(No Model.)

G. W. WILLIAMS.

COPYING PRESS.

No. 301,418. Patented July 1, 1884.

Fig. 1.

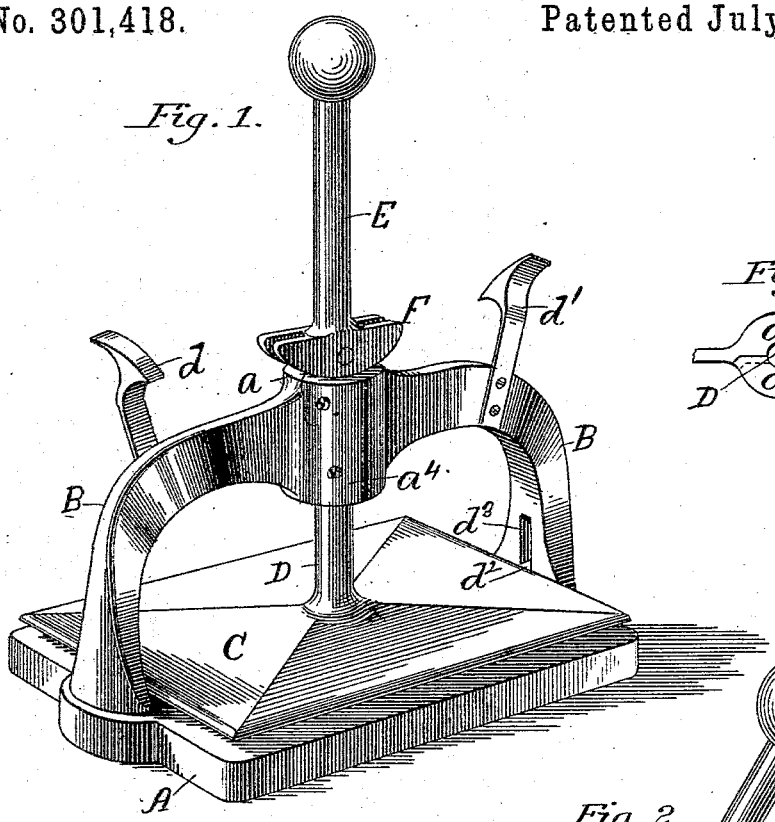


Fig. 3.

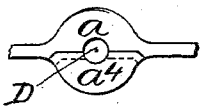


Fig. 2.

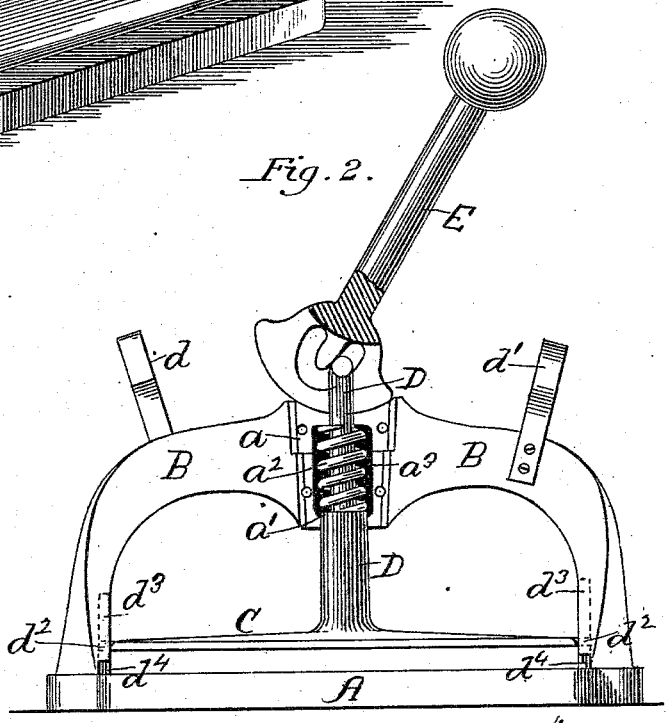
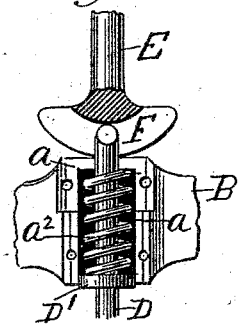


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE W. WILLIAMS, OF CHICAGO, ILLINOIS.

COPYING-PRESS.

SPECIFICATION forming part of Letters Patent No. 301,418, dated July 1, 1884.

Application filed November 26, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. WILLIAMS, of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in a Copying-Press, of which the following is a full, clear, and exact description, that will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to improvements in that class of devices used for taking impression copies of written matter upon dampened pages by subjecting the same to a mechanical pressure, the object being to provide a press that is easily and conveniently operated, and at the same time one that obviates the objectionable features of the ordinary screw-press.

The nature of this invention consists in the employment, arrangement, and construction of certain novel features, as will be hereinafter more fully set forth in detail.

Figure 1 is a view in perspective of a press embodying my improved features. Fig. 2 is a side elevation showing a part removed and a part in section, and embodying a modification with reference to an eccentric or curved slot in the cam-foot. Fig. 3 is a top view of the vertical box through which the central standard passes. Fig. 4 shows a part broken away from Fig. 1, the journal-cap being removed to expose the interior.

Referring to the drawings, A represents the base of the press, B the arched bridge, and C the platen. The standard D is cast integral with the platen C and extends up through the vertical box *a* in the bridge B. This standard is reduced in size from the lower end of the box *a* upward, thereby forming the shoulder *a'*, which provides the lower bearing for the spiral spring a^2, that is coiled around said standard. The box *a* is formed with the chamber a^3 for the reception of the spiral spring, as shown in Figs. 2 and 4 of the drawings. The box *a* is provided with the removable cap a^4, which is cut away, so as to have the shoulder-bearing *b* on the companion part of the box formed in the bridge, thus relieving the bolts attaching said cap from any undue strain.

For light presses the standard D may be of about the same diameter the entire length, and provided with the annular flange D' to form the bearing for the lower end of the spring.

The lower end of the lever E is provided with the cam-foot F, which is cut out lengthwise through the center, so as to adapt the same to straddle the upper end of the standard D, which is secured to said foot. Now, by bringing the lever E from a vertical to a horizontal position on either side, the platen is raised up and the spring compressed. The bearing-surface of the cam-foot F is curved for the purpose of imparting the required eccentric action to these parts.

The function of the spring a^2 is to impart the required pressure to make the copy, so that normally the pressure is always on the platen, and the power to make the impression is applied automatically by simply allowing the lever E to assume a perpendicular position, as shown in Fig. 1 of the drawings.

The arched bridge is provided at each side with the upward-projecting locking-hooks *d d'*, which serves the purpose of securing and holding the lever E in a horizontal position when the platen is raised up to remove the matter from the press. The lever may be moved toward either end of the press, as may be the most convenient. The curved bearing of the cam-foot on the top of the box in the bridge gives such a leverage that but very little power is required to raise the platen in order to remove the copying matter, and when the end of the lever is released from the locking-hook it will at once assume a vertical position, and the spring a^2 will automatically apply the required pressure. Each end of the platen is provided with the guide-lugs d^2, which engage with the recesses d^3 on the inside of and at each end of the arched bridge. Extending out horizontally from the bottom of these recesses are the channels d^4, (shown in Fig. 2,) which permits of the platen and the connecting parts being conveniently removed by simply taking off the cap on the vertical box. By this arrangement the eccentric lever is employed to remove the pressure from the press, instead of applying it.

I do not confine myself to the precise form of spring shown, but may make use of another style of spring that would be suitable for the purpose. I may also make use of more than

one spring, in which case they could be placed underneath the bridge at each side of the center and have a bearing on the platen nearer the ends. In large presses this arrangement might be necessary, but ordinarily the arrangement shown will be sufficient. The power of the spring will be in accordance with the size of the press and the nature of the work to be done.

Fig. 2 of the drawings is a modification showing a somewhat differently-shaped cam-foot, which is provided with a curved or eccentric slot.

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

1. In a copying-press, the combination, with a platen provided with a vertical standard formed integral therewith, of a spring adapted to have a downward pressure bearing on said standard, whereby the required pressure is automatically applied to said platen, substantially as described.

2. The combination, with the platen C, provided with the standard D, having the shoulder-bearing a', of the vertical box a, the chamber a^3, and the spring a^2, substantially as and for the purpose set forth.

3. The combination, with the platen C and the standard D, of the spring a^2, the arched bridge B, and the eccentric-lever E, provided on the lower end with the cam-foot F, which is connected with the upper end of the standard D, whereby the platen is raised up from the base or bed to permit of the copying matter being removed, substantially as described.

4. The combination, with the base or bed of a copying-press, of the arched bridge B, having a central chambered box provided with a removable cap, the locking-hooks d d', the lever E, having on the lower end thereof the cam-foot F, the standard D, the spring a^2, and the platen C, substantially as described.

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