No. 835,990. PATENTED NOV. 13, 1906.

B. TINDALL.

WRENCH.

APPLICATION FILED APR. 7, 1906.

Fig. 1.

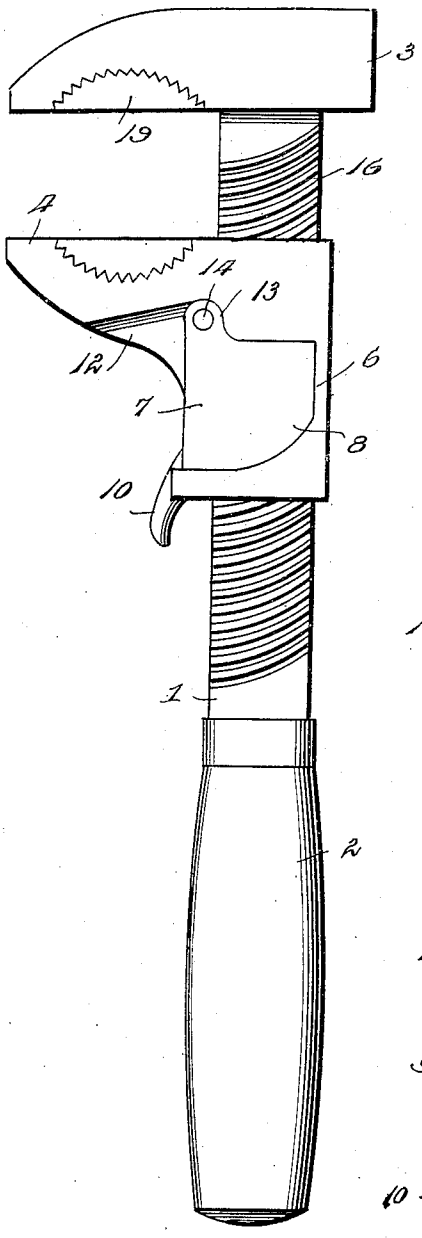


Fig. 2.

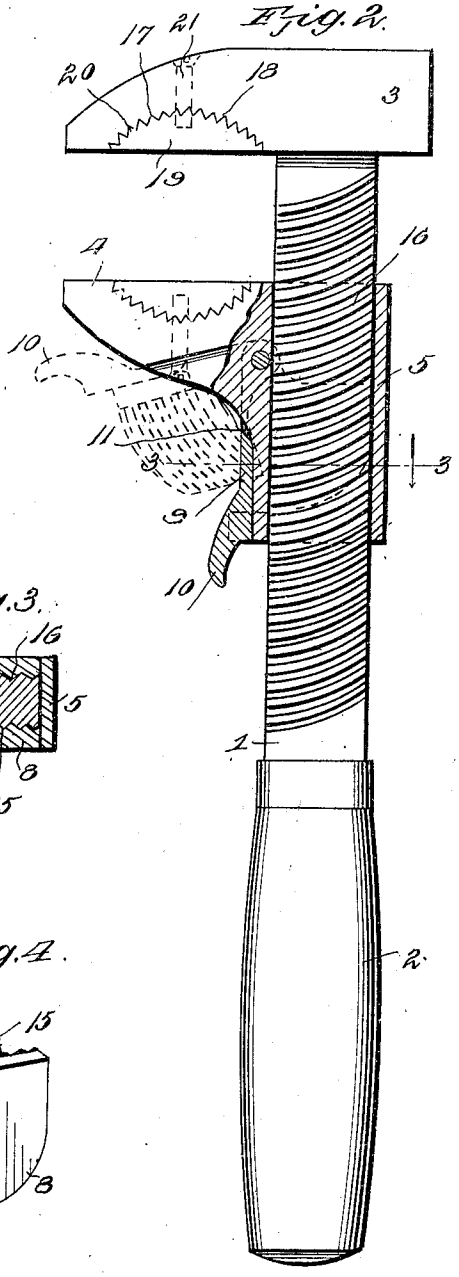


Fig. 3.

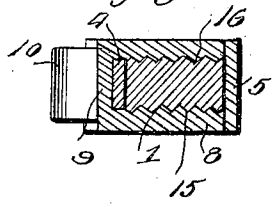
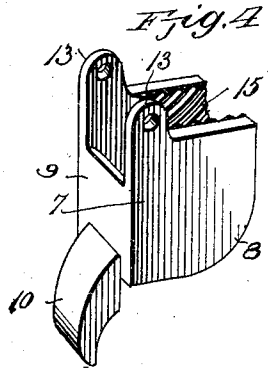


Fig. 4.



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BENJAMIN TINDALL, OF FRAMINGHAM, MASSACHUSETTS.

WRENCH.

No. 835,990. Specification of Letters Patent. Patented Nov. 13, 1906.

Application filed April 7, 1906. Serial No. 310,510.

To all whom it may concern:

Be it known that I, BENJAMIN TINDALL, a citizen of the United States, residing at Framingham, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to improvements in wrenches, its object being to provide a structure whereby the movable jaw may be quickly and conveniently adjusted and securely locked in adjusted position and whereby the device may be readily converted to serve as a pipe or nut wrench at will.

In the accompanying drawings, Figure 1 is a side elevation of a wrench embodying my invention. Fig. 2 is a similar view with the body of the movable jaw and locking device shown in longitudinal section and with the locking device illustrated in its release position in dotted lines. Fig. 3 is a cross-section on the line 3 3 of Fig. 2. Fig. 4 is a detail view of the locking device.

Referring to the drawings, the numeral 1 designates the shank of the wrench, which is provided at one end with a handle 2 and at its opposite end with a fixed jaw 3. The movable jaw 4 is provided with a slotted body portion 5, arranged to slide upon the shank and formed in its sides with slots 6.

A locking device 7 is provided for securing the movable jaw in adjusted position and comprises a pair of side plates 8, adapted to fold within the slots 6 and connected at their outer ends by a short cross-wall 9, on which is formed a finger-piece 10. The wall 9 has its forward portion slotted or cut away, as at 11, to receive the web or reduced portion 12 of the jaw 4, and the side plates 8 of the locking device are provided at their outer forward edges with ears 13 for the reception of a pivot-pin 14, which extends through the web 12 and forms a pivotal support for the locking device.

The inner faces of the plates 8 are provided with teeth or ribs 15, which are curved or arranged on arcs concentric with the pivot-pin 13 and are adapted to engage the grooves between similar teeth or ribs 16, formed upon the opposite sides of the shank 1. In any position of adjustment of the jaw 4 the ribs of the shank engaged by the ribs on the locking device lie on arcs concentric with the pivot-pin 14, so that when the locking device is swung inward to locking position the sets of ribs will interlock and hold the movable jaw firmly and securely in adjusted position. The ribs or teeth of both the shank and locking device are preferably made of V form, or corresponding in shape to ordinary screw-threads, so that they will fit with a binding or wedging action, and thereby secure a more reliable and effective locking action.

It will be apparent that the locking device swings into and out of the slots 6 toward and from the adjacent edge of the shank to locking and retracted positions and forms a clasp whose side plates embrace the shank and interlock on both sides therewith and that owing to this construction and to the described curvature of the locking teeth or ribs any strain upon the movable jaw along the axis of the tool will not affect the locking device or tend in any manner to throw it out of locking engagement.

The meeting faces of the fixed and movable jaws are each formed with a concavity 17 of partially-circular form and provided with cross teeth or serrations 18, said recesses being adapted to receive pipes or other cylindrical objects to adapt the wrench for holding and turning the same. A block 19 is adapted to fit within the recess and is provided with coacting engaging teeth 20. The outer face of the block is plane and lies flush with the face of the jaw when inserted in the recess, the blocks when applied closing the recesses and adapting the device for use as an ordinary nut or bolt wrench. A screw 21 may be applied to each jaw to enter a recess in the block to hold the latter from outward displacement, movement of the block longitudinally of the jaw being prevented by the engaging teeth.

It will thus be seen that a simple form of wrench is provided which may be manufactured at a comparatively low cost and is adapted to effectually perform the functions for which it is designed.

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

1. A wrench having fixed and adjustable jaws provided in their meeting faces with partially-circular toothed or serrated recesses, correspondingly-shaped blocks adapted to be fitted into said recesses, and means for removably fastening the blocks in position.

2. A wrench comprising a shank provided with a fixed jaw and having curved locking-teeth on the opposite sides thereof, a movable jaw slidably mounted on the shank, and a pivoted locking device comprising a clasp

carried by the movable jaw and arranged to swing toward and from the adjacent edge of the shank, said clasp being adapted to embrace the shank and having curved teeth upon its embracing portions to interlock with the teeth on the shank.

3. A wrench comprising a shank provided with a fixed jaw and having curved locking-teeth on opposite sides thereof, a movable jaw slidably mounted on the shank and provided in its sides with slots exposing the toothed surfaces of the shank, and a locking device pivoted to the movable jaw and comprising a clasp arranged to swing toward and from the adjacent edge of the shank and into and out of said slots, said clasp being adapted to embrace the shank and having side plates provided with curved teeth to interlock with the teeth on the shank.

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

BENJAMIN TINDALL.

Witnesses:
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