

E. D. HAMILTON.
WRENCH.
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938,319.

Patented Oct. 26, 1909.

Fig. 1.

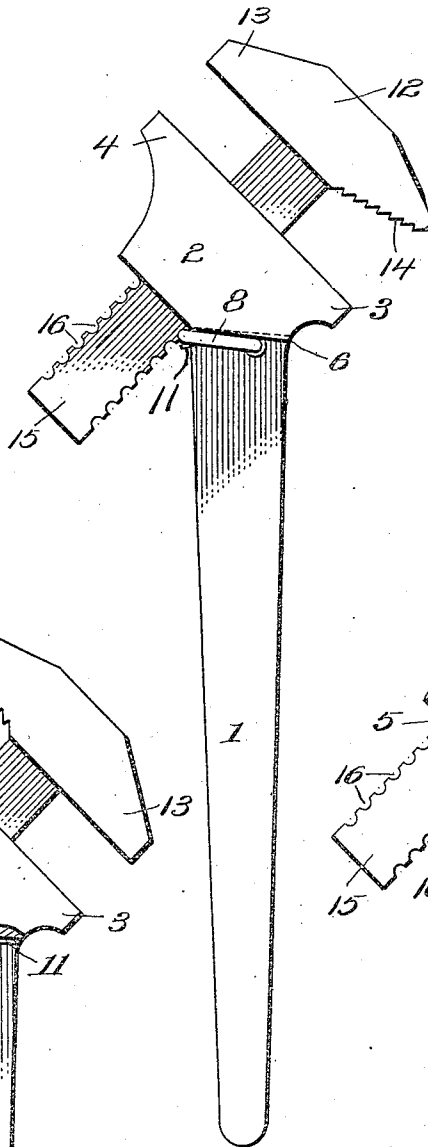


Fig. 2.

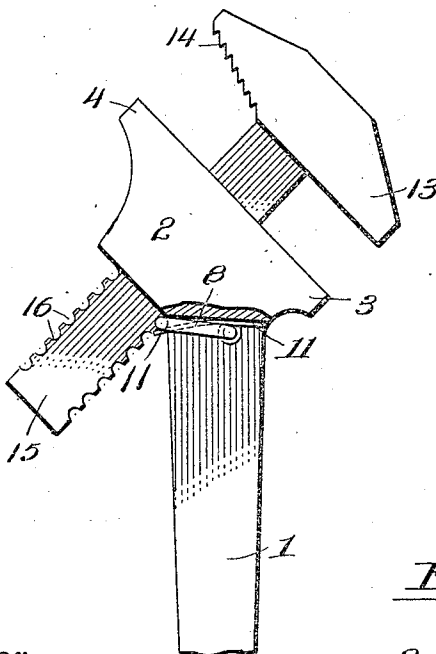


Fig. 3.

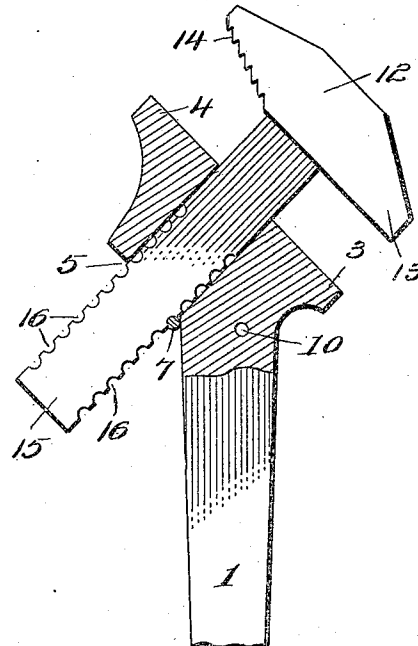
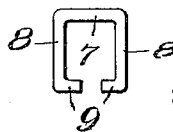


Fig. 4.



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Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD D. HAMILTON, OF MATTOON, ILLINOIS, ASSIGNOR OF ONE-HALF TO MORRIS WELTON STORM, OF MATTOON, ILLINOIS.

WRENCH.

938,319.

Specification of Letters Patent.

Patented Oct. 26, 1909.

Application filed December 29, 1908. Serial No. 469,824.

To all whom it may concern:

Be it known that I, EDWARD D. HAMILTON, a citizen of the United States, residing at Mattoon, in the county of Coles and State of Illinois, have invented new and useful Improvements in Wrenches, of which the following is a specification.

This invention is an improved wrench consisting of a handle having a fixed head forming a jaw, a movable jaw having an arm slidable in a guide-opening of the fixed jaw, and a keeper to lock the movable jaw at any desired adjustment, as hereinafter more fully described and claimed.

The objects of this invention are to provide an improved wrench which is efficient, may be used both for the purposes of a nut wrench and of a pipe wrench and which may be readily produced at very slight expense.

In the accompanying drawing:—Figure 1 is an elevation of a wrench constructed in accordance with this invention. Fig. 2 is a similar view, partly in section showing the movable jaw in a reversed position. Fig. 3 is partly an elevation and partly a sectional view of the same. Fig. 4 is a detail elevation of the keeper.

The handle 1 of my improved wrench is provided at one end with a head 2 disposed at an angle of about forty-five degrees with reference thereto, the said head forming a pair of integral fixed jaws 3, 4, which extend in opposite directions. The said head is provided with the guide opening 5 which extends therethrough and is at right angles to the common plane of the engaging surfaces of the jaws 3, 4. The head extends laterally beyond opposite sides of the handle to form shoulders 6. A keeper 7 which is substantially U-shaped is placed with its arms 8 on opposite sides of the handle and with its inwardly extending pintles or pivots 9 at the inner ends of said arms in engagement with openings 10 in said handle so that the keeper is disposed astride of the handle and is pivotally connected thereto at a point near the head. A spring 11 is employed which serves to normally press the keeper against the shoulders 6 of the head.

A movable head 12 is provided with oppositely extending jaws 13, 14, and with a centrally disposed arm 15 which extends through and is fitted in the guide opening 5 of the fixed head 2. The said arm is provided on opposite sides with series of adjust-

ing notches 16 any one of which notches may be engaged by the keeper 7 to lock the movable head at any required adjustment with reference to the fixed head.

It will be understood that by first disengaging the spring pressed keeper from the arm 15, the movable head may be moved either toward or from the fixed head and the said movable head may be connected to the fixed head with its jaws 13, 14, respectively opposite the jaws 4, 3, of the fixed head as shown in Fig. 1 or with its jaws 13, 14, respectively opposite the jaws 3, 4, of the fixed head as shown in Figs. 2 and 3. The engaging face of the jaw 14 is serrated and is at an angle in respect to the engaging face of the jaw 13.

It will be understood from reference to the drawing that the movable head may be disposed with reference to the fixed head so as to fit the wrench for use with the serrated movable jaw opposed either to the jaw 3 or the jaw 4 so that one side of the wrench is adapted for use for turning angular objects, such as nuts or the like and the other side of the wrench is adapted for use on cylindrical objects, such as pipes.

By bearing against the shoulders 6 of the head, the angularly movable keeper 7 which engages a notch of the arm of the movable jaw firmly locks the movable jaw so that the same can withstand the stress incident to the use of the wrench and the greater the degree of stress to which the movable jaw is subjected the more firmly and securely is the same locked by the said angularly movable keeper as will be readily understood.

My improved wrench may be very readily and rapidly adjusted since it is only necessary to disengage the keeper from the arm of the movable head, move the latter to the required position and then permit the keeper to become reengaged with the said arm, which may be done almost in an instant.

I do not desire to limit myself to the precise construction and arrangement of devices herein shown and described, as modifications may be made therein within the scope of the appended claims.

What is claimed is:—

1. A wrench comprising a handle having a fixed jaw at one end thereof disposed at an oblique angle thereto and forming shoulders across the handle, said jaw having an

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opening extending therethrough, at an angle to the handle so that both ends of said opening are exposed, said jaw further having an engaging face at an oblique angle to the handle, in combination with a movable jaw having an arm extending through, slidable in the opening of the fixed jaw and maintained by said opening at an oblique angle to the handle, said arm of the slidable jaw being provided with locking devices and a keeper pivotally connected to the handle of the fixed jaw, movable angularly into and out of engagement with the locking devices of the arm of the movable jaw and when in engaged position, disposed at an oblique angle to the arm of the slidable jaw and bearing against and coacting with the said shoulders of the handle and fixed jaw to lock the movable jaw against movement in one direction.

2. A wrench comprising a handle having a fixed jaw at one end thereof disposed at an oblique angle thereto and forming shoulders across the handle, said jaw having an opening extending therethrough, at an angle to the handle so that both ends of said open-

ing are exposed, said jaw further having an engaging face at an oblique angle to the handle, in combination with a movable jaw having an arm extending through, slidable in the opening of the fixed jaw and maintained by said opening at an oblique angle to the handle, said arm of the slidable jaw being provided with locking devices, and a keeper pivotally connected to the handle of the fixed jaw, movable angularly into and out of engagement with the locking devices of the arm of the movable jaw and when in engaged position, disposed at an oblique angle to the arm of the slidable jaw and bearing against and coacting with the said shoulders of the handle and fixed jaw to lock the movable jaw against movement in one direction, and a spring to normally hold said keeper in engaged position with said shoulders.

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

EDWARD D. HAMILTON.

Witnesses:

J. A. McFALL,
F. M. PHIPPS.