(No Model.)

H. W. CHAPMAN.

Foot Press for Jewelers, &c.

No. 241,617. **Patented May 17, 1881.**

Fig. 2

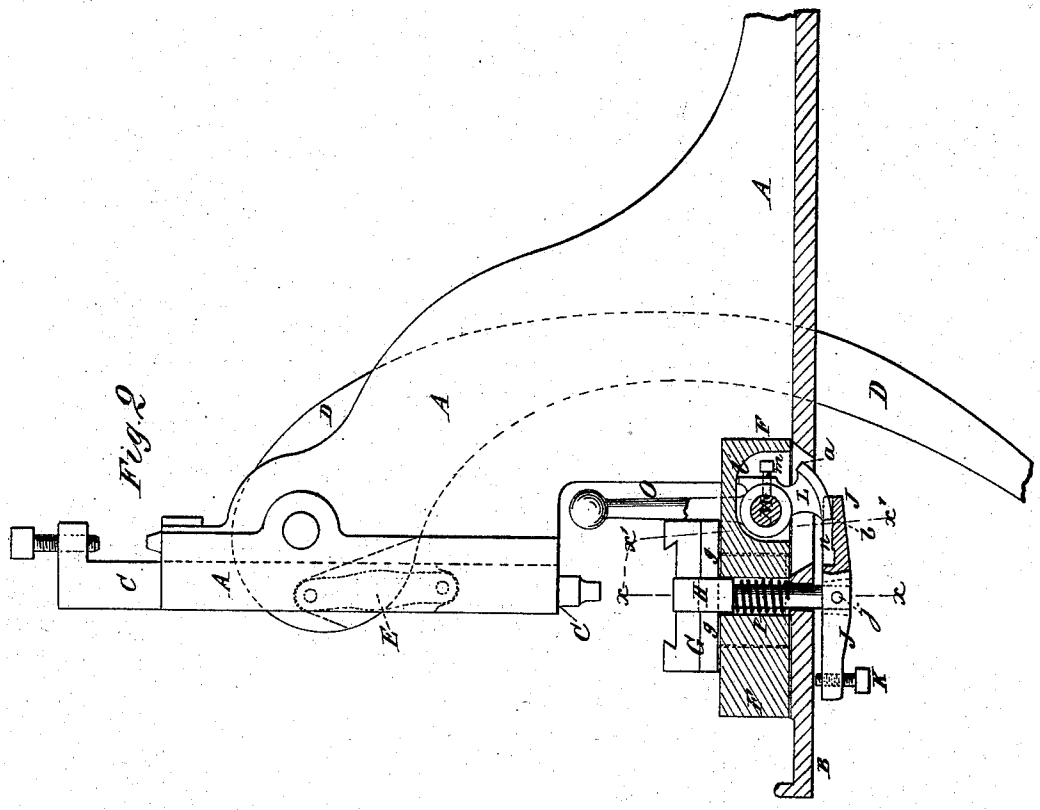
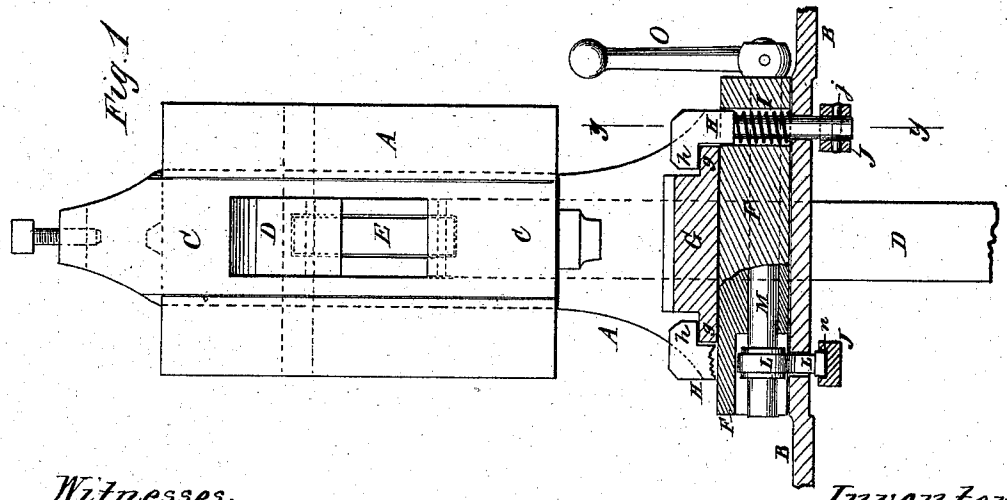


Fig. 1



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UNITED STATES PATENT OFFICE.

HERBERT W. CHAPMAN, OF NEWARK, NEW JERSEY.

FOOT-PRESS FOR JEWELERS, &c.

SPECIFICATION forming part of Letters Patent No. 241,617, dated May 17, 1881.

Application filed August 30, 1880. (No model.)

To all whom it may concern:

Be it known that I, HERBERT W. CHAPMAN, of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Foot-Presses for Jewelers, &c., of which the following is a specification.

My invention relates to presses such as are used by jewelers and others for punching, stamping, and embossing metals, and are operated by foot-levers.

The object of the invention is to provide an improved and convenient device accessible above the press-table for quickly clamping and releasing the die-bolster, in order to facilitate the manipulation of exchanging and readjusting the lower or female die, and to avoid the liability of inaccurate adjustment and wear of the bolster incurred by the old mode of fastening by bolts and nuts.

In the accompanying drawings, Figure 1 represents a front view of a foot-press embodying my invention, and partly in section through the line *x x* of Fig. 2, the bolster-bed being further in part broken away through the line *x' x'* of Fig. 2. Fig. 2 represents a side elevation of the press, partly in section, through the line *y y* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A designates the frame of the press; B, the table; C, the slide holding the male die; D, the foot-lever by means of which the slide C is operated, and E the link connecting the short arm of the lever D with the slide C.

F is the bolster-bed, secured in any suitable manner upon the table B.

G is the bolster, having a bevel-edged slot in its face, as usual, in which the female die is inserted, and end flanges, *g*, for clamping it to the bed.

H are the clamping-bolts. These are arranged to slide vertically in holes made through the bed F and table B, and their shanks are surrounded by spiral springs I, acting between the table and the head of (or a shoulder on) the upper end of the shanks, to raise the bolts when the clamping pressure is removed. The bolts H are "side-headed," or, in other words, a horizontal projection, *h*, is formed on only one side of the shank, and the bolts are arranged with their heads *h* toward each other and just above the flanges *g*, so that when the bolts descend the flanges *g* of the bolster G will be clamped to the bed F by the heads *h*. To accomplish this, to the lower end of each bolt, H, projecting below the table B, is pivoted by a pin, *j*, a lever, J, having a set-screw, K, through its forward end, to adjust its distance from the under side of the table, and a slot or groove, *n*, in the upper side of its rear end, in which groove the face of a cam, L, is arranged to work, so as to always be kept in working contact with the lever J. The working radius of the cam increases from *a* to *b*, the throw being equal to the difference between the radii at those two points. The two cams L are secured by set-screws *m* upon a horizontal shaft, M, having its bearing or bearings in the bed F, and to one end of the said shaft, projecting beyond the bed, is attached a lever, O, by which the shaft is turned to operate the cams L. To prevent the cams from being turned out of the groove *n* they are provided each with a projection or shoulder, *l*, which at completed throw of the cam stops against the casting in the bed F, as shown in Fig. 2. The lever O being above the table, the operator can handle it while in full view of his dies, pulling it forward into the position shown in the drawings when he wishes to make the bolts H descend and clamp the flanges *g* and bolster G to the bed F, and pushing it rearward when he wishes to remove the bolster to change dies. On the release of cam-pressure the bolt-heads *h* are raised from contact with the flanges *g* by the expansive force of the springs I.

The force or tightness of the grasp of the bolt-heads *h* upon the flanges *g* is regulated by the set-screw K, increasing when the said screw is being turned inward, and decreasing when it is being turned outward or unscrewed.

By this construction the bolts H are caused to slide in straight lines, and both act upon the flanges *g* simultaneously by moving the lever O, and no damage is caused to the bolster G by any turning play or lateral movement of bolts and bolt-heads.

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

1. A die-press in which the bolster G is held

by clamping devices H J L, operated by a lever, O, arranged above the table B, substantially as specified.

2. The combination of the bolster G, spring-pressed sliding bolts H, having adjustable levers J pivoted to their shanks, the cams L, cam-shaft M, and hand-lever O, arranged above the table, substantially as and for the purpose set forth.

3. The combination, with the side-headed sliding bolt H and the cam L, of the lever J, pivoted to the said bolt and provided with the end groove, *n*, for retaining the cam-face in working contact and prevent the bolt from turning, substantially as set forth.

HERBERT W. CHAPMAN.

Witnesses:
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