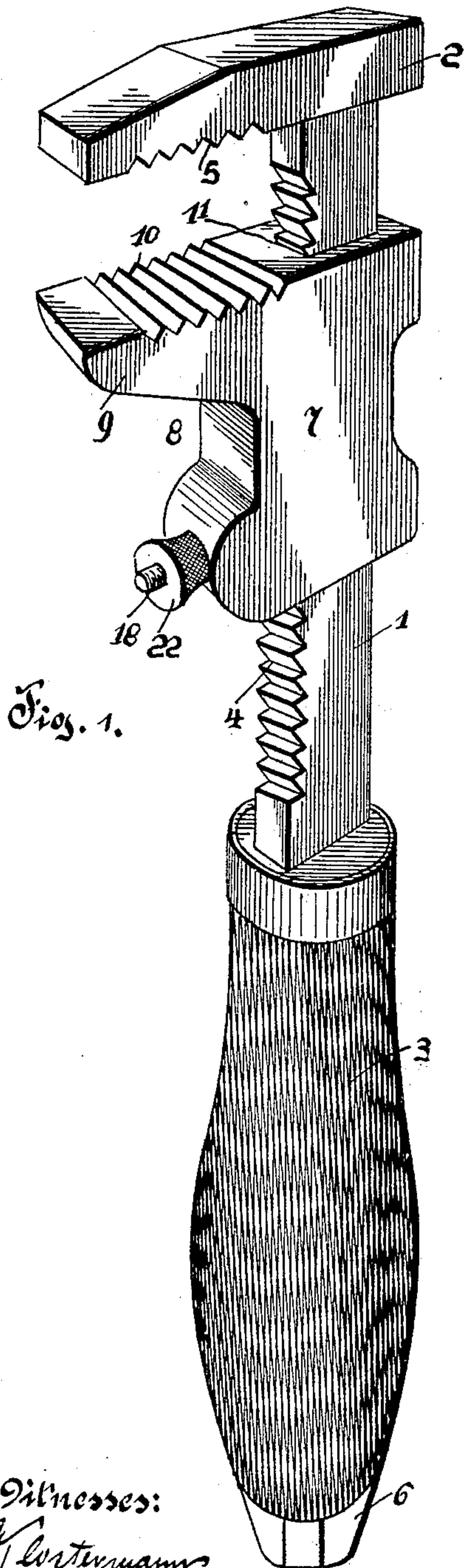


Fig. 1.

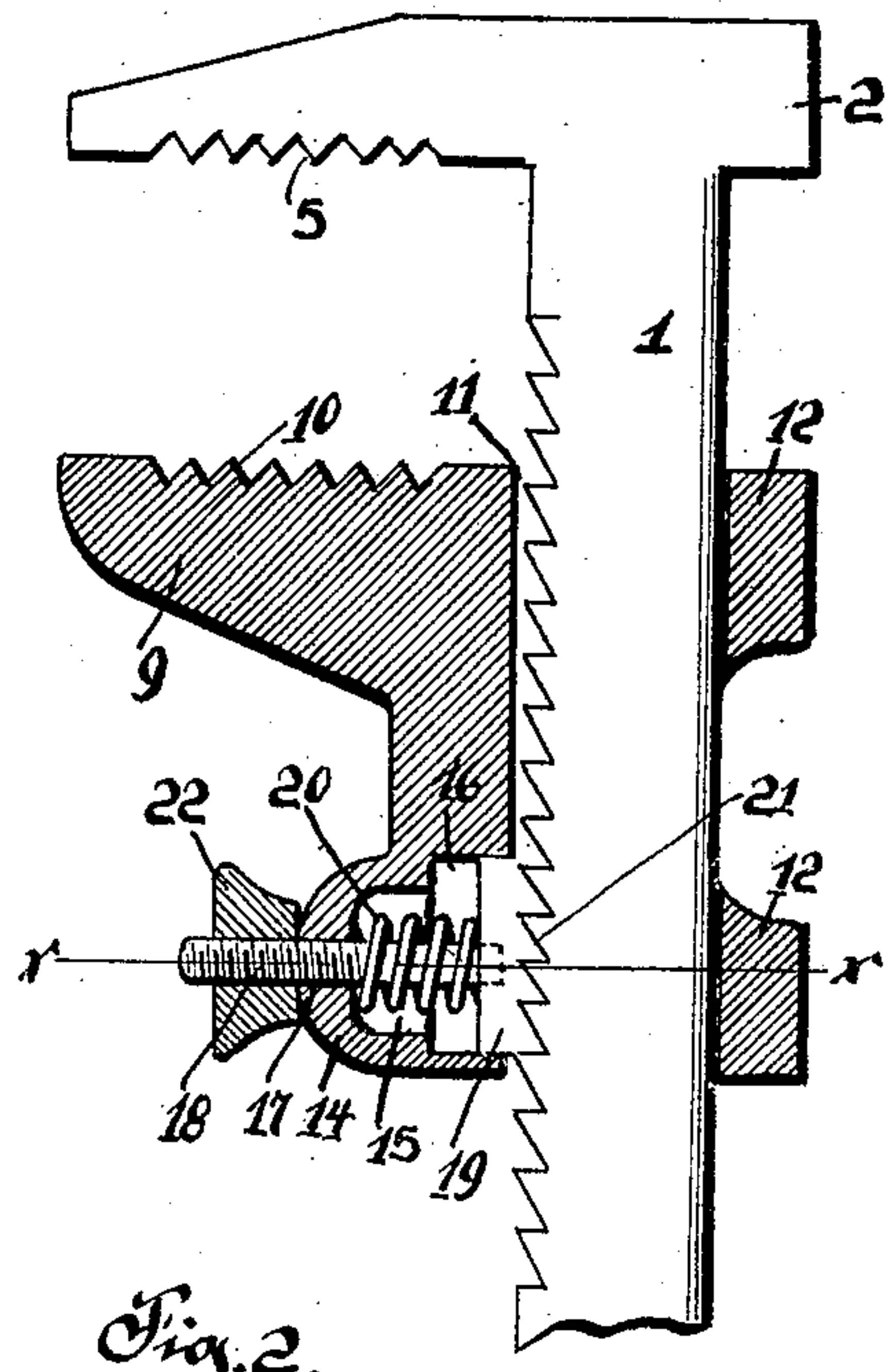


Fig. 2.

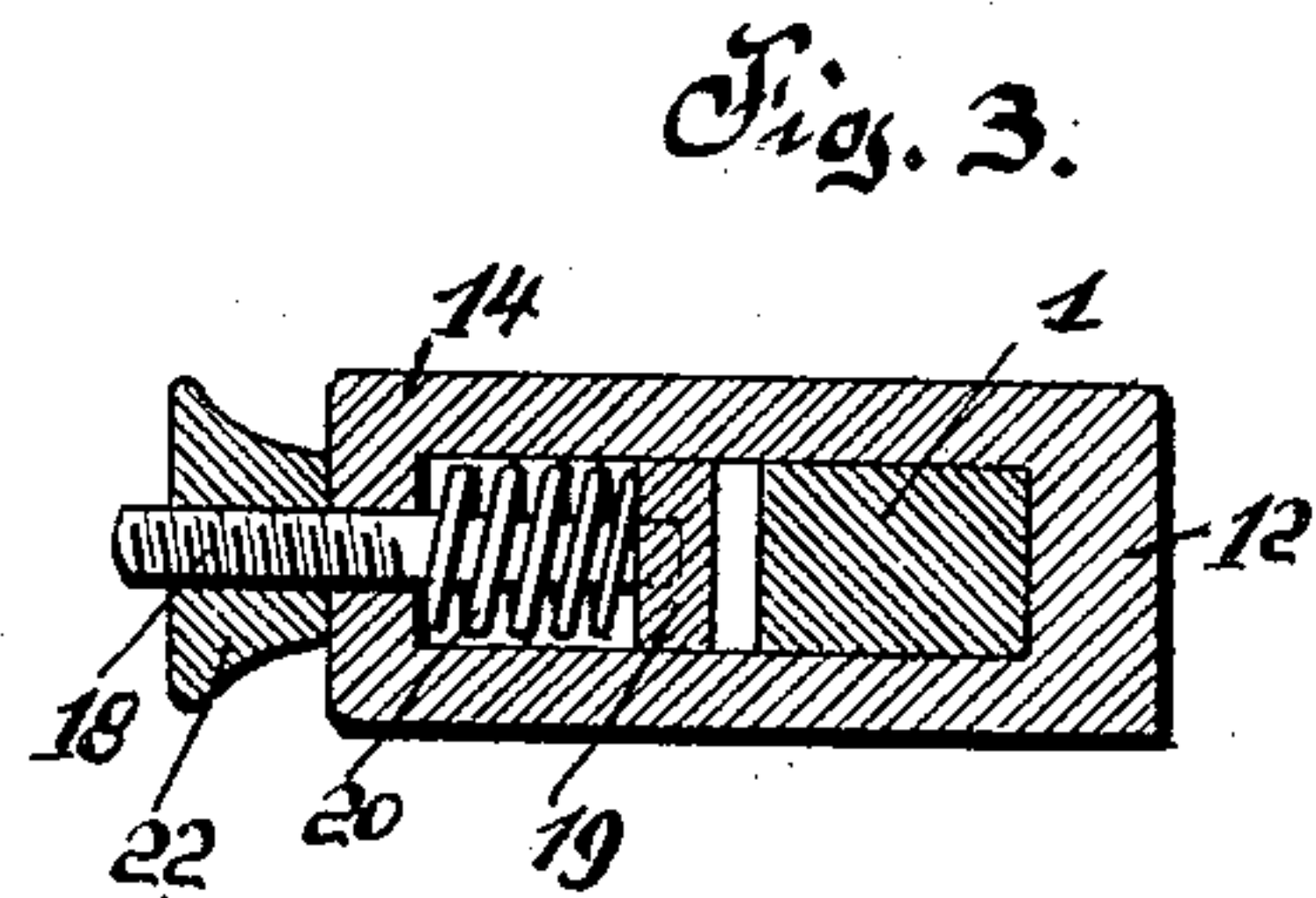


Fig. 3.

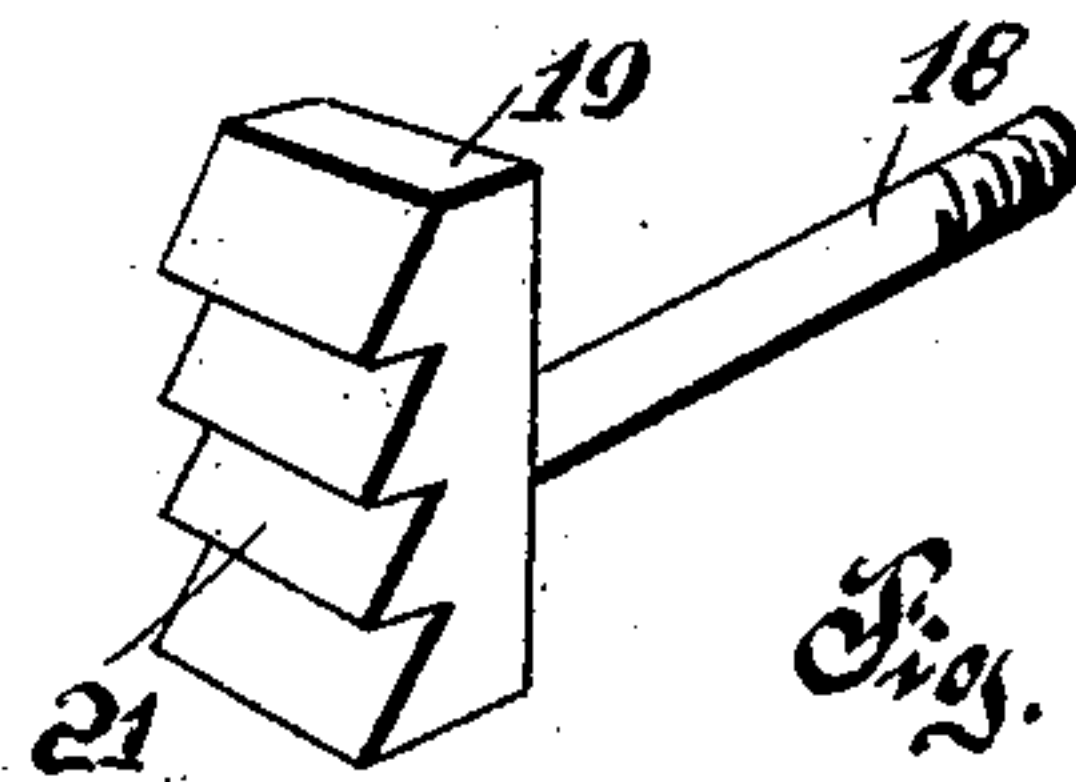


Fig. 4.

Witnesses:
C. F. Lortermann

D. H. Butler

Inventors.
Peter Matusak & George Slaine.

by H. C. East & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

PETER MATUSAK AND GEORGE SLAINE, OF GREENSBURG, PENNSYLVANIA.

WRENCH.

No. 824,499.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed January 2, 1906. Serial No. 294,143.

To all whom it may concern:

Be it known that we, PETER MATUSAK and GEORGE SLAINE, citizens of the United States of America, residing at Greensburg, in the county of Westmoreland 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 the invention has for its primary object to provide a quick-acting wrench wherein novel means is employed for readily adjusting the movable jaw of a wrench.

Another object of this invention is to provide a wrench which can be easily used upon curved surfaces, such as pipes or tubes, the wrench at the same time being applicable to nuts, burs, and the like objects having flattened angularly-disposed surfaces.

A further object of this invention is the provision of novel means whereby the movable jaw of the wrench can be easily and quickly closed and locked into engagement with the object which it grips.

A still further object of this invention is to provide a wrench which will be extremely simple in construction, strong and durable, comparatively inexpensive to manufacture, and highly efficient for the purposes for which it is used.

With the above and other objects in view the invention consists in the novel construction, combination, and arrangement of parts, to be hereinafter more fully described and claimed, and, referring to the drawing accompanying this application, like numerals of reference designate corresponding parts throughout the several views, in which—

Figure 1 is a perspective view of my improved wrench. Fig. 2 is a vertical sectional view of a portion of my improved wrench, partly in side elevation. Fig. 3 is a horizontal sectional view taken on the line xx of Fig. 2, and Fig. 4 is a perspective view of the gripping-block of my improved wrench.

To put our invention into practice, we construct our improved wrench of a shank 1, having a fixed head or jaw 2 and a detachable handle 3. The shank 1 upon its one edge is provided with teeth 4, while the underneath gripping-face of the fixed head or jaw 2 is provided with teeth 5. The handle 3 is detachably held upon the shank 1 by a nut or bur 6, said handle being removed to permit of the

movable jaw 7 being slidably mounted upon the shank 1.

The movable jaw consists of a body portion 8, having an outwardly-extending gripping portion 9, the upper surface of which is provided with teeth 10. The body portion 8 is cut away, as at 11, to receive the shank, and upon its top and bottom edges is provided with straps 12 12, which engage the shank and guide the jaw in its movement thereon.

The lower edge of the jaw 7 is provided with an enlargement 14, having a spring cavity 15 and a gripping-block recess 16, formed therein. The enlargement 14 is provided with a central opening 17, through which extends a screw-threaded stem 18, carried by a gripping-block 19, said gripping-block being slidably mounted in the recess 16 of the jaw 7.

Surrounding the screw-threaded stem 18 within the recess 15 is a coiled spring 20, which is adapted to normally hold the gripping-block 19 in engagement with the shank 1, said gripping-block being provided with teeth 21, corresponding to the teeth of the shank 1.

Mounted upon the outer end of the screw-threaded stem 18 is a knurled button or tap 22, by which the gripping-block 19 is moved.

On account of the pitch or beveled faces of the teeth of the shank 1 and the gripping-block 19 the jaw 7 can be readily closed by sliding it upon the shank 1 toward the fixed head or jaw 2; but when it is desired to open the jaw it is necessary that the button or tap 22 be gripped and pulled outwardly, compressing the spring 20 and removing the gripping-block 19 from engagement with the teeth of the shank 1. The jaw 7 can then be opened to the desired position, and upon releasing the button or tap 22 the expansion of the spring 20 returns the gripping-block 19 to the shank 1, where the teeth 21 of the gripping-block and the teeth 4 of the shank prevent the jaw from being further opened.

By the construction of the adjusting mechanism of the movable jaw it will be observed that the gripping-block 19 can be adjusted relative to the button or tap 22—that is, by rotating the button 22 the engagement of the gripping-block 19 with the shank 1 can be regulated either to more firmly grip the shank 1 or take a lesser grip upon the teeth of said shank.

We preferably construct our improved wrench of strong and durable material, whereby it will withstand the rough usage to which

wrenches of this type are subjected, and such changes in the construction and operation of our improved wrench as are permissible by the appended claims may be resorted to without departing from the spirit and scope of the invention.

What we claim and desire to secure by Letters Patent, is—

1. In a wrench, the combination with a ratchet-toothed shank, and a fixed head or jaw carried by said shank, of a jaw slidably mounted upon said shank, an enlargement carried by the lower end of said jaw and having a spring-receiving recess and a gripping-block recess formed therein, a toothed gripping-block mounted in its respective recess, a screw-threaded stem carried by said gripping-block and extending through said enlargement, a coiled spring mounted in its respective recess and surrounding said screw-threaded stem, and a knurled button having a screw-threaded opening extending through its center from end to end of the button screwing upon the outer end of said stem and bear-

ing against the outer surface of the sliding jaw, substantially as described.

2. In a wrench, the combination with a shank, having a fixed head and inclined ratchet-teeth on one edge, of a sliding jaw mounted on the shank, and formed with a recess adjacent the toothed edge of the shank, a gripping-block having inclined ratchet-teeth on one surface, said gripping-block being mounted in the recess in the sliding jaw, a screw-threaded stem rigidly mounted in said block and extending through an opening in the wall of the sliding jaw, a knurled button mounted on said screw-threaded stem and a spring disposed in said recess and bearing against said block and impelling the same against the shank.

In testimony whereof we affix our signatures in the presence of two witnesses.

PETER MATUSAK.
GEORGE SLAINE.

Witnesses:

J. F. BEATTY,
GEO. S. ANDERSON.