(No Model.)

M. CUMMINS.

WRENCH.

No. 454,678. Patented June 23, 1891.

Fig. 1.

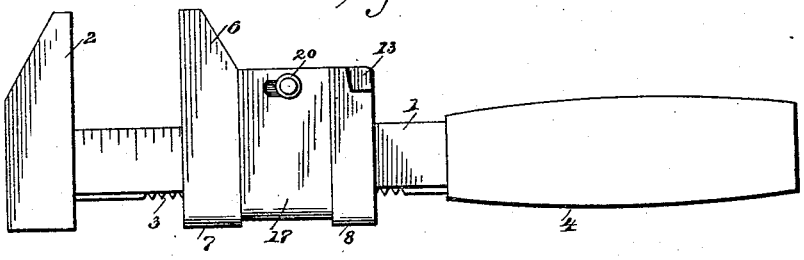


Fig. 2.

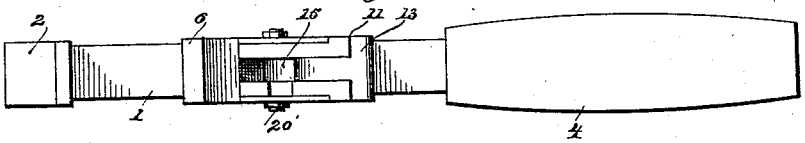


Fig. 3.

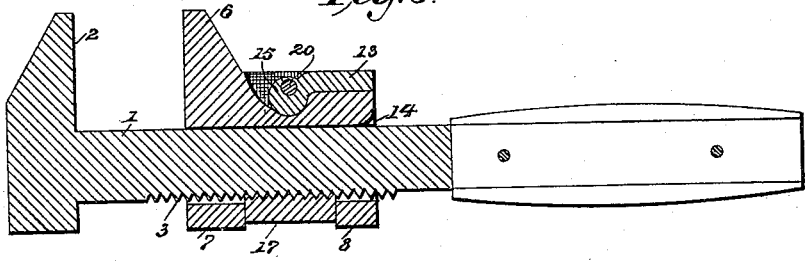


Fig. 4.

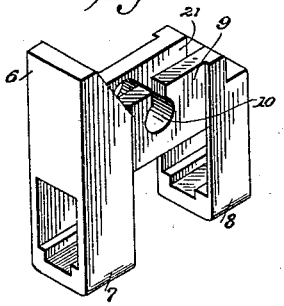


Fig. 5.

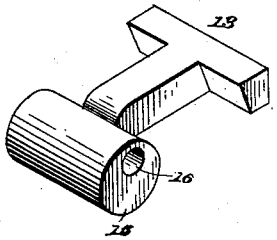
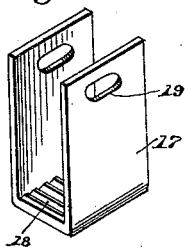


Fig. 6.



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UNITED STATES PATENT OFFICE.

MICHAEL CUMMINS, OF NEW YORK, N. Y.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 454,678, dated June 23, 1891.

Application filed October 13, 1890. Serial No. 367,956. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL CUMMINS, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented a new and useful Wrench, of which the following is a specification.

This invention has relation to that class of wrenches employing a sliding jaw, a toothed shank or stock, a clamping-block, and an eccentrically-pivoted binding-lever for operating said block.

The objects of the invention are to improve the details of construction of the wrench, providing a more efficient, better appearing, and serviceable device, to reduce the number of parts, and to obviate the liability of any accidental movement upon the part of the lever and consequent unlocking.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a side elevation of a wrench constructed in accordance with my invention. Fig. 2 is a front elevation. Fig. 3 is a vertical longitudinal section. Fig. 4 is a detail in perspective of the sliding jaw. Fig. 5 is a similar view of the binding-lever. Fig. 6 is a similar view of the clamp.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the shank or stock of the wrench, rectangular in cross-section and terminating at its upper end in the fixed jaw 2. The rear edge of the wrench is provided with a toothed rib 3, and to the lower end of the shank is secured the usual handle 4. The sliding jaw 6 is provided with an upper loop 7 and a lower loop 8, said loops embracing and being adapted to slide upon the stock or shank, and therefore of rectangular shape, and the two loops are connected by a block 9, adapted to slide upon the front face of the shank, and said block is provided with a transverse circular opening or bearing 10. In the front face of the block there is formed a T-shaped recess 11, which communicates with the circular bearing-opening 10.

13 designates a T-shaped lever adapted to fit the recess 11, and said lever, when in the recess, has its surface flush with that of the block 9, so as to offer no protrusions likely to be accidentally engaged by the clothing or fingers of the operator. The inner edge of the lever is provided with a beveled face 14, into which the thumb-nail of the operator may be introduced for the purpose of raising the free end of the lever out of the recess 11. The inner end of the lever is provided with a cylindrical bearing-trunnion 15, which loosely fits the cylindrical bearing-opening 9, and eccentrically located in said trunnion is a perforation 16.

17 designates a U-shaped clamping-plate adapted to embrace the stock or shank 1 and fit loosely between the upper and lower rectangular loops or sleeves 7 and 8. The rear inner face of the clamping-plate is toothed, as at 18, and the opposite sides thereof are provided with elongated openings or slots 19, through which is passed a bolt 20, which also passes through the eccentric bearing-opening 16 of the block. This completes the construction of the wrench.

In use it is apparent that in order to adjust the wrench the T-shaped lever is by the thumb of the operator swung out from the wrench upon its bearing-trunnion, and such movement, by reason of the eccentric location of the bearing-opening 16, forces the U-shaped clamp in an opposite direction, so that its teeth 18 disengage from the toothed rib 3 of the stock or shank. The sliding jaw may now be moved to or from the fixed jaw, so as to accurately fit the nut, and when a proper position has been reached the T-shaped lever is drawn inwardly and takes within its recess, and the eccentric bolt 20 draws the clamp inwardly, and its teeth intermesh or engage with those of the rib 3. When in this locked position it is apparent that it is impossible for an accidental change of location of the jaws to take place, as is often the case with screw-wrenches, and even in the lever class in cases where the lever hangs down and, like the sleeve of the screw-wrench, is liable to be accidentally struck. In order to introduce the T-shaped lever and its trunnion laterally into the bearing-opening 10, one side of the opening is provided with a passage 21 sufficient to receive the lever.

It will be observed that my wrench con-

sists of a few and simple parts, easily constructed and assembled, and when so assembled has the appearance of an ordinary wrench, yet obviates many disadvantages inherent in such construction.

Having described my invention, what I claim is—

1. In a wrench of the class described, the sliding jaw comprising the upper and lower loops and the intermediate block, the latter provided with a cylindrical transverse bearing-opening and provided at one side with a narrow passage communicating with the opening, said opening being adapted to receive a cylindrical trunnion, and the passage to permit of the lateral introduction of a lever integral with said trunnion, substantially as specified.

2. In a wrench, the combination, with the rectangular stock toothed upon its rear side and terminating at its upper end in a lateral rigid jaw, of a sliding jaw comprising a pair of stock-embracing loops or sleeves, a connecting-block adapted to slide upon the front of the stock and provided with a transverse cylindrical bearing-opening and T-shaped recess, the latter in its front face, a T-shaped lever fitting the recess and having an inner beveled edge, and a cylindrical trunnion fitting the bearing-opening and provided with an eccentric transverse bearing-perforation, a U-shaped clamp having a rear inner toothed surface adapted to engage the teeth of the stock and loosely slide between the loops of the sliding jaw and having its opposite sides provided with elongated slots registering with the eccentric perforation of the trunnion, and a bolt passed through said perforation, substantially as specified.

3. In a wrench, the combination, with the rectangular stock toothed upon its side and terminating at its end in a lateral rigid jaw, of a sliding jaw provided with a transverse cylindrical bearing-opening and T-shaped recess, the latter in its front face, a T-shaped lever fitting the recess, and a cylindrical trunnion fitting the bearing-opening and provided with an eccentric transverse bearing-perforation, a U-shaped clamp having a rear inner toothed surface adapted to engage the teeth of the stock and loosely slide in a recess of the sliding jaw and having its opposite sides provided with elongated slots registering with the eccentric perforation of the trunnion, and a bolt passed through said perforation, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

MICHAEL CUMMINS.

Witnesses:
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JOHN MCKIBBIN.