

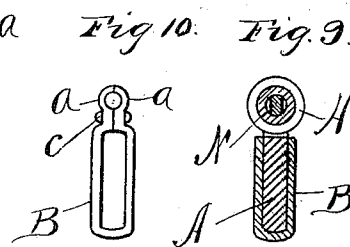
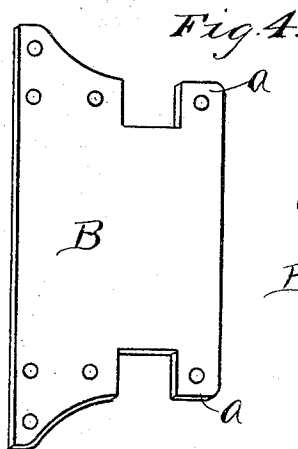
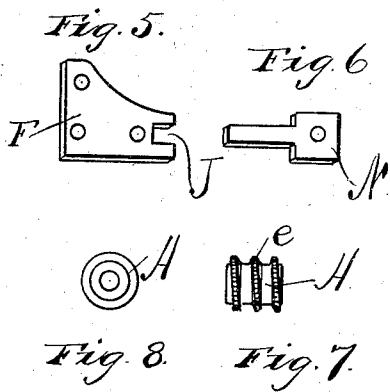
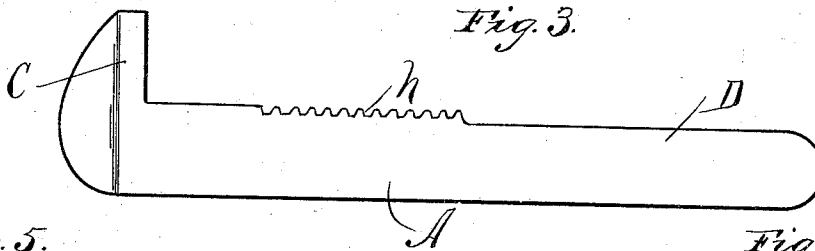
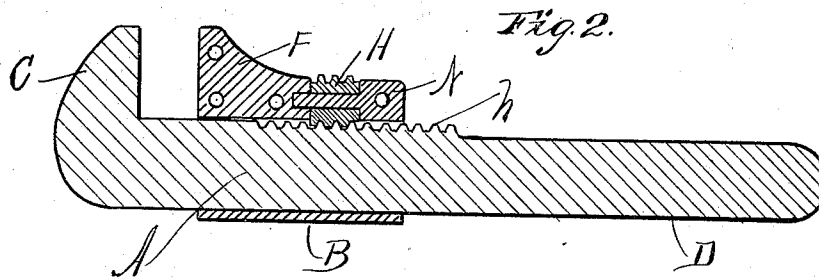
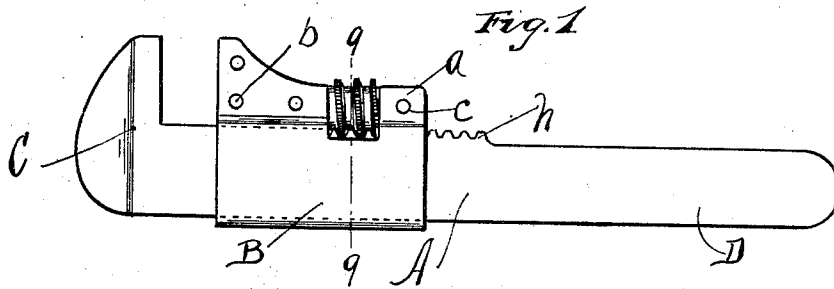
No. 695,072.

Patented Mar. 11, 1902.

F. MOSSBERG.
WRENCH.

(Application filed Oct. 28, 1901.)

(No Model.)



Witnesses.

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WRENCH.

SPECIFICATION forming part of Letters Patent No. 695,072, dated March 11, 1902.

Application filed October 28, 1901. Serial No. 80,218. (No model.)

To all whom it may concern:

Be it known that I, FRANK MOSSBERG, a resident of Attleboro, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Wrenches; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention consists in improvements in nut-wrenches, its object being to produce a wrench for light work, like that found in bicycles, that shall be efficient, durable, and light and at the same time made at the least possible cost. It is fully described and illustrated in this specification and the annexed drawings.

Figure 1 represents a side elevation of the wrench. Fig. 2 shows a section of the wrench, taken lengthwise down through the middle. Fig. 3 is a separate view of the member that forms the stationary jaw and the handle. Fig. 4 shows the shape of the blank that forms the sliding jaw of the wrench. Fig. 5 shows the shape of the blank that forms the intermediate block in the sliding jaw of the wrench. Fig. 6 represents the pin on which the screw-cylinder turns. Fig. 7 is a side elevation of the screw-cylinder. Fig. 8 is an end view of the screw-cylinder. Fig. 9 shows a vertical cross-section of the wrench, taken on line 9 9 in Fig. 1. Figs. 10 and 11 show a modification of the form of the pin and the rear end of the sliding jaw that holds it.

The construction and operation of the wrench are as follows:

A denotes a blank struck out of metal of a proper thickness, that constitutes the solid jaw C and the handle D of the wrench. The solid jaw C is made in the usual monkey-wrench shape, and the handle D extends out back as a plain bar far enough to give the required leverage to accomplish the work the wrench is designed for. The bar D has a number of teeth *h* made on its upper edge about midway of its length to enter between the teeth *e* of the screw-collar H. (See Fig. 2.)

B in Fig. 4 represents the blank struck out of sheet metal—say about one-sixteenth of an inch thick—that is folded up into a loop to form the sliding jaw B in Fig. 1. This blank B is swaged up so as to leave just room enough between its two sides for the bar A to slide in, and the two sides above the bar are bent in so that they shall be just as thick on the outside as the solid head C. A block F (shown in Fig. 5) is punched out of metal of the proper thickness to just fill the space left between the two sides of the upper part of the jaw B, and one or more rivets *b* are put through the sides and the block F to hold it in place. A pin N, to hold the screw-collar H, is punched out of metal of the same thickness as the blank F. This pin N (see Fig. 6) consists of a pin to hold the screw-collar and a broad head on one end to go between the ears *a a* on the rear end of the jaw B, in which it is secured by a rivet *c*. The inner end of the pin N is fitted to enter a notch *j* in the rear end of the block F to hold it in place.

The screw H is a collar (see Fig. 7) with a hole through its center and a screw-thread *e* made on its periphery to fit in between the teeth *h* on the upper edge of the bar A, (see Fig. 2,) and the edge of the screw-thread *e* is milled to give a better hold for the thumb in turning the screw-collar. The operation of the wrench may be understood from the above because of the simplicity of its construction; but we will add that the wrench is taken in the right hand by the handle D, so as to bring the thumb on the screw-collar H. Then by turning the top of the screw to the right the jaws will be opened, and by turning it to the left they will be closed, so as to clamp the nut.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In a wrench, the combination with a shank having the fixed jaw and having teeth on its inner edge; of a jaw member slidable on said shank, and having a recess extending down to said teeth, the forward wall of the recess having a slot therein, the portion rearward of the recess comprising two wings extending longitudinally of the wrench and transverse

to the shank; a plate disposed between said wings; means for securing the plate and wings together, the plate having a reduced portion extending across said recess and engaging the walls of said slot; and a threaded sleeve rotatably mounted on the reduced portion and engaging the teeth of the shank.

In testimony whereof I have hereunto set my hand this 22d day of October, A. D. 1901.

FRANK MOSSBERG.

In presence of—

HOWARD E. BARLOW,
BENJ. ARNOLD.