

R. W. ARMSTRONG.

WRENCH.

APPLICATION FILED MAY 7, 1909.

957,726.

Patented May 10, 1910.

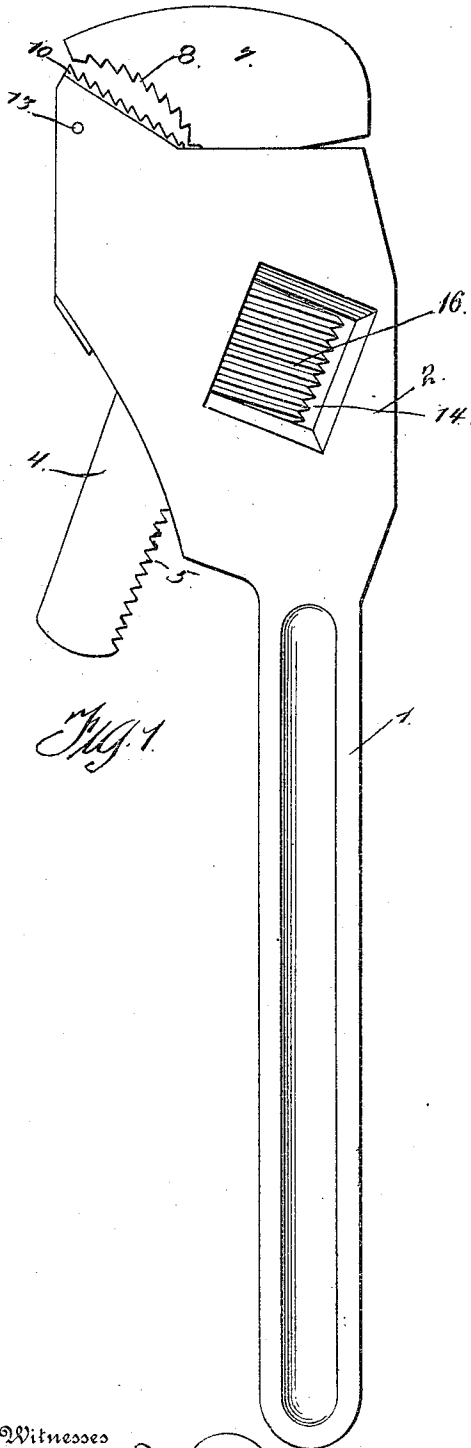


Fig. 1.

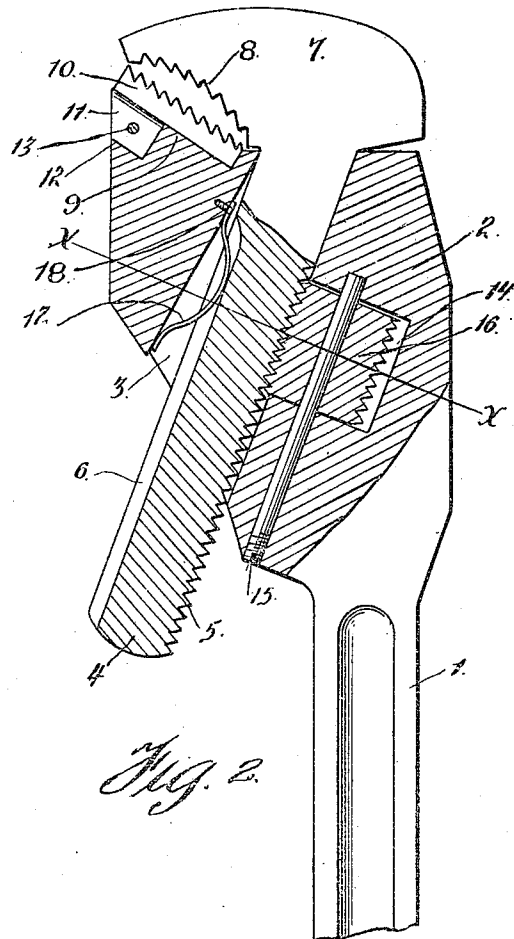


Fig. 2.

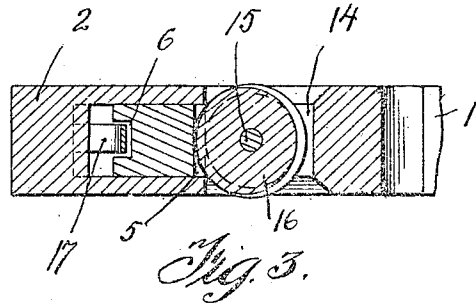


Fig. 3.

Witnesses

Samuel Payne  
A. H. Butler

Inventor

R. W. ARMSTRONG

By

H. C. Everitt

Attorney

# UNITED STATES PATENT OFFICE.

RICHARD W. ARMSTRONG, OF PARKERS LANDING, PENNSYLVANIA.

## WRENCH.

957,726.

Specification of Letters Patent.

Patented May 10, 1910.

Application filed May 7, 1909. Serial No. 494,614.

*To all whom it may concern:*

Be it known that I, RICHARD W. ARMSTRONG, a citizen of the United States of America, residing at Parkers Landing, in the county of Armstrong 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 drawing.

This invention relates to wrenches, and more particularly to that type of wrench commonly styled quick adjusting wrench.

The objects of my invention are, first, to provide a simple and durable pipe wrench that can be easily and quickly adjusted; second, to provide a wrench with a removable gripping jaw that can be renewed when worn and removed when it is desired to use the wrench for rotating nuts or objects having flat surfaces; third, to provide a wrench having a movable gripping jaw that can be easily and quickly adjusted and locked in an adjusted position; and fourth, to provide a wrench that can be advantageously used by mechanics of various kinds, the construction of the wrench being such that it enables the wrench to be easily and quickly manipulated.

The invention will be hereinafter described in detail and reference will now be had to the drawing forming a part of this application, wherein there is illustrated the preferred embodiments of the invention, but I would have it understood that the detail construction thereof can be varied or changed without departing from the spirit of the invention.

Referring to the drawings:—Figure 1 is a side elevation of a wrench constructed in accordance with my invention, Fig. 2 is a vertical sectional view of a portion of the same, and Fig. 3 is a sectional view taken on the line  $x-x$  of Fig. 2.

In the accompanying drawings 1 designates a handle or lever having an enlarged end or head 2 provided with a diagonally disposed tapering opening 3 for a shank 4, which is substantially rectangular in cross section and upon its rear edge provided with teeth or threads 5, while the front edge of the shank is provided with a longitudinal groove 6. The shank 4 is formed integral with a gripping jaw 7 having a serrated concave gripping surface 8.

The head 2 has the upper edge thereof inclined, as at 9, to confront the gripping

surface 8 of the jaw 7, said inclined surface of the head having a seat formed therein for a serrated gripping bar 10, which is provided with a depending tongue 11 adapted to extend into a recess 12 provided therefor in the head 2, said tongue being retained within the recess by a pin 13.

The head 2 is provided with a transverse opening 14 and extending upwardly through said opening is a rod 15. Upon the rod 15 and within the opening 14 is rotatably mounted an exteriorly threaded nut 16 adapted to engage the threads 5 of the shank 4.

Mounted in the tapering diagonally disposed opening 3 of the head 2 is a bow spring 17 having one end thereof fixed, as at 18, said spring extending into the groove 6 of the shank 4 for normally holding said shank in engagement with the nut 16.

It is obvious that by moving the shank 4 outwardly the same can be disengaged from the nut 16 and moved to adjust the jaw 7 relative to the gripping block 10 or by rotating the nut 16 the shank 6 can be minutely adjusted.

The wrench in its entirety is made of strong and durable metal and can be made in various sizes.

Having now described my invention what I claim as new is:—

1. A wrench of the type described, comprising a handle, an enlarged head carried thereby, said head having a diagonally disposed tapering opening formed therein, a shank movably mounted in said opening and having one edge thereof provided with teeth while the opposite edge is provided with a longitudinally disposed groove, a jaw carried by said shank and having a concave serrated gripping surface, said head having an inclined surface provided with a seat, a serrated gripping block mounted in said seat and adapted to confront the gripping surface of said jaw, a pin for holding said gripping block in said seat, said head having a transverse opening formed therein, a threaded nut revolubly mounted in said opening and adapted to engage the teeth of said shank, and a spring located in the diagonally disposed tapering opening of said head and adapted to extend into the groove of said shank for holding said shank in engagement with said nut.

2. A wrench of the type described, comprising a handle, an enlarged head carried

thereby, said head having a diagonally disposed tapering opening formed therein, a shank movably mounted in said opening and having one edge thereof provided with teeth, 5 while the opposite edge is provided with a longitudinally disposed groove, a jaw carried by said shank and having a concave serrated gripping surface, said head having an inclined surface provided with a seat, a 10 serrated gripping block mounted in said seat and adapted to confront the gripping surface of said jaw, a pin for holding said gripping block in said seat, said head having

a transverse opening formed therein, a threaded nut revolubly mounted in said 15 opening and adapted to engage the teeth of said shank, and means carried by said head and extending into the groove of said shank for normally holding said shank in engagement with said nut. 20

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

RICHARD W. ARMSTRONG.

Witnesses:

H. C. ELDER,  
GEO. H. COE.