F. KNOBEL.

WRENCH.

APPLICATION FILED APR. 2, 1909.

948,332. Patented Feb. 8, 1910.

Fig. 1.

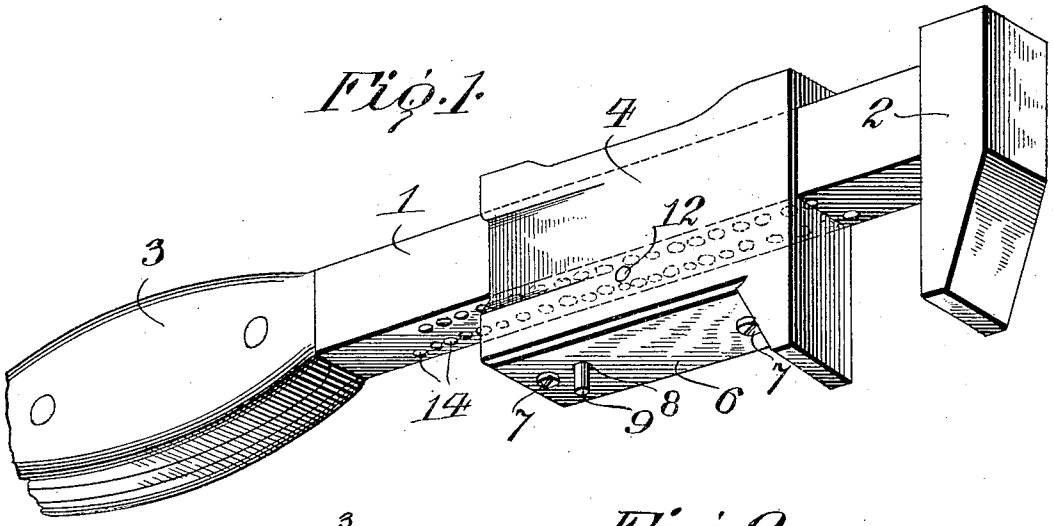



Fig. 2.

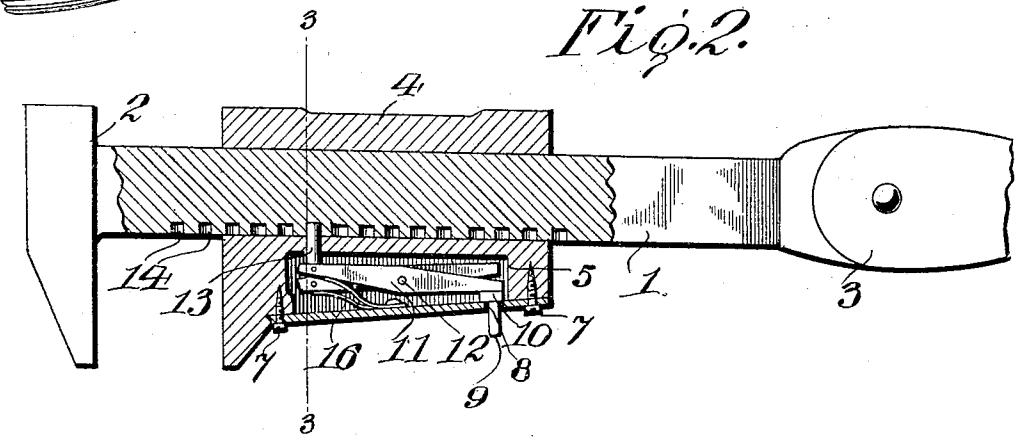
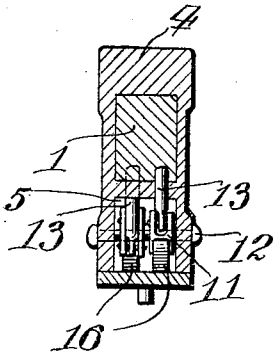



Fig. 3




Witnesses

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# UNITED STATES PATENT OFFICE.

FRED KNOBEL, OF ODESSA, NEBRASKA.

## WRENCH.

948,332. Specification of Letters Patent. Patented Feb. 8, 1910.

Application filed April 2, 1909. Serial No. 487,497.

*To all whom it may concern:*

Be it known that I, FRED KNOBEL, citizen of the United States, residing at Odessa, in the county of Buffalo and State of Nebraska, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention comprehends certain new and useful improvements in wrenches of the sliding jaw and spring pressed pivoted pawl type, and the invention has for its object a simple, durable and efficient construction of tool of this character which is composed of comparatively few parts which may be cheaply manufactured and readily assembled, and that are so arranged that the wrench may be operated effectively with a quick action and a nicety of adjustment.

With these and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings in which:

Figure 1 is a perspective view of a wrench constructed in accordance with my invention. Fig. 2 is a longitudinal sectional view thereof, with parts in side elevation. Fig. 3 is a transverse sectional view, the section being taken substantially on the line 3—3 of Fig. 2.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

Referring to the drawing the numeral 1 designates the shank of my improved wrench and 2 the stationary jaw.

3 designates the handle which is secured to the shank and which may be of any desired construction or design.

The movable jaw 4 is mounted to slide on the shank 1 and is formed with a chamber 5 communicating with one face of the shank 1 and normally covered by a plate 6 secured to the movable jaw by screws or other fastening devices 7. The plate 6 is formed with an opening 8 in which a plunger 9 works, the inner end of the plunger being formed with a transversely elongated head 10 designed to bear against the two pawls 11 that are pivotally mounted in the chamber 5 on a transversely extending pivot 12. Each of the pawls 11 carries at its forward end a pin 13, the said pins 13 being designed to take into depressions or sockets 14 that are formed on the adjacent edge of the shank 1. These sockets 14 are arranged in two longitudinally extending series and in staggered relation as shown, so that a nicety of adjustment may be effected by one or the other of the pawls 11 having a locking engagement with the shank.

15 designates two springs, that are preferably plate or leaf springs and that bear at one end on the respective pawls 11, the springs being secured at their other ends by screws or the like to the inner face of the plate 6.

In order to effect a quick action and adjustment of my improved wrench, it will be obvious from the foregoing description, that it is only necessary to depress the plunger 9 and the head 10 which is formed on the inner end of the plunger will release both of the pawls 11 at once. The jaw 4 may then be slid toward the relatively stationary jaw 2 up against the nut or other work that is to be clamped between the jaws, and when the plunger 9 is released, it is manifest that the springs 15 will exert their tension upon the pawls and cause the pin 13 of one or the other of the pawls to enter one of the sockets 14 and hold the two jaws in rigid relation to each other against the nut or the like.

Having thus described the invention, what is claimed as new is:

1. A wrench, comprising a shank, a relatively stationary jaw secured to said shank, a movable jaw mounted on the shank and formed with a chamber, two pawls mounted side by side in said chamber and provided at one end with pins, the shank being formed with two series of sockets in alinement with the respective pins and in staggered relation to each other, and means carried by the movable jaw for releasing said pins from the sockets.

2. A wrench of the character described, comprising a shank, a stationary jaw connected to said shank, the shank being formed with sockets, a movable jaw mounted to slide on the shank and formed with a chamber, a plate connected to said movable jaw and arranged to close said chamber pawls mounted in said chamber and spring pressed into engagement with the sockets, the plate being formed with an opening and

a plunger extending into said opening into engagement with the rear ends of the pawls.

3. A wrench of the character described, comprising a shank, a jaw secured to said shank, and relatively stationary, a movable jaw mounted to slide on said shank and formed with a chamber, two pawls mounted side by side in said chamber, a plate secured to said movable jaw and closing the outer end of said chamber, springs bearing upon said pawls and arranged to force them into engagement with the shank, the plate being formed with an opening extending therethrough and a plunger working in said opening and formed at one end with a transversely elongated head designed to engage the rear ends of both pawls.

4. A wrench of the character described, comprising a shank formed in one edge with two longitudinally extending series of sockets, the sockets of one series being in staggered relation to the sockets of the other series, a slidable jaw mounted on said shank and formed with a chamber, a plate closing the outer end of said chamber, two pawls pivotally mounted intermediate their ends in said chamber and located side by side, the pawls being provided at their forward ends with pins designed to engage the sockets of the respective series, springs bearing upon the forward ends of said pawls and secured to said plate, the plate being formed with an opening, and a plunger working in said opening and formed at its inner end with a transversely elongated head bearing against the rear ends of said pawls.

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

FRED KNOBEL. [L. S.]

Witnesses:
J. G. LOWE,
W. F. CROSSLY.