F. V. HENDRICKSON.

WRENCH.

APPLICATION FILED MAR. 30, 1911.

1,015,181.

Patented Jan. 16, 1912

FIG. 1. FIG. 2. FIG. 4.

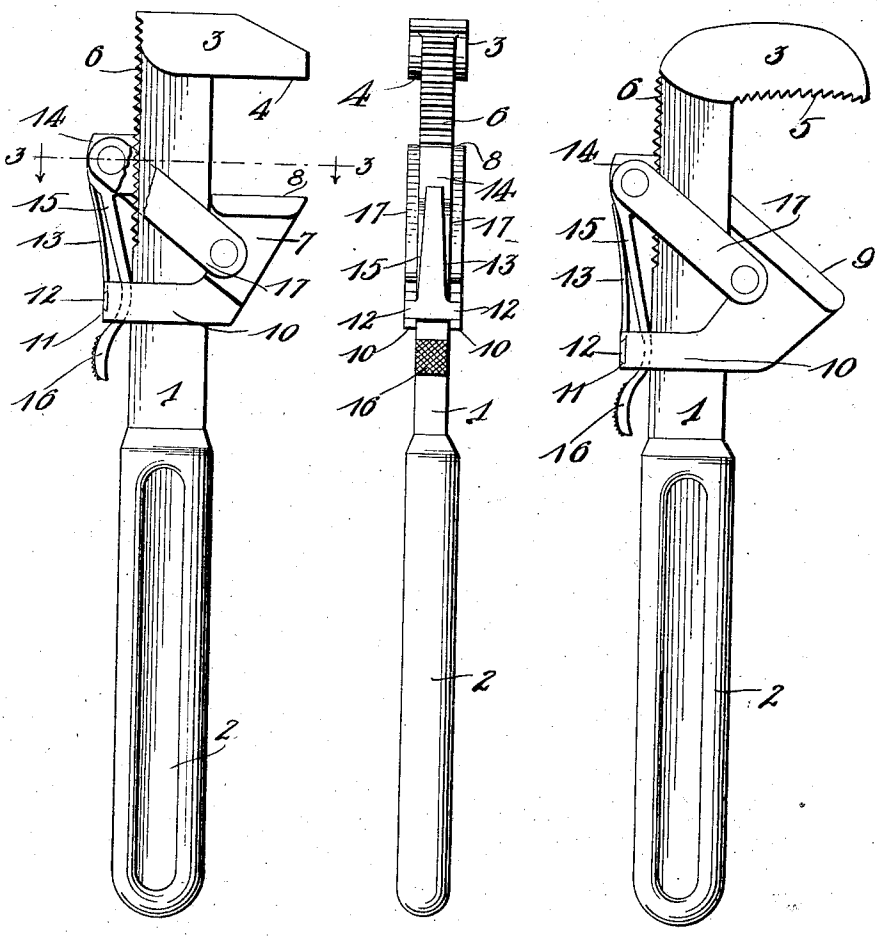
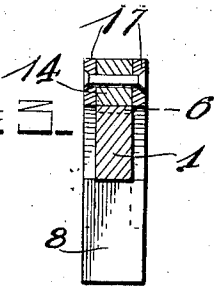


FIG. 3.



Witnesses

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WRENCH.

1,015,181 Specification of Letters Patent. Patented Jan. 16, 1912.

Application filed March 30, 1911. Serial No. 617,975.

To all whom it may concern:

Be it known that I, FREDERICK VICTOR HENDRICKSON, a citizen of the United States, residing at Kellettville, in the county of Forest and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in nut and pipe wrenches.

One object of the invention is to provide a wrench of this character having an improved operating mechanism whereby the movable jaw may be quickly and easily adjusted and fastened in the desired position and which may be constructed in the form of a monkey wrench or a pipe wrench.

With this and other objects in view the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1 is a side view of a monkey wrench constructed in accordance with the invention; Fig. 2 is a rear edge view; Fig. 3 is a cross sectional view on the line 3—3 of Fig. 1; Fig. 4 is a side view of a pipe wrench embodying the invention.

Referring more particularly to the drawings, 1 denotes the stem or shank of the wrench. On the inner end of the stem 1 is a handle 2 said handle being here shown and is preferably formed integral with the stem. On the outer end of the stem is formed the stationary jaw 3 of the wrench. The jaw 3 may have a flat working face 4 as shown in Fig. 1 for engagement with nuts or flat sided objects or said jaw may have a curved and serrated working face 5 as shown in Fig. 4 of the drawing. The rear edge of the stem has formed thereon a series of rack teeth 6 the purpose of which will be hereinafter described.

Slidably mounted on the stem 1 is the movable jaw 7 of the wrench. The jaw 7 may have a flat working face 8 arranged at right angles to the stem and parallel to the working face 4 of the jaw 3 or said jaw 7 may have an inclined working face 9 to coact with the curved serrated surface 5 for gripping pipes or round objects. On the inner end of the jaw 7 are formed parallel stem engaging plates 10 which embrace the opposite sides of the stem and are slidably engaged therewith. The outer ends of the plates 10 project beyond the rear edge of the shank and said ends have formed therein dovetail shaped notches 11 in which are secured lugs 12 formed on the inner end of a spring 13 the purpose of which will be hereinafter described.

Adapted to be engaged with the rack teeth 6 on the rear edge of the stem 1 is a jaw adjusting and locking pawl 14 said pawl comprising a head having a series of teeth adapted to engage the teeth 6 and a curved shank 15 adapted to project between the ends of the plates 10 and slidably engage the edge of the stem below the fixed end of the spring 13 as shown. On the inner end of the pawl is formed a thumb piece 16 the outer surface of which is preferably serrated whereby the same may be firmly engaged by the thumb for operating the movable jaw. The outer end or head of the pawl is pivotally connected by a pair of links 17 with the opposite sides of the movable jaw whereby the pawl is held in position. The outer or free end of the spring 13 is engaged with the outer side of the toothed head of the pawl whereby said head is held in operative engagement with the rack teeth 6.

In the operation of the wrench to adjust the jaw 7 the serrated inner end of the pawl is engaged and depressed by the thumb. In thus depressing the inner end of the pawl the shank 15 is engaged with the rear edge of the stem 1 of the wrench and said pawl thus rocked. In thus rocking the pawl the toothed head on the outer end thereof is swung out of engagement with the rack teeth 6 against the pressure of the spring 13 whereupon the jaw 7 and the parts connected thereto may be readily moved toward or from the outer stationary jaw and thus adjusted to the desired position. When the jaw 7 has thus been adjusted the pawl is released and the spring thus permitted to force the toothed head of the pawl into engagement with the rack teeth thereby locking the jaw in its adjusted position.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention, as defined in the appended claims.

Having thus described my invention, what I claim is:—

1. A wrench comprising a handle, a stem thereon, a stationary jaw on the outer end of said stem, a movable jaw adjustably mounted on said stem, a spring projected pawl adapted to engage said stem and hold said jaw in its adjusted positions, said pawl having its shank curved inwardly intermediately of its ends toward said stem, said curved portion operating against said stem to form a fulcrum for the pawl, means to loosely connect said pawl to said movable jaw.

2. A wrench comprising a handle, a stem thereon, said stem having on its rear edge a series of rack teeth, a stationary jaw on the outer end of said stem, a movable jaw, stem engaging plates formed on said jaw whereby the latter is slidably connected with the stem, a pawl adapted to be engaged with the rack teeth on said stem, said pawl having a curved shank arranged between the projecting ends of the side plates of the adjustable jaw and having an operative engagement with the rear edge of the stem whereby the pawl may be rocked and thus disengaged from the rack teeth on the stem, a thumb piece on said shank, a spring secured between the ends of said jaw plates and having its outer end engaged with said pawl and links to connect the pawl with said movable jaw.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRED. VICTOR HENDRICKSON.

Witnesses:

A. J. SPANGLE,

CHAS. POPE.