

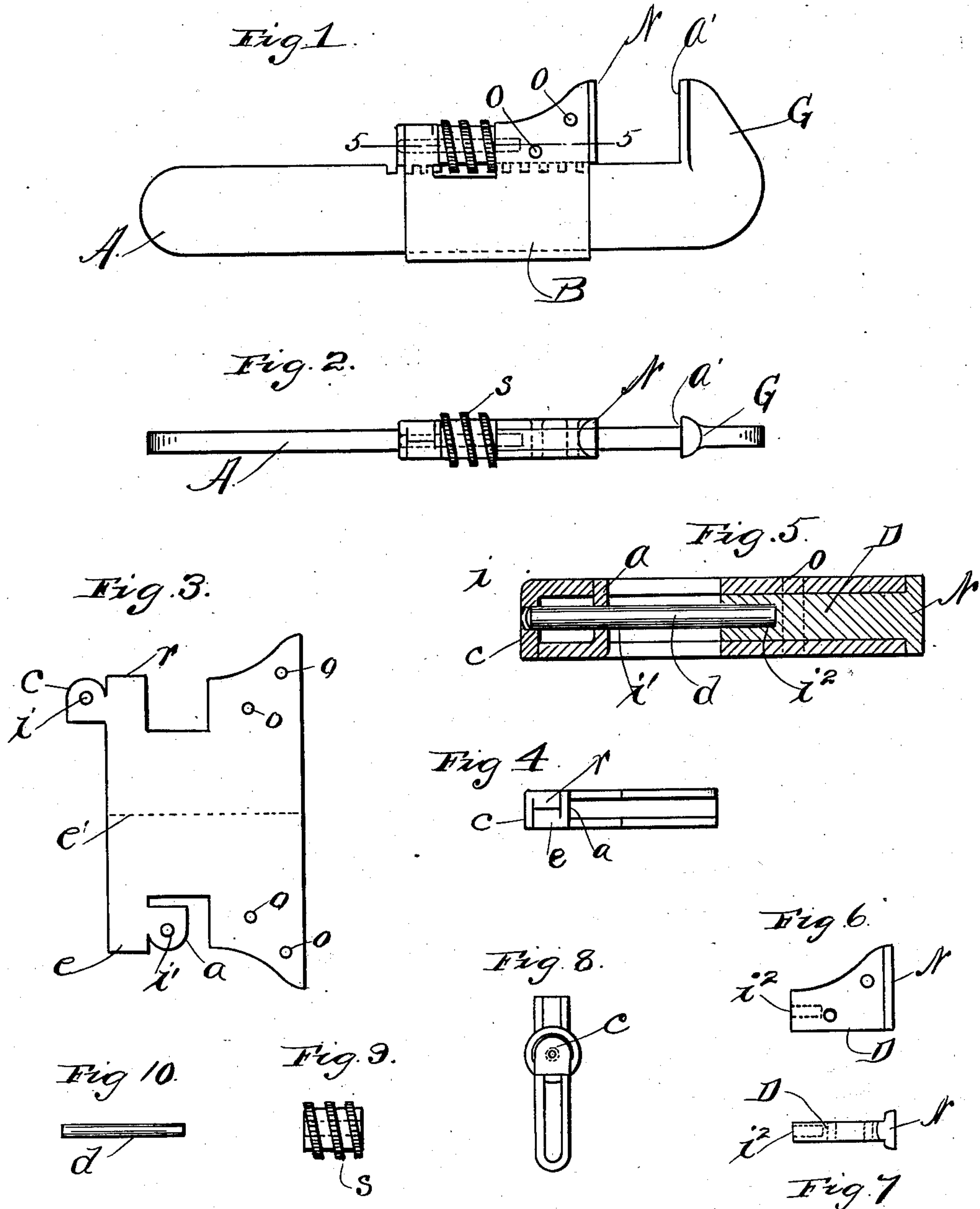
No. 661,810.

Patented Nov. 13, 1900.

F. MOSSBERG.
WRENCH.

(Application filed Sept. 11, 1900.)

(No Model.)



Witnesses.

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WRENCH.

SPECIFICATION forming part of Letters Patent No. 661,810, dated November 13, 1900.

Application filed September 11, 1900. Serial No. 29,631. (No model.)

To all whom it may concern:

Be it known that I, FRANK MOSSBERG, a resident of Attleborough, 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 relates to the class of wrenches intended for light work, such as bicycles, &c.

It is fully explained and illustrated in this specification and the annexed drawings.

Figure 1 shows a side view of the wrench. Fig. 2 is a top view of the wrench. Fig. 3 is a diagram of the blank of sheet metal which is to be folded up to form the movable jaw of the wrench. Fig. 4 is a top view of the blank seen in Fig. 3 bent up to form said movable jaw. Fig. 5 is an enlarged horizontal section of the movable jaw, taken on line 5 5 in Fig. 1, showing the bearing of the pin in the block and in the rear end of the jaw and also the closing in of the outer bearing to hold the pin in place with the screw-collar left out. Fig. 6 shows a side view of the block that forms the center of the movable jaw. Fig. 7 is a top view of the center block shown in Fig. 6. Fig. 8 shows an end view of the movable jaw. Fig. 9 is the milled nut shown in Figs. 1 and 2. Fig. 10 is the pin on which the milled nut turns.

The object of this invention is to produce a very light strong wrench for use on bicycles or automobiles, simple in construction, and that can be made at a very small cost.

The construction and operation are as follows:

In the drawings, A represents the shank of the wrench, which has a stationary jaw G made integral with the shank and having its inner face at *a'* upset by swaging to form a face as broad as the inner face of the movable jaw at N.

B is the movable jaw, which is made by punching a blank out of sheet metal in the shape shown in Fig. 3 and folding it up on the dotted line *e'* in that figure into the form

shown in Fig. 4. In order to make a bearing for the pin *d*, on which the screw-collar turns in the rear end of the movable jaw, the ear *a* in Fig. 3 is folded square across and forms an inner bearing *a*, (see Figs. 4 and 5,) while the ear *c* of Fig. 3 is folded the opposite way across the rear end, forming an outer bearing for this pin *d*, which passes through both of these ears, thereby giving it a double bearing in the tail of the jaw. (See Fig. 5.) The parts *r* and *e* are bent up and over in a semi-circular form to meet each other over the top, making a cap and giving a solid and finished appearance to this end of the jaw. In Figs. 6 and 7 are shown the center block D, that fills in between the folded sides of the movable jaw B and which is made broader on one end to make a face N for that jaw. The block is held between the sides of the folded blank by means of rivets *o o*, which pass through the sides and block. No brazing is necessary by this method. A hole *i*² is made in the rear end of the block to correspond with holes *i i'* made in the inner and outer folds *a c* on the rear end of Fig. 5. This hole forms the other bearing for the pin *d*, as illustrated in Fig. 5. The thread on the screw-collar *s* is made square and milled on its periphery to give it a suitable surface to turn it by, and portions of a corresponding screw-thread or rack are made on the upper side of the shank A, into which the threads of the collar fit when the movable jaw is in its place on the shank A. To retain the pin *d* in place, the edge of the hole *i* is headed over the pin sufficiently to keep it from working out. This wrench is handsome and finished in appearance and so easy to manufacture that the cost of making is reduced to the lowest figure. The metal being well placed, it combines the most desirable features in this class of wrenches—that of great strength with lightness, together with low cost of manufacture.

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

1. In a wrench the combination of a shank having a stationary jaw made integral with it and having its working face broadened by upsetting, a movable jaw formed of a blank of sheet metal having projections on it to

form the outer side the inner side and top of a back bearing for a pin, a center block having its face made broad by upsetting, a center block held between the sides of the folded blank and secured by rivets, a collar having a milled screw-thread made on its surface held in a cavity in said movable jaw, a pin for said collar to turn on, substantially as described.

2. In a wrench, the combination of a shank having a stationary jaw and a row of screw-notches in its upper edge, a movable jaw made of a blank of sheet metal folded up and a center block having one end made broad to form the face of the jaw, a collar having a screw-thread on its periphery milled on its outside, a pin to hold said collar having its inner end held in a hole in said block, and its rear end held in a bearing made by bending parts of the blank across at right angle to the sides of the jaw, substantially as described.

3. In a wrench, the combination of a shank, a stationary jaw, a movable jaw consisting of a blank punched out of sheet metal with its sides bent up and fastened to a center block, said blank having ears *a* and *c* on its rear end bent around at right angles to its sides forming a bearing for a pin on which the screw-collar turns, and said center block, substantially as described.

4. In a wrench, the combination of a shank, a stationary jaw, a movable jaw consisting of a blank punched out of sheet metal, with its sides bent up parallel to each other and its upper edges riveted to a center block, said blank having ears *a* and *c* bent around at right angles to the side forming a bearing for a pin,

the hole in the outer bearing *c* being headed over to keep the pin in place, said center block drilled to receive the inner end of said pin, substantially as described.

5. In a wrench, the combination of a shank, a stationary jaw, a movable jaw consisting of a blank punched out of sheet metal with its sides bent up and fastened together, said blank having ears *a* and *c* on its rear end bent around at right angles to its sides forming a bearing for a pin on which a screw-collar turns, and said center block, substantially as described.

6. In a wrench, the combination of a shank, a stationary jaw, a movable jaw consisting of a blank punched out of sheet metal with its sides bent up and fastened to a center block, a collar having a screw-thread made on its periphery milled on its outer edge, a pin held by said movable jaw for the screw to turn on, substantially as described.

7. In a wrench, the combination of a shank, having a stationary jaw made integral with it and having its working face made broad by upsetting the metal, a movable jaw formed of a blank of sheet metal folded up and riveted together, a collar having a screw-thread made on its periphery milled on its outer edge, a pin held by said movable jaw for the screw-collar to turn on, substantially as described.

In testimony whereof I hereunto set my hand this 8th day of September, A. D. 1900.

FRANK MOSSBERG.

In presence of—

BENJ. ARNOLD,
E. S. MARSH.