

(No Model.)

A. McCALLUM.
WRENCH.

No. 521,123.

Patented June 5, 1894.

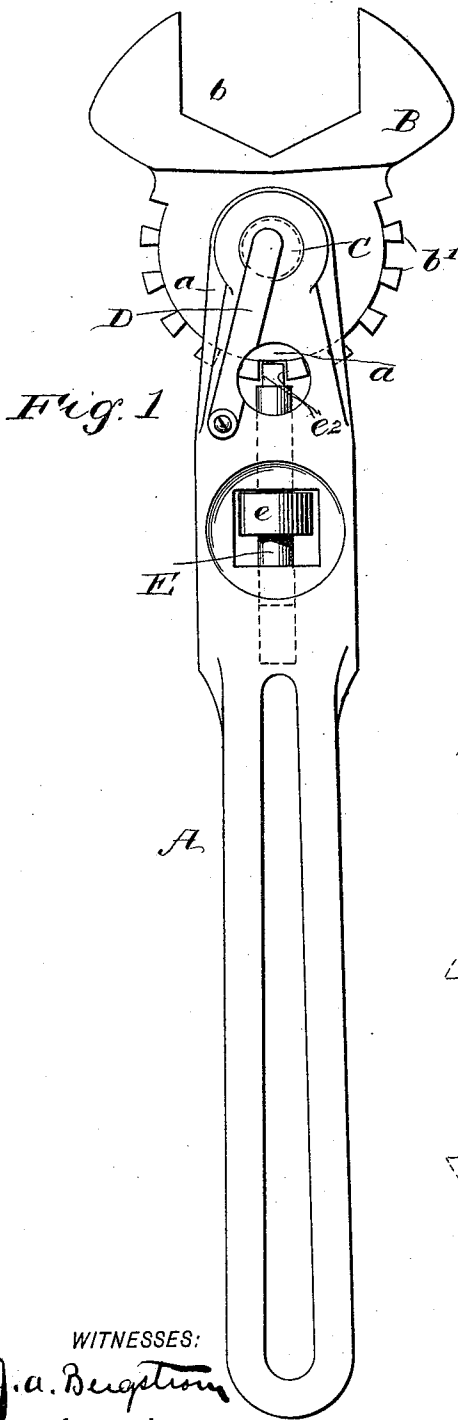


Fig. 1

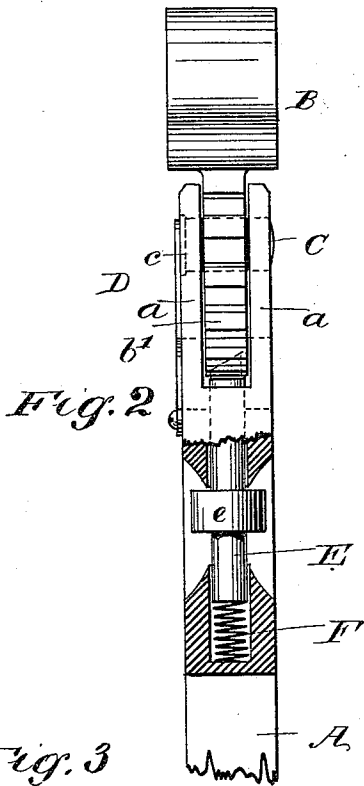


Fig. 2

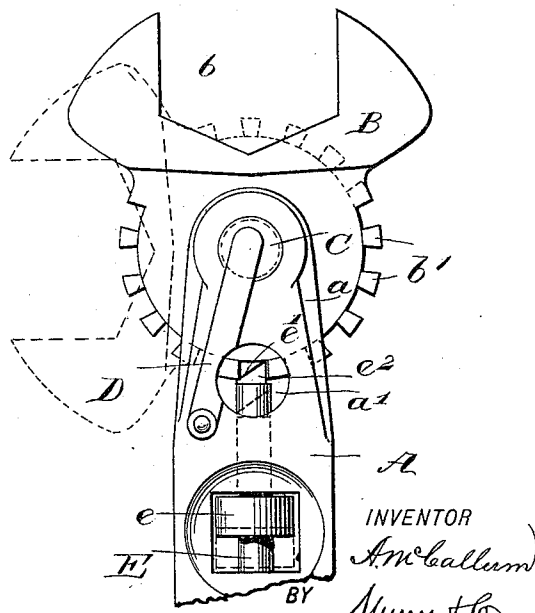


Fig. 3

WITNESSES:
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UNITED STATES PATENT OFFICE.

ARCHIBALD McCALLUM, OF CONRAD, PENNSYLVANIA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 521,123, dated June 5, 1894.

Application filed December 5, 1893. Serial No. 492,858. (No model.)

To all whom it may concern:

Be it known that I, ARCHIBALD McCALLUM, of Conrad, in the county of Potter and State of Pennsylvania, have invented a new and Improved Wrench, of which the following is a full, clear, and exact description.

The invention relates to wrenches having a handle and head adjustably connected for enabling the handle to be disposed at the desired angle to the head, and the object of the present improvement is to provide a simple and efficient wrench of this character, in which the adjustment of the handle may be readily effected, and in which provision is made for working the wrench as a ratchet wrench in either direction, and for locking the head at any angle in fixed relation to the handle against movement in either direction.

The invention consists in the novel construction hereinafter particularly described and defined in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a wrench, embodying my improvement. Fig. 2 is an edge view thereof, partly in section; and Fig. 3 is a broken detail view to be hereinafter referred to.

In constructing a wrench in accordance with my invention, the handle A, of suitable shape and proportions, is forked at its front end, to provide arms *a, a*, between which is received the removable and adjustable head B, which in the present instance is shown as having an angular open sided recess *b*, for the nut; the head may, however, be a socket head.

The head is secured in place by a pin C, which has a slightly enlarged head *c* at one end, and by a pivoted plate D, which is held to the handle and adapted to be slid over the pin C, to retain the latter. Thus by moving the plate D, the pin C may be withdrawn, thus permitting the head B to be removed and substituted by one of a different size. The back edge of the head B, is in the form of a curve and is provided with teeth *b'* and these teeth are adapted to be engaged by a longitudinally movable bolt E, which normally is pressed into engagement with the teeth, by a spring F, and is limited in its longitudinal movement by a stop collar *e*, thereon. In addition to its longitudinal movement the bolt

E is free to be rotated in its bearings in the handle, and at its forward end it is beveled at one edge as at *e'*, as shown in Fig. 3, while the three remaining sides are unbeveled. By this construction, convenience is promoted, as the beveled edge enables the wrench to be operated step by step, as a ratchet wrench, in either direction, according to the disposition of the beveled edge *e'*, thus enabling the wrench to operate in angles or other places that will permit of only a slight movement of the handle, and the construction also permits of the head being turned far enough to permit of obtaining a new hold on the nut. Further, by giving the bolt a quarter turn from the position shown in Fig. 3, two unbeveled surfaces *e², e²*, on opposite sides of the bolt, will be presented to the teeth *b'*, locking the handle at any desired angle, in fixed relation to the head B. An orifice *a'* is formed in one arm *a*, or in both arms, opposite the front of the bolt E, for permitting the operator to see the position of the bolt.

It will be seen that the wrench may be quickly adjusted, and affords a convenient and durable tool.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

The herein described wrench comprising a handle having a forked front end, a removable head held in the fork of the wrench, and formed with a curved and toothed back edge, a pin passing through the fork of the handle and through the head, a pivoted plate on the handle, movable across the pin, and removably retaining said pin in place, and the handle having an orifice, a bolt longitudinally movable in the handle, and adapted to rotate, a stop collar on the bolt, and a spring movably pressing the bolt into engagement with the teeth of the head, the forward end of the bolt being squared and having one side edge beveled and the remaining sides unbeveled, whereby the wrench may be operated as a ratchet wrench in either direction, or may be locked with the handle in fixed relation to the head at any angle, substantially as described.

ARCHIBALD McCALLUM.

Witnesses:

E. O. AUSTIN,
E. B. YARGER.