(No Model.)

J. A. GILES.

WORK HOLDING CHUCK.

No. 323,414. Patented Aug. 4, 1885.

Fig. 1.

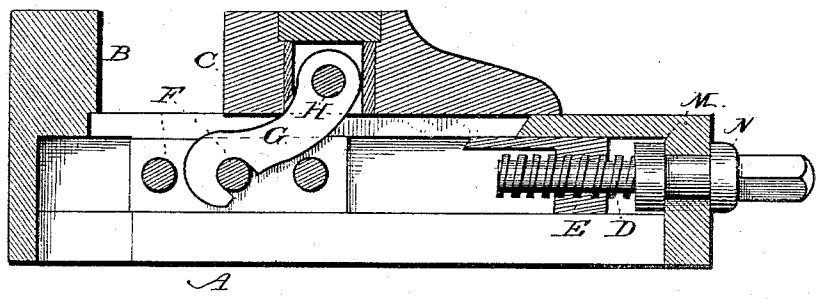


Fig. 2.

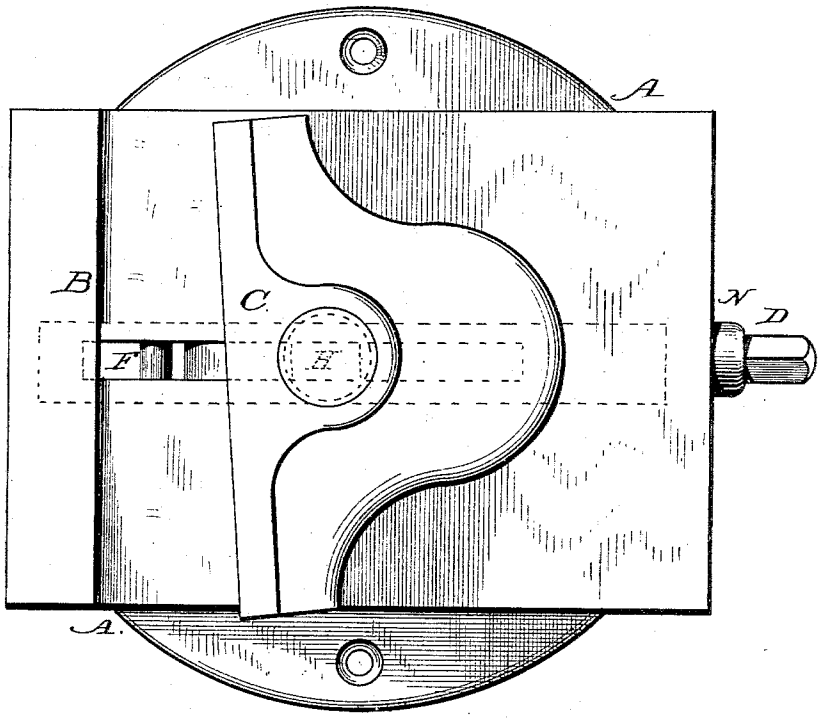
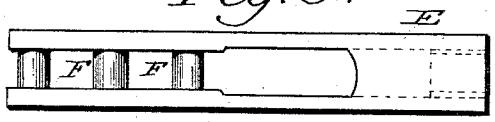


Fig. 3.



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UNITED STATES PATENT OFFICE.

JULIAN A. GILES, OF CORTLAND, NEW YORK.

WORK-HOLDING CHUCK.

SPECIFICATION forming part of Letters Patent No. 323,414, dated August 4, 1885.

Application filed January 5, 1885. (No model.)

To all whom it may concern:

Be it known that I, JULIAN A. GILES, a citizen of the United States, residing at Cortland, in the county of Cortland and State of New York, have invented certain new and useful Improvements in Chucks for Holding Work, of which the following is a specification, reference being had to the accompanying drawings.

In order to secure the surest and most accurate results in connection with the use of machines for planing, milling, shaping, and the like, it is necessary that the work to be operated upon should have the highest attainable degree of rigidity and immovability.

My invention relates to a chuck or vise especially adapted for such purpose, consisting in the construction and arrangement of parts hereinafter described, and particularly set forth in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 represents a central section of my improved chuck. Fig. 2 represents a top plan view of the same, and Fig. 3 represents a detail top plan view of the screw-nut forming a part thereof.

In the several figures like letters indicate like parts.

A indicates the main body of the vise, provided with means for fastening it upon the bed-plate of the machine in connection with which it is to be used. From the upper surface, and at one end of the main body A, extends a projection, B, forming the stationary jaw against which the work is held by means of the movable jaw C. The latter is perforated, as shown, for the reception of the shouldered hollow swivel-pin H, within which is pivoted the swinging link G, passing downwardly through a longitudinal guide-slot in the main body of the chuck. The link G is notched or recessed at its lower extremity, so as to engage with any desired one of a series of pins, F, extending between the outer bifurcated end of a traveling screw-nut, E, sliding in suitable recessed bearings in the body A. Motion is imparted to said nut by means of the screw D, having shoulders M N to prevent longitudinal movement of the screw.

The parts being constructed as described, the operation of my invention is as follows: The article or work to be operated upon being placed between the fixed and movable jaws, and the screw D turned in the appropriate direction, the nut E travels forward, transmitting motion, by means of the pin F and link G, to the movable jaw C, which thereupon clamps and holds the work in position.

By means of the swivel-pin the movable jaw is adapted to adjust itself to tapering and irregular forms. This feature may, however, in some instances, be dispensed with, in which case the link would be attached directly to the movable jaw.

The object of having several pins F is to provide for a large opening of the jaws without making the vise too long for convenience.

In the operation of my invention two forces are brought into play, one in the direction of the work and the other in the direction of the body of the vise, the link drawing at an angle of about forty-five degrees, the resultant of the two. This tends to hold the work squarely and firmly in place and prevent it from rolling, as in vises where the screw is directly behind the movable jaw and pushing it against the work.

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

1. In a chuck or vise, the combination, with the fixed jaw B, of the movable jaw C, traveling screw-nut E, and link G, connecting said movable jaw and screw-nut, substantially as shown and described.

2. In a chuck or vise, the combination, with the fixed jaw B, of the movable jaw C, traveling screw-nut E, having series of pins F F, and notched link G, adapted to connect the movable jaw with either of said pins, substantially as described.

3. In a chuck or vise, the combination, with fixed jaw B, of the movable jaw C, swivel-pin H, link G, and bifurcated traveling screw-nut E, having pins F F, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JULIAN A. GILES.

Witnesses:

JOHN W. SUGGETT,

J. A. GILKERSON.