

(No Model.)

E. S. JONES.

DEVICE FOR SECURING ZINC OR OTHER PRINTING PLATES.

No. 495,466.

Patented Apr. 11, 1893.

Fig. 1.

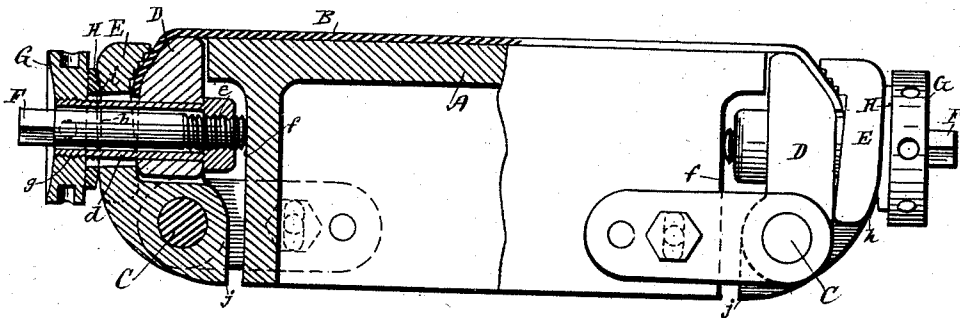


Fig. 2.

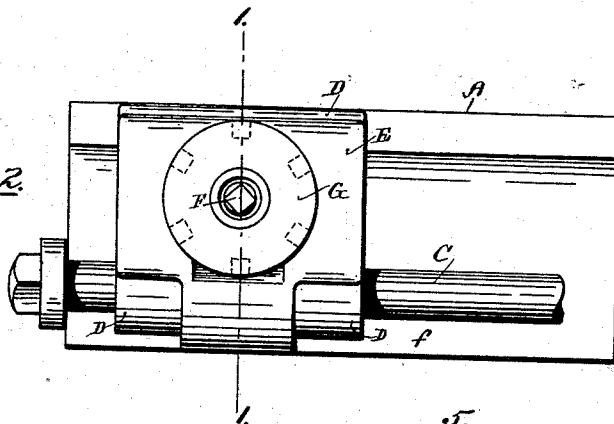


Fig. 3.

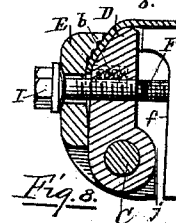
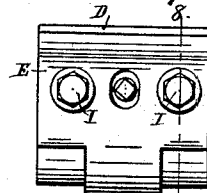


Fig. 3.

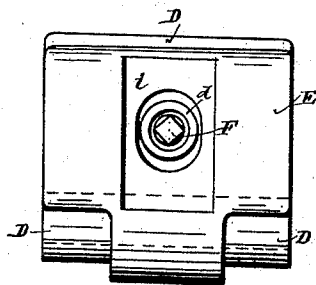


Fig. 4.

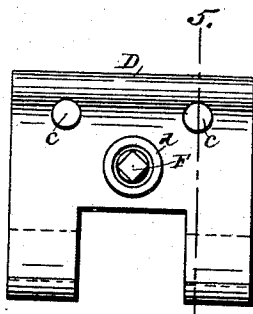
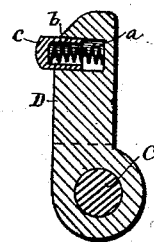


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

EDWARD S. JONES, OF PROVIDENCE, RHODE ISLAND.

DEVICE FOR SECURING ZINC OR OTHER PRINTING PLATES.

SPECIFICATION forming part of Letters Patent No. 495,466, dated April 11, 1893.

Application filed August 9, 1892. Serial No. 442,615. (No model.)

To all whom it may concern:

Be it known that I, EDWARD S. JONES, a citizen of the United States, residing at Providence, in the State of Rhode Island, have invented a new and useful Improvement in Devices for Securing Zinc or other Printing Plates, of which the following is a specification.

In placing lithographic zinc plates upon the bed of the press, there is a tendency in the metal to wrinkle, and to spring up in places from the surface of the bed. This tendency of the zinc plate seriously interferes with the operation of printing therefrom, and it is necessary in order to obtain the best results, that the plate should rest with its entire surface upon the bed, and the object of my invention is to provide suitable means for securing the plate firmly and smoothly upon the bed, and it consists in the improved construction and arrangement of devices, as hereinafter fully set forth.

Figure 1, represents an end view, partly in section, of the bed and devices for securing and straining the plate upon the same. Fig. 2, represents a partial side elevation, showing the back of the straining device. Fig. 3, represents a back-view of the straining device separate from the bed, the nut for tightening the jaw upon the sheet of zinc, being removed. Fig. 4, represents a view of the clamping side of the tightening lever. Fig. 5, represents a section, taken in the line 5, 5, of Fig. 4. Fig. 6, represents the face and edge view of the washer, held under the tightening nut. Fig. 7, is a back view of the straining-device showing a modification. Fig. 8, represents a section of the same, taken in the line 8, 8, of Fig. 7.

In the accompanying drawings, A represents the bed of the printing press, and B the zinc-plate by means of which the printing is to be performed. Upon each side of the bed A, are placed the rods C, C, which may be either made adjustable, or otherwise, as preferred, and upon which swing a series of tightening levers D, provided with the serrated clamping jaw E which may also be pivoted to the rod C. The levers D are provided with one or more recesses *a*, in each of which is placed a spiral spring *b*, having its outer

end covered by a cap *c*. The screw threaded sleeve *d*, is firmly secured to the lever D, and is provided with the internal screw thread *e*, adapted to receive the thread of the tightening screw F, which is adapted to bear with its point against the side *f* of the bed A. The outer end of the sleeve *d* is provided with the screw thread *g*, upon which is placed the clamping nut G, which serves to operate the clamping jaw E, and between the nut G and the clamping jaw, is placed the washer H, the said washer being provided with a rounded inner face *h*, which bears against the recessed surface *i* of the clamping jaw, the said jaw being provided with the shoulder *j* which by striking against the side *f* of the bed, will serve to limit the outward movement of the said jaw when released from the printing plate.

In operating the tightening device, the clamping nut G, is first unscrewed upon the sleeve *d*, thus allowing the clamping jaw E, to be thrown back from the tightening lever D, sufficiently, for the insertion of the edge of the plate B, between the said jaw and lever, after which the jaw E is to be brought firmly against the plate B, by screwing up the nut G. Both sides of the supporting bed may have the same arrangement of devices, or one side may be provided with a permanent or stationary clamp, as may be desired. After the edge of the plate B has been securely fastened as described, the tightening screw F is to be turned, which serves to force the top of the lever D, away from the side of the bed A, thus straining the plate and bringing it closely in contact with the surface of said bed. The levers D being placed at intervals along the side of the bed A, and being capable of lateral adjustment upon the rod C, allow the different portions of the plate to be subjected to the degree of strain required to bring the entire plate to a perfectly smooth condition and in uniform contact with the surface of the bed.

A modification of my invention, is shown in Figs. 7 and 8, in which the clamping jaw E, is secured to the tightening lever D, by means of the screws I, I, which screw into the said lever, the intermediate tightening screw F, being arranged to bear against the side *f*

of the bed A, as before, the spring *b*, also serving to throw back the jaw E upon the unscrewing of the clamping screws I, I.

I claim as my invention—

- 5 1. The combination with the bed of the printing press, of the tightening lever, pivoted upon a rod at the side of the bed, the tightening screw, adapted to operate the tightening lever, the clamping jaw pivoted to the
10 rod, and means for operating the clamping jaw to clamp the plate, substantially as described.
2. The combination with the bed of the printing press, of the tightening lever, pivoted upon a rod at the side of the bed, the
15 tightening screw, adapted to operate the tightening lever, the clamping jaw pivoted to the rod, means for operating the clamping jaw to clamp the plate, and the spring for causing
20 the separation of the clamping jaw from the

lever, upon unscrewing the clamping means, substantially as described.

3. The combination with the bed of the printing press, of the tightening lever provided with the hollow sleeve, the tightening
25 screw, the clamping jaw, and the clamping nut arranged upon the sleeve, substantially as described.

4. The combination with the bed of the printing press of the tightening lever provided with the hollow sleeve, the tightening
30 screw, the clamping jaw, the clamping nut arranged upon the sleeve, and the washer provided with a rounded face adapted to bear
35 against the side of the clamping jaw, substantially as described.

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Witnesses:

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