

(No Model.)

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BED FOR ZINCOGRAPHIC PRESSES.

No. 312,325.

Patented Feb. 17, 1885.

Fig. 3.

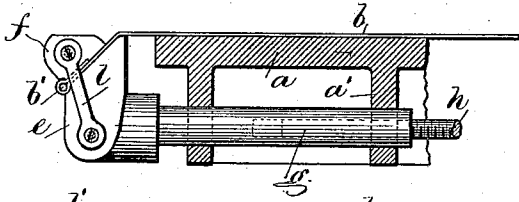


Fig. 1.

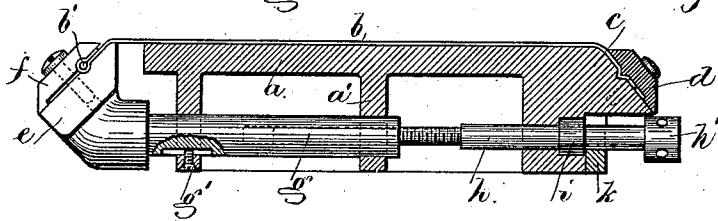


Fig. 4.

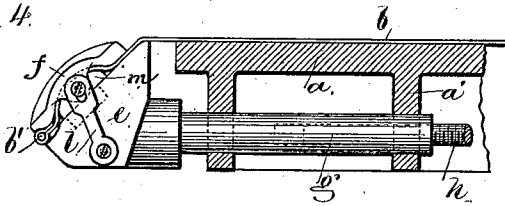


Fig. 5.

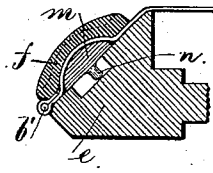
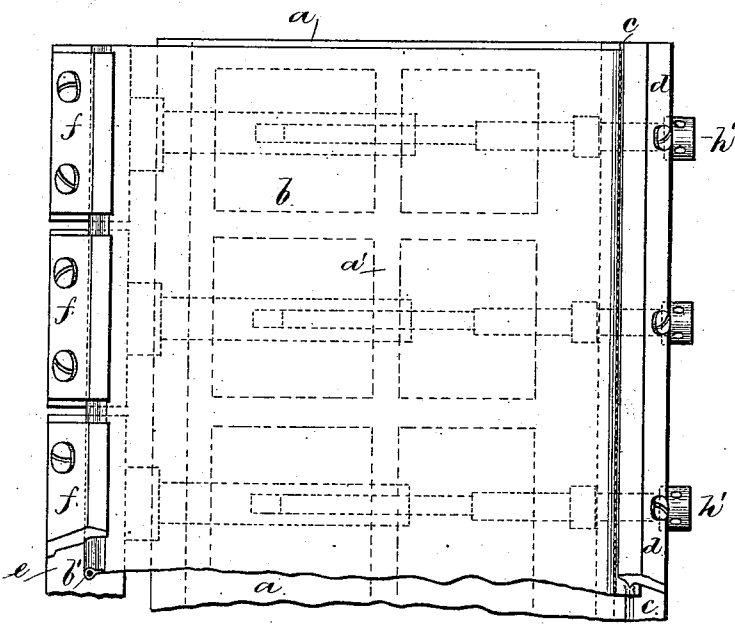


Fig. 2.



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BED FOR ZINCOGRAPHIC PRESSES.

SPECIFICATION forming part of Letters Patent No. 312,325, dated February 17, 1885.

Application filed March 3, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN BROOKS, of Plainfield, in the county of Union and State of New Jersey, have invented a new and useful Improvement in Beds for Zincographic Presses, and the following is declared to be a description of the same.

Plates of zinc are sometimes employed for printing instead of the lithographic stone, on account of cheapness and occupying less space when packed away. It has heretofore been very difficult to satisfactorily stretch the zinc sheets so as to bring them down flat and even upon the bed-plate of the press.

My invention relates to mechanism for grasping and securing the opposite edges of the zinc plate, and for stretching the same and imparting to it any desired amount of tension.

My invention consists of a metal bed, upon which the zinc plate is laid. One edge of said bed is beveled, and upon it a bar is secured by screws. One edge of the sheet of zinc is placed between the beveled edge and the bar, and is securely held by a projection or rib on the bar and a groove in the beveled edge, which groove is preferably V-shaped. The other edge of the sheet of zinc is bent over a wire or rod, and is laid in a groove upon the inclined surface of a bar or series of bars, and it is held in place by a clamping bar or series of bars, either screwed upon the aforesaid bars or connected to them by links. The bar or series of bars having the inclined surfaces are connected to and supported by rods sliding in openings in the frame of the bed, and these rods are moved endwise to stretch the zinc plate by screw-rods, also passing through openings in the frame of the bed, and having a bearing against a plate screwed upon the side of the bed.

In the drawings, Figure 1 is a cross-section and partial elevation of my improved bed. Fig. 2 is a plan of the same. Figs. 3, 4, and 5 are views of modifications, hereinafter described.

The bed *a* of the press may be of any desired size or construction. I have shown the same with ribs *a'* on the under side, forming a frame-work. The bed *a* is beveled at one side, as shown at *c*, Fig. 1, and in the surface of such beveled edge there is a groove running parallel with the edge of the bed. The bar

d is secured to the beveled edge *c* by screws, and upon its under surface there is a rib or projection, preferably V-shaped, and fitting the groove in said edge. The sheet of zinc is laid between the beveled edge and the bar and pressed into this groove by the projection on the bar, so as to securely hold the sheet in place. It is then bent and pressed down flat upon the surface of the bed. The bars *e* and sliding or guide rods *g* are permanently connected together, and the bars *e* are inclined or beveled upon their outer edges at about an angle of forty-five degrees. The rods *g* pass through openings in the ribs or frame of the bed, and they are kept from revolving and the movement is limited by the slots and set-screws *g'*, the points of which pass into the slots. The screws *h* have heads *h'* and collars *i*, and said screws pass through openings in the frame or ribs of the bed, the collars *i* being in recesses in the bed-frame, as shown in Fig. 1. A bar or plate, *k*, having slots for the screw *h*, is secured to the bed-frame, and confines the collars *i*, and forms a stop to prevent the endwise movement of the screw-rods *h*, and serves as a bearing for the collars. The screws pass into the sliding or guide rods *g*, and the revolution of said screws imparts a forward or backward movement to the guide-rods *g* and the bars *e*. The sheet of zinc is bent around a wire or rod, *b'*, and is laid in shallow grooves in both the surfaces of the bars *e* and clamping-bars *f*, and said bars *f* are secured upon the inclined face of *e* by screws. After this side of the sheet of zinc is secured in this manner it is stretched by revolving the screw-rods *h* and forcing out the guide-rods *g* and bars *e*.

Instead of screwing the clamping-bar *f* to the surface of *e*, I may employ, as shown in Fig. 3, links *l*, secured by pivots at the ends to the bars *f* and *e*, respectively. In this case the sheet of zinc will be clamped between the bars *f* and *e*, and the depressions for receiving the wire or rod *b'* and the surrounding zinc will be at the lower outer edge of said bars.

In Figs. 4 and 5 I have shown a clamping-bar, *f*, hollowed out upon its under side and covering the bar *m*, and the sheet of zinc passes between the bars *f* and *m*, the clamping-bar *f* being provided with lugs upon its ends, from which pivot-pins project to connect it to the links *l*. The bar *m* is free to move upon the

surface of the bar *e*, and has a guide-pin, *n*, working in a slot in the surface of the bar *e*. The links *l* are slotted to allow the bars *f* and *m* to remain in contact when the bars are drawn back and the links *l* are swung, at which time the bar *f* can be raised and a space will be opened between the bars *f* and *m* to allow of the zinc plate being inserted in this space and being adjusted before the plate is stretched.

10 The action of the links *l* in Fig. 3 as the rods *g* and bars *e* are pushed out by the screw-rods is to compel the clamping-bar *f* to press tightly against the zinc and force it against the inclined surface of bar *e*, and in Figs. 4 and 5 the action of the links *l* as the rods *g* and bars *e* are moved is to press the bars *f* and *m* tightly together and hold and clamp the zinc plate between their surfaces. The bars *f* and *m* have a slight movement together upon the surface of *e* as pressure is applied, and the pressure in both cases increases with the strain.

The angle at which the end portions of the sheet are bent may vary according to the inclination of the surfaces of the clamps.

I claim as my invention—

1. In a zincographic press, the combination, with the bed *a*, of the bar *d*, for securing one edge of the sheet, the bars *e*, and clamping-bars *f*, for grasping the other edge of the sheet, and the guide-rods *g*, screw-rods *h*, collars *i*, and plate *k*, for stretching the metallic sheet, substantially as set forth. 25

2. The bed *a*, in combination with the bars *e*, clamping-bars *f*, wire or rod *b*, guide-rods *g*, and means, substantially as described, for stretching the zinc plate, as set forth. 35

3. The combination, with the bed *a*, guide-rods *g*, and bars *e*, of clamping-bars *f*, links *l*, wire *b*, and mechanism, substantially as described, for stretching the zinc plate, as set forth. 40

Signed by me this 23d day of February, A. D. 1884.

JOHN BROOKS.

Witnesses:

GEO. T. PINCKNEY,
HAROLD SERRELL.