

(No Model.)

R. W. LORD.

WORK HOLDER FOR METAL WORKING MACHINES.

No. 603,025.

Patented Apr. 26, 1898.

Fig. 1.

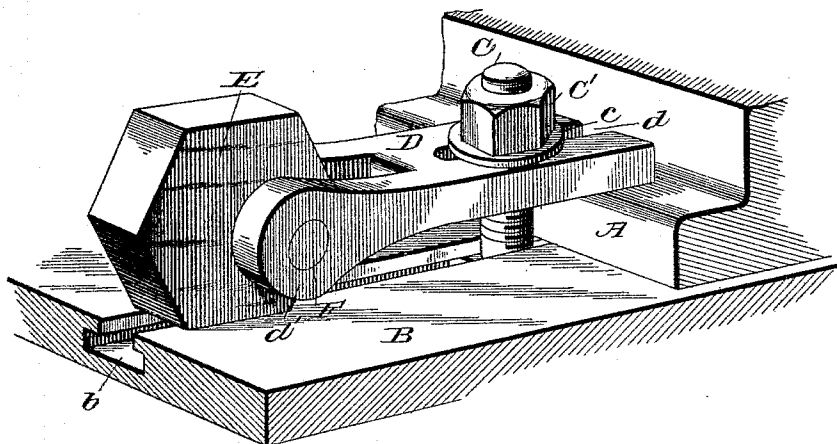


Fig. 2.

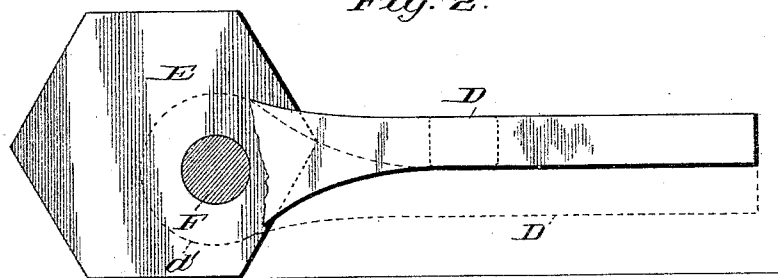
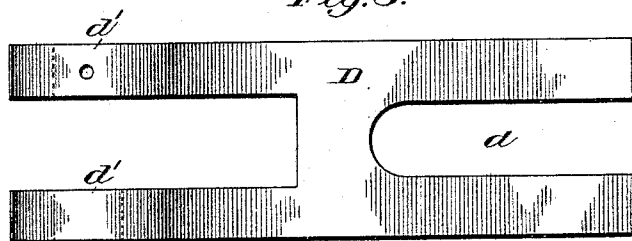


Fig. 3.



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WORK-HOLDER FOR METAL-WORKING MACHINES.

SPECIFICATION forming part of Letters Patent No. 603,025, dated April 26, 1898.

Application filed November 5, 1897. Serial No. 657,567. (No model.)

To all whom it may concern:

Be it known that I, ROBERT WILLIAM LORD, a citizen of the United States, residing at Bath, in the county of Sagadahoc and State of Maine, have invented certain new and useful Improvements in Work-Holders for Metal-Working Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to work-holders for metal-working machines. In clamping a piece of work on the bed of a planer, milling-machine, drill-press, slotting-machine, or the like it is frequently necessary to use a strap one end of which rests on the work and the other on a chock, the strap being held down by a bolt having a T-head engaging an undercut groove in the bed of the machine. Inasmuch as it is desirable to have the under side of the strap lie about parallel with the bed in order to give a firm hold, different pieces of work require chocks of different thicknesses, and so a number of chocks must be kept on hand. Being separate from the strap, they are liable to get mislaid and lost, which causes trouble, delay, and loss of time.

My invention is designed to obviate this difficulty. It consists in a strap which has attached to it a chock so constructed that it will support one end of the strap at a number of different heights. The strap, too, is preferably made reversible, so that by turning it over a new set of heights is available.

In the drawings, Figure 1 is a perspective view of my improved strap and chock. Fig. 2 is a side elevation, partly broken away. Fig. 3 is a plan of the strap.

Referring to Fig. 1, the work is represented in the shape of a piece having a flange A resting on the bed B of the machine. An undercut or T-shaped slot *b* is shown in this bed to receive the head of the clamping-bolt C. The strap D has a slot or bifurcation *d* at one end to permit the bolt C to pass up through it and receive a washer *c* and nut C'. This end of the strap rests on the flange A of the work. The opposite end of the strap is piv-

otally attached to a chock E, which is a block having parallel ends and a polygonal periphery, preferably, though not necessarily, a regular hexagon. The strap is bifurcated to receive the block, and the ends of the fork are formed into eyes *d'*. A pin F passes transversely through said eyes and through the chock E, which is thus pivotally attached to the strap and can be turned to bring any one of its sides undermost. The hole for the pin passes through the chock at a point eccentric to the center of the block and such that the perpendicular distance to the sides is different for each side. Thus if the chock be a hexagon three inches in diameter from side to side the center of the hole may be seven-eighths of an inch from one side, one and one-eighth inches from another, one and one-quarter inches from another, and one and three-quarters inches from another, one and seven-eighths from the fifth side, and two and one-eighth inches from the last side. This gives six different heights for the strap. I prefer, moreover, to offset the eyes for the pin, so that the center of the pin lies in the plane of one side of the strap, or thereabout. It follows that by turning the strap over from the position in which it is shown in Figs. 1 and 2 the level of its underside will be changed by an amount equal to the thickness of the strap. This construction therefore gives practically two heights for each side of the chock.

The operation of the device is as follows: The end of the strap is laid upon the work, and then the chock is rotated until it will support the other end of the strap at the proper height. The nut C' is then tightened to clamp the strap firmly on the work.

The advantages of my invention are its simplicity, the quickness with which it can be adjusted to different heights of work, and the fact that the chocks and the strap are always together. Furthermore, the chock affords a firm solid support, which is superior to that given by a set-screw, owing to the tendency of a screw to work loose by the constant jarring of the machine.

Having thus described my invention, what I claim is—

1. A strap for holding work having a chock pivotally attached thereto, at one end, and

means for clamping the other end of said strap upon the work, substantially as described.

2. A strap for holding work having a polygonal chock pivotally attached thereto, at one end, and means for clamping the other end of said strap upon the work, substantially as described.

3. A strap for holding work, in combination with a chock having sides affording supports of different heights for said strap, and means for clamping the other end of said strap upon the work, substantially as described.

4. A strap for holding work, having a bifurcated end, and a polygonal chock pivoted therein, and means for clamping the other end of said strap upon the work, substantially as described.

5. A strap for holding work having a polygonal chock eccentrically pivoted thereto, at one end, and means for clamping the other end of said strap upon the work, substantially as described.

6. A strap for holding work having a polygonal chock pivoted thereto by a pin which passes through said chock at a point lying at

different distances from the several sides of the polygon, and means for clamping the other end of said strap upon the work, substantially as described.

7. The combination with a chock, of a strap pivoted thereto on an axis offset from the plane of the body of the strap, substantially as described.

8. The combination with a chock, of a strap having eyes offset so as to lie substantially in the plane of one side of the strap, and a pin passing through said eyes and the chock, substantially as described.

9. The combination with a polygonal chock E, of a strap D having one end slotted, as at d , and the other end bifurcated and provided with eyes d' , and a pin F passing through the eyes d' and eccentrically through the chock E, substantially as described.

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

ROBERT WILLIAM LORD.

Witnesses:

T. S. WELCH,

C. E. PAINE.