

(No Model.)

2 Sheets—Sheet 1.

H. GOODWIN.  
BED FOR ZINCOGRAPHIC PRESSES.

No. 348,736.

Patented Sept. 7, 1886.

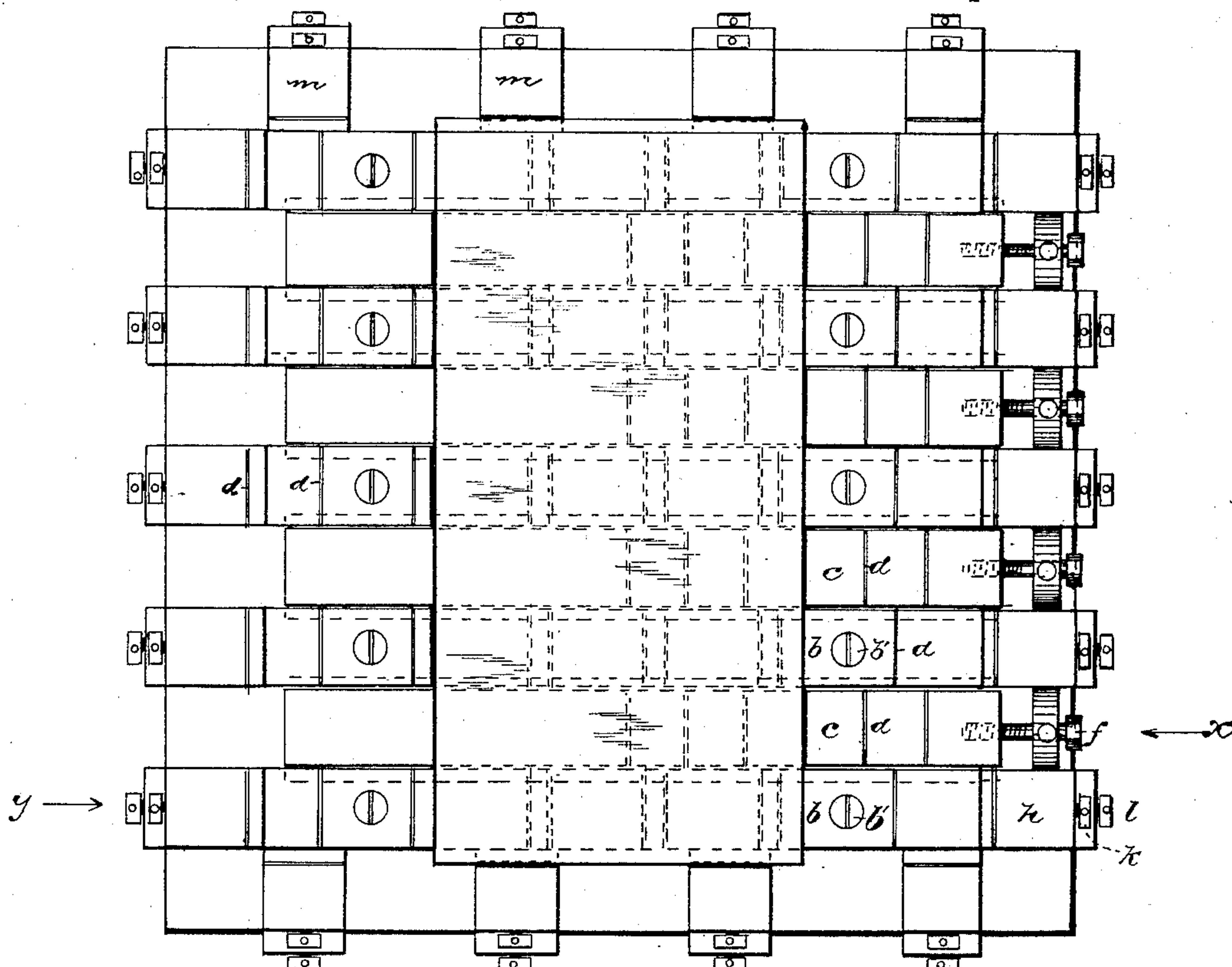


Fig. 1.

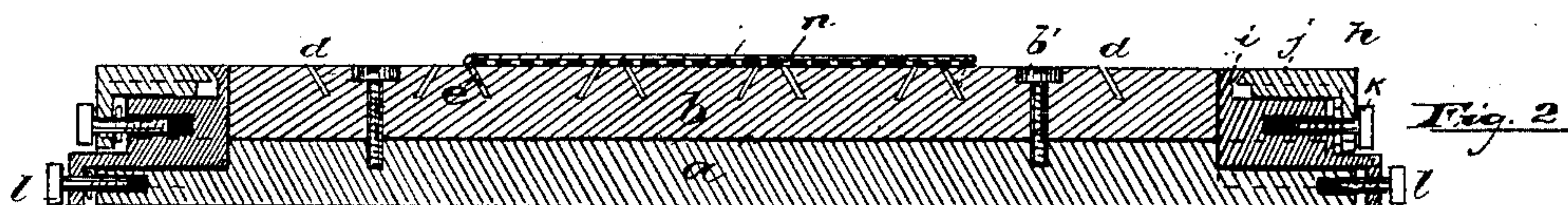


Fig. 2.

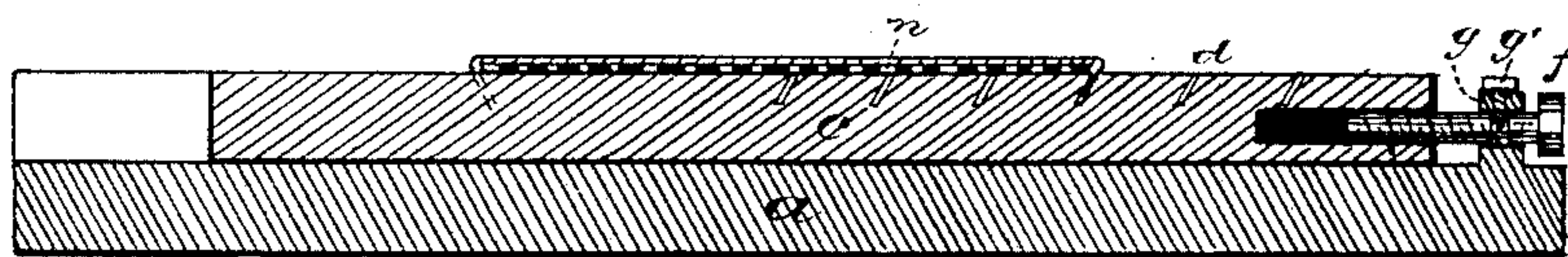


Fig. 3.

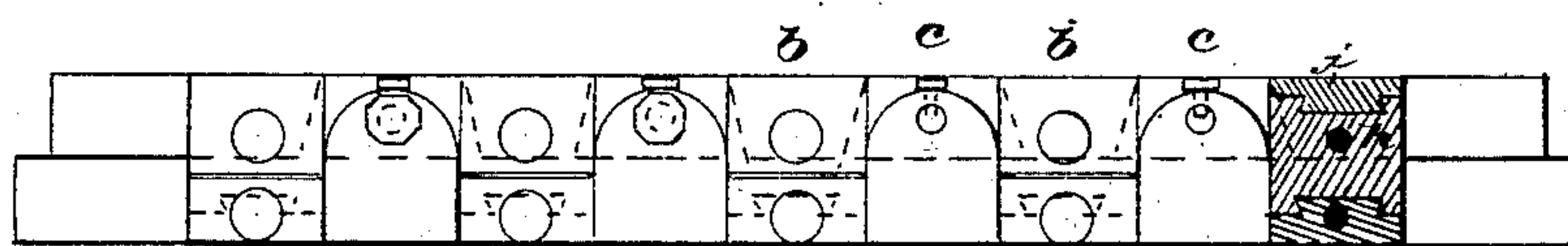


Fig. 4.

Attest:

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R. L. M. Nulty.  
Fred. P. Campbell.

Hannibal Goodwin,  
by Drake & Co.,  
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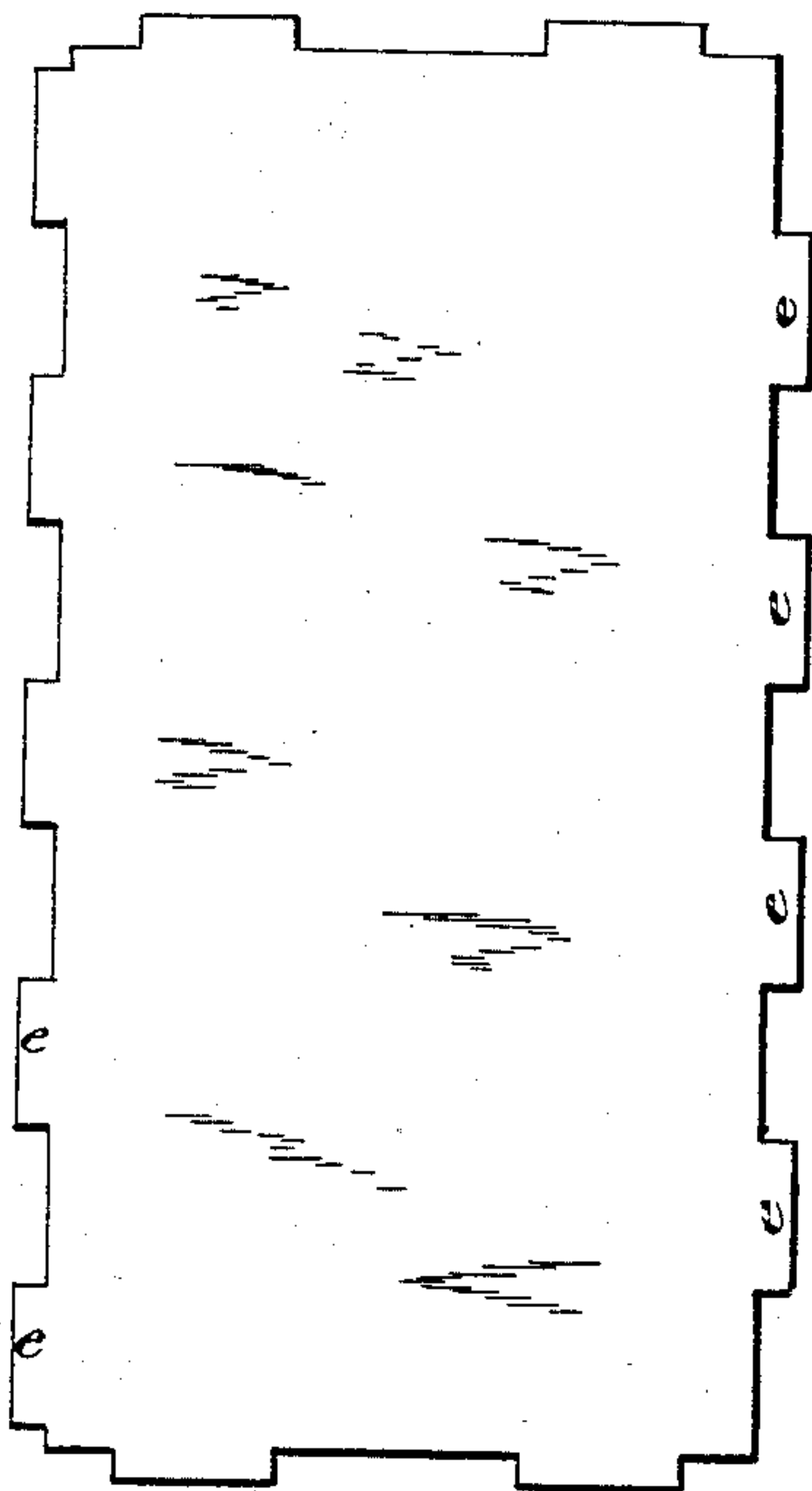
(No Model.)

2 Sheets—Sheet 2.

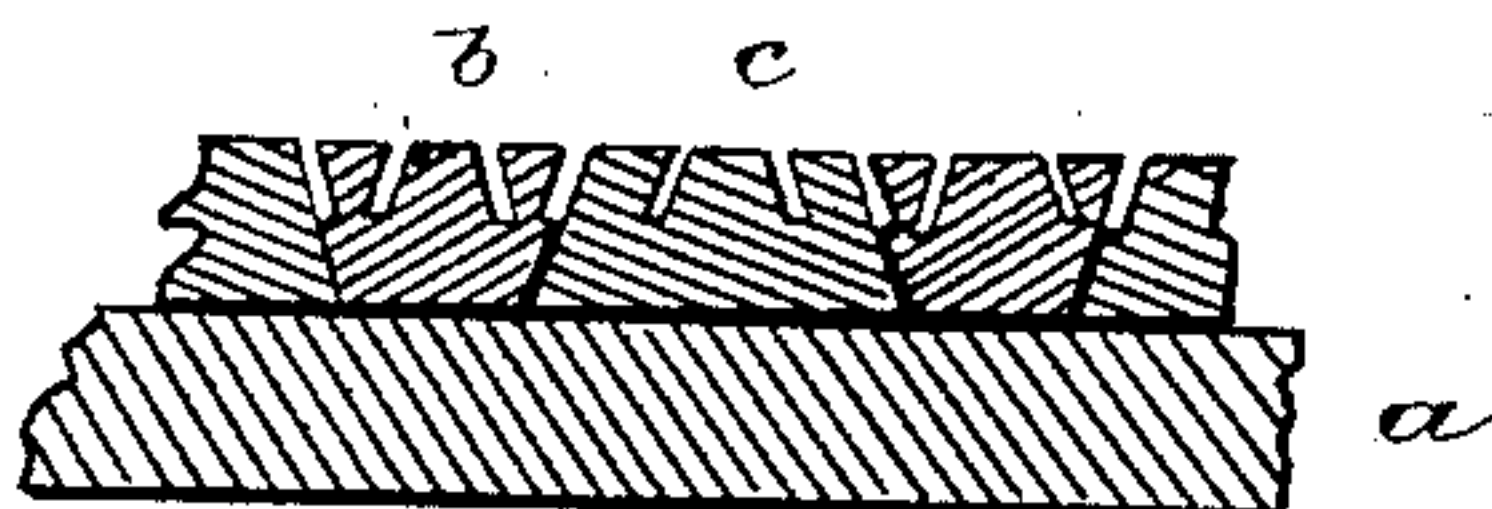
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*Fig. 5.*



*Fig. 6.*

Attest:

*Fredk. F. Campbell.*  
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Inventor

*Hannibal Goodwin,*  
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# UNITED STATES PATENT OFFICE.

HANNIBAL GOODWIN, OF NEWARK, NEW JERSEY.

## BED FOR ZINCOGRAPHIC PRESSES.

SPECIFICATION forming part of Letters Patent No. 348,736, dated September 7, 1886.

Application filed April 16, 1885. Serial No. 162,441. (No model.)

*To all whom it may concern:*

Be it known that I, HANNIBAL GOODWIN, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Beds for Zincographic Presses; and I do hereby 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 letters of reference marked thereon, which form a part of this specification.

The object of this invention is more particularly to enable thin sheet-zinc plates to be employed with greater convenience and more effectively in lieu of stone or heavier zinc plates, zinc having properties similar to lithographic stone, and in sheet form being more portable, much cheaper, and consuming less space when laid away in the printing-office or other depository. Thin sheet-zinc as turned out from the rolling-mill presents a more level or even surface to the paper than the thicker plates which have been necessarily used heretofore, being comparatively free of blisters and other faults found in the said thicker plates; but the use of said sheets has been materially interfered with in that they are found to "buckle" either in the preparatory process of planing or in the process of printing from them when secured to the bed by the means heretofore employed. Again, it has been found desirable to secure several disconnected plates or sheets, each containing one or several subjects upon one bed, the plates being disconnected from one another to allow several artists to work on a page of plates at one and the same time. It is also desirable to so form the bed that, or provide means whereby, the plate or plates may be so adjusted on said bed as to print on or at any desired portion of the page. To overcome these difficulties and supply the wants above mentioned, I have provided a bed such as will be hereinafter described, although I do not wish to be understood as limiting myself to the construction shown and positively described, as many changes may be made in the construction from that of the illustrations and descriptions without departing from the spirit of this invention.

The invention consists in the arrangements and combinations of parts substantially as will be finally embodied in the clauses of the claims.

Referring to the accompanying drawings, included in two sheets, in which like letters of reference indicate corresponding parts in each of the several figures, Figure 1, Sheet 1, is a plan of my improved bed, showing a sheet of zinc stretched or secured thereon. Figs. 2 and 3 are sections of the same taken through lines *y* and *x*, respectively, and Fig. 4 is an end view of the said bed. Fig. 5, Sheet 2, is a plan of a blank sheet of zinc for use with my improved bed in the zincographic press, showing tongues or lips at the edges thereof adapted to be bent into certain notches or slits in the bed; and Fig. 6 is a sectional view taken transversely through the bed to show certain longitudinal slits which may be formed therein.

In said drawings, *a* indicates a bed having formed or secured on the upper surface thereof a series of parallel ribs, strips, or sections, *b b*, which are preferably held rigidly upon the body or bed *a* by screws *b'*, or other fastening devices, and are undercut or inwardly beveled, substantially as shown in Fig. 6, forming ways to receive and hold movable strips or sections *c c*, which are also in a series and alternate with the parts marked *b b*. Said sections *b c* are each provided with suitable means to catch or clamp the edges of the zinc, which means are preferably slits *d*, into which the said edges may be inserted when bent down at an angle to the body of the sheet, so that when lateral strain is brought to bear said edges will be caught and firmly held in said slits, as will be understood. The transverse slits, in alternate sections, are preferably made in line, as shown, and the edges of the zinc are provided with a series of tongues or lips, *e e*, to correspond with and engage the alternating slits. The bent edges of the plates or the tongues *e e* thereof form an angle with the body of the plate of less than ninety degrees, the said edges extending under the plate into correspondingly-inclined slits, so that when draft is brought to bear there will be no danger of the tongues being drawn out, as will be understood.

The movable sections are operated and controlled by set-screws *f*, which are held in suit-



able bearings, *g*, and prevented from moving longitudinally by a holding pin or screw, *g'*. By placing the tongues at one edge of the zinc in the slits of the movable sections and those of the opposite edge in the slits of the fixed sections and then turning the adjusting or setting screws *f*, so that the movable sections slide in the ways between the fixed sections, the respective slits tend to separate, and the sheet is thereby stretched and brought to an even surface, suitable for printing or polishing.

To stretch the sheets when they extend to the edges of the bed, I have provided clamping or clamping and stretching heads *h*, which are preferably arranged opposite the ends of the fixed sections. Said clamps are composed, preferably, of clamping-jaws *i j*, which may be closed together by a clamping-screw, *k*, and means, such as the screw *l*, working in the bed for throwing said head away from said sections, whereby the sheets clamped in said sections and heads, or between the two opposite series of heads, will or may be stretched.

To stretch the sheet in a direction at right angles to that in which the sections run, I provide said sections with longitudinal slits or openings, which may be either in said sections or between the same, both arrangements being illustrated in Fig. 6. To coact with these slits, the edge of the bed is provided with movable clamps or heads, similar to those already described.

To prevent the edges of the printing sheet or plate from creasing the paper receiving the impression and thus to some extent damaging it, I may insert a plate, *n*, with rounded edges, as shown in Figs. 2 and 3, beneath said sheet before stretching, so that the edges of said sheet will be rounded in conformity to those of the inserted plate.

By means of the adjustable sections and clamps the sheet, when clamped in the said adjustable sections only, may, by manipulating the adjusting-screws at both edges of the bed at one time, be adjusted or moved over the face of the bed to be brought exactly into the desired position for printing.

This improved bed may be employed as a support in planishing and polishing other plates than those employed in printing or for other purposes than those specified.

Having thus described the invention, what I claim as new is—

1. A bed for zincographic presses, consisting, essentially, of a bed, *a*, provided with two alternating series of sections changeable in their relations to one another, one series being adapted to clamp the sheet at one edge and the other series at the other edge, substantially as set forth.

2. In combination, a bed provided at the face thereof with fixed sections and movable sections alternately, which sections are provided at intervals throughout their lengths with transverse slits adapted to receive and clamp the edges of the plate, and said plate

substantially as and for the purposes set forth.

3. A bed provided at the face thereof with alternating series of movable and fixed sections, which are longitudinally and transversely slitted, in combination with clamping-jaws arranged to co-operate with said longitudinal slits, substantially as and for the purposes set forth.

4. In combination, a bed provided with alternating series of movable and fixed sections, each section of which is provided with a series of transverse slits adapted to receive the edges of the printing-plates, and means, substantially as described, for adjusting the movable sections, whereby the said plates are stretched or extended to produce an even surface.

5. The combination, with a bed having movable sections on the face thereof, the latter having slits to receive tongues of the printing-plate, of said printing-plate provided with series of tongues on the opposite edges thereof adapted to be inserted in said slits, the tongues of one edge lying opposite the spaces between the tongues of the opposite edge, substantially as set forth.

6. The printing-plate for zincographic presses, consisting of a plate having tongues at the opposite edges thereof bent down to enter slits in the beds of said presses, the tongues of one edge lying opposite the spaces between the tongues of the opposite edge, substantially as shown and described.

7. In combination, the bed *a*, sections *b c*, having transverse and longitudinal slits, the adjusting-screws *f*, working in bearings *g*, the clamping-jaws *i j*, and screws *l*, all said parts being arranged and operating substantially as set forth.

8. In combination, in a zincographic press, the bed and adjustable clamps or catches formed in or arranged upon a bed and adapted to clamp or catch the opposite edges of a printing-plate and to allow the said plate to be moved while clamped over the face of said bed to an exact position for printing, substantially as set forth.

9. The combination, with a bed having an adjustable part and having inclined slits, of a plate having under-bent edges to engage the said slits, substantially as set forth.

10. The combination, with a bed having an adjustable part and a fixed part, each of which is provided with an inclined slit which extends in a direction opposed to that of the one in the co-operating part, of a plate having under-bent opposite edges to engage said slits, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 9th day of April, 1885.

HANNIBAL GOODWIN.

Witnesses:

CHARLES H. PELL,  
FREDK. F. CAMPBELL.