

(No Model.)

J. P. LAVIGNE.
WRENCH.

No. 552,324.

Patented Dec. 31, 1895.

Fig. 1

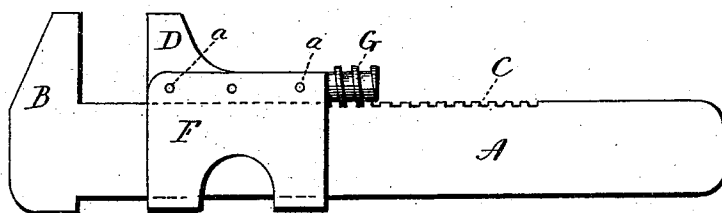


Fig. 2

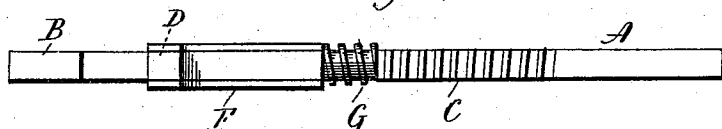
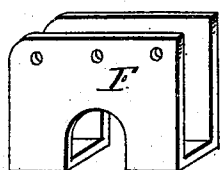


Fig. 3



Fig. 4



Witness
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WRENCH.

SPECIFICATION forming part of Letters Patent No. 552,324, dated December 31, 1895.

Application filed August 12, 1895. Serial No. 558,998. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH P. LAVIGNE, of New Haven, in the county of New Haven and State of Connecticut, have invented a new
5 Improvement in Wrenches; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same,
10 and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of a wrench; Fig. 2, an outer edge view of the same; Figs. 3 and 4, perspective views of the parts of the movable jaw detached.

My invention relates to an improvement in that class of monkey-wrenches in which a movable jaw sliding upon the shank of the wrench is adjusted back and forth by means
20 of an operating-nut in the form of a small worm-gear, the threads of which take into a rack formed in the inner edge of the shank.

The object of my present invention is to produce at a low cost for manufacture a wrench of the type described, which shall be
25 composed of few parts and which shall be convenient and effective in use.

With these ends in view my invention consists in a monkey-wrench having certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claim.

In carrying out my invention, as herein shown, I construct the shank A and the stationary jaw B of the wrench integral with each other by striking them out from wrought metal of suitable thickness. I also form upon the inner edge of the shank a rack C, the threads of which are pitched, as clearly seen
35 in Fig. 2. The movable jaw of the wrench is composed of a block D and a sheet-metal shell or strap F. The said block is constructed at its upper end with a lug, corresponding in projection to the projection of the stationary jaw B, and constructed at its lower end with an integral stud E, which is brought into the required form after the block has been blanked out from suitable wrought metal. The shell F before mentioned is
40 struck up from a single piece of sheet metal, and has two corresponding side walls, the

space between which corresponds substantially to the thickness of the shank A of the wrench, over which the shell fits with just enough play to permit it to slide freely back
55 and forth thereupon. When the shell is applied to the shank, the edges of its side walls project sufficiently beyond the inner edge thereof to receive between them the inner edge of the block, which is permanently secured to the shell by means of rivets a. I may here observe that the length of the shell corresponds to the length of the block exclusive of the integral stud E of the latter. Upon the said stud, after it has been worked
60 into cylindrical form, I mount an operating-nut G, in the form of a small worm-gear, the threads of which take into the rack C before mentioned. By preference I secure the nut to the stud by riveting or heading down the
65 outer end thereof upon the outer end of the nut. It will be obvious that by turning the nut by the fingers the movable jaw will be slid back and forth upon the shank.

By providing the block of the movable jaw
75 with an integral stud, as shown and described, I am enabled to construct the block and shell from sheet metal, and to permanently secure them together without weakening the jaw, for were the stud formed independent of the
80 block and driven into a socket formed therein to receive it the block would be not only weakened, but also it would be impossible to secure an equally strong construction, as the rivets employed for connecting the shell and
85 block together would have either to pass through the inner end of the independent stud, whereby the same would be weakened, or would have to be located so as to dodge the inner end of the stud, and that alternative
90 could not be resorted to without leaving a weak place in the jaw. Moreover, the construction of the stud independent of the block, and the counterboring of the latter to receive it, necessarily results in a weaker construction
95 than I secure by making the block and stud integral.

I am aware that it is old to make the shank and stationary jaw of a monkey-wrench from a single piece of sheet metal. I am also
100 aware that it is old to apply sheet-metal straps or shells to the shanks of monkey-wrenches.

I do not therefore claim either of those constructions broadly.

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

5 The herein described monkey wrench, consisting in the combination with an integral wrought-metal jaw and shank, of which the latter has a rack formed in its inner edge; 10 of a movable jaw sliding upon the shank, and composed of a permanently connected sheet-metal shell, and block, the said shell fitting over the shank so as to slide freely thereupon, and having its side walls project beyond the 15 inner edge thereof, and the said block constructed at its upper end with a projecting lug co-acting with the stationary jaw and at

its lower end with an integral stud, and the said block having its inner edge inserted between and rigidly secured by rivets to the 20 projecting side walls of the shell which corresponds to the block in length exclusive of the stud thereof; and a small worm-gear-operating-nut applied to the stud and secured thereto by the riveting down of the projecting outer end thereof, substantially as set 25 forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOSEPH P. LAVIGNE.

Witnesses:

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FRED. C. EARLE.