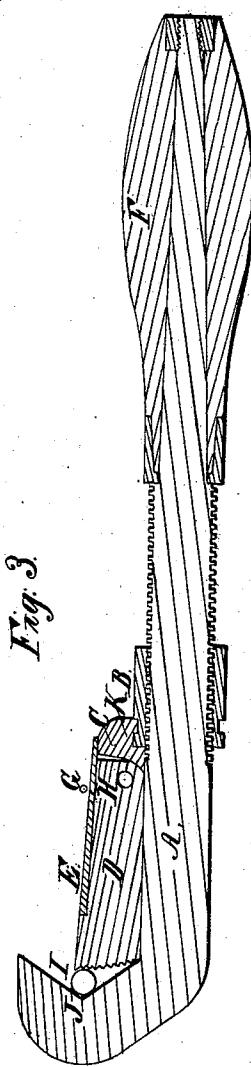
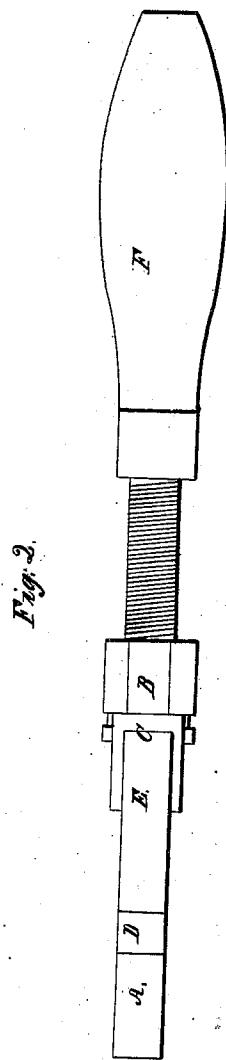
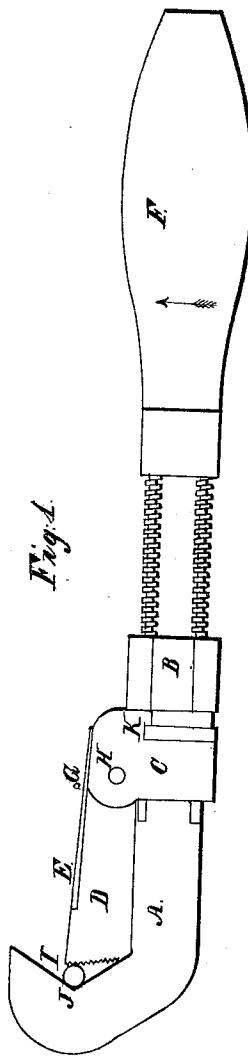


Bartholomew & Merrick,

Wrench.

No. 6,002.

Patented Jan 2, 1849.



# UNITED STATES PATENT OFFICE.

F. H. BARTHOLOMEW, OF NEW YORK, N. Y., AND SOLYMAN MERRICK, OF SPRINGFIELD, MASSACHUSETTS.

## SCREW-WRENCH FOR GRASPING CYLINDRICAL FORMS.

Specification of Letters Patent No. 6,002, dated January 2, 1849.

*To all whom it may concern:*

Be it known that we, FREDERICK H. BARTHOLOMEW, of New York City, in the county and State of New York, and SOLYMAN MERRICK, of Springfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in the Screw-Wrenches, for which Letters Patent were granted to the said MERRICK on the 10 15th day of August, A. D., 1848; and we do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

15 Of said drawings, Figure 1 denotes a side elevation of our improved wrench. Fig. 2 is a top view of it. Fig. 3 is a central vertical section.

20 In said figures A denotes the main bar of the wrench, B the movable nut, C the slide, D the tightening lever, E the spring, F the handle, G the center from which the indented end of the lever D is described, H the center upon which the lever D turns, I 25 the bolt or other cylindrical substance to be turned.

25 In the wrench described in the schedule of the Letters Patent herein above mentioned, for the purpose of turning cylindrical substances, the jaws of the common wrench are made in such a manner that when the faces are brought in contact they are not parallel but form an angle; one of the faces is indented or roughened and the other left smooth, so that by turning the wrench in the proper direction, the bolt or cylinder to be turned is drawn in between the two faces and held firmly. It is found in practice that when the wrench has been long in use, the 40 smooth face becomes somewhat roughened, and when the motion of the wrench is reversed for the purpose of taking a new hold of the cylinder, the friction on the smooth face is so great as to draw it partially back in a contrary direction to the one desired. In order to remedy this defect we form an angle in the main bar of the wrench as shown at J; we then make the slide C to move easily backward and forward on that 45 part of the bar upon which the screw is cut; to the slide C we attach the lever D by a joint as shown at H. which lever is pressed

down upon the main bar by the spring E, which spring is made fast to the lever D and bears upon the slide C; the end of the 55 lever D is made circular (the center of which circle is shown at G) for the purpose of pressing more firmly against the cylinder as the end of the lever is forced down toward the main bar; the circular end of 60 the lever is also indented or roughened that it may not slip on the cylinder. The screw is cut upon two opposite sides of the main bar and the movable nut fitted to it as in the ordinary screw wrench; the handle is 65 also attached in the usual way; but to connect the slide C with the movable nut, we make a portion of the slide to project a short distance toward the handle; underneath this projection we cut a groove a 70 short distance from the end; we also turn a groove near the end of the nut; the collar of the nut thus formed takes into the groove in the slide, and the projection on the end of the slide takes into the groove in the nut 75 as shown at K Fig. 1 and Fig. 3.

To operate our wrench, we place the main bar upon the cylindrical nut or bolt as shown at I Fig. 1; we then advance the lever D by means of the movable nut, until the indented end of the lever comes in contact with the cylinder; we then draw the handle back a short distance and at the same time continue to advance the lever until the indented end of the lever is raised a little from 80 the main bar; we then draw the handle in the direction indicated by the arrow, which causes the lever to take a firm hold of the cylinder and carry it around in the direction of the arrow, and by reversing the motion of the handle the cylinder is instantly 85 released.

What we claim in the above described wrench, and for the purpose of holding and turning cylindrical substances, is—

95 The combination of the lever D with the main bar of the wrench, also with the slide C, the nut B and the spring E, substantially as herein described.

F. H. BARTHOLOMEW.  
SOLYMAN MERRICK.

Witnesses:

GEO. IRELAND, Jr.,  
JAS. P. HOWARD.