

J. BARNETT.
Dies for Embossing Pictures.

No. 154,576.

Patented Sept. 1, 1874.

Fig: 1.

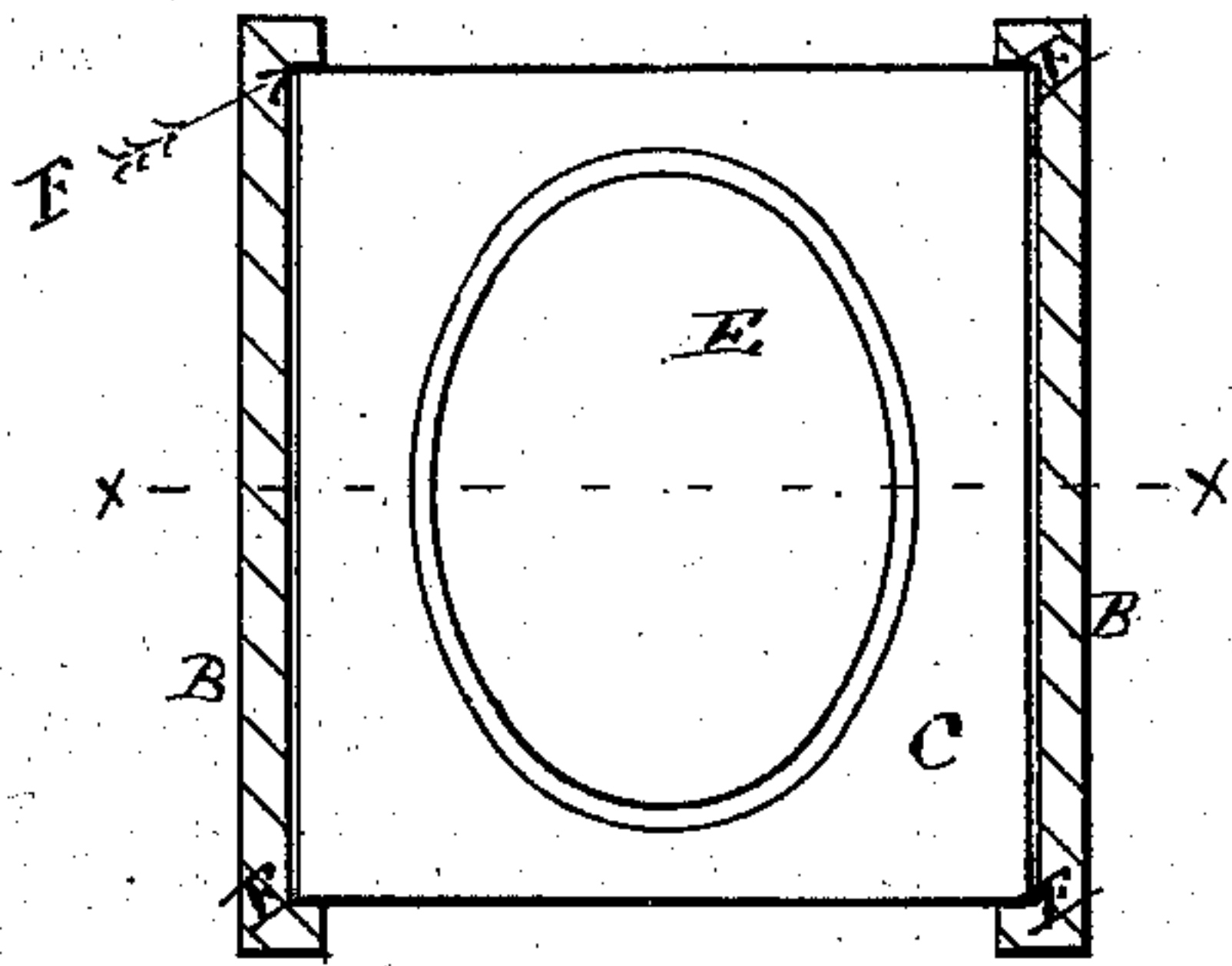


Fig: 2.

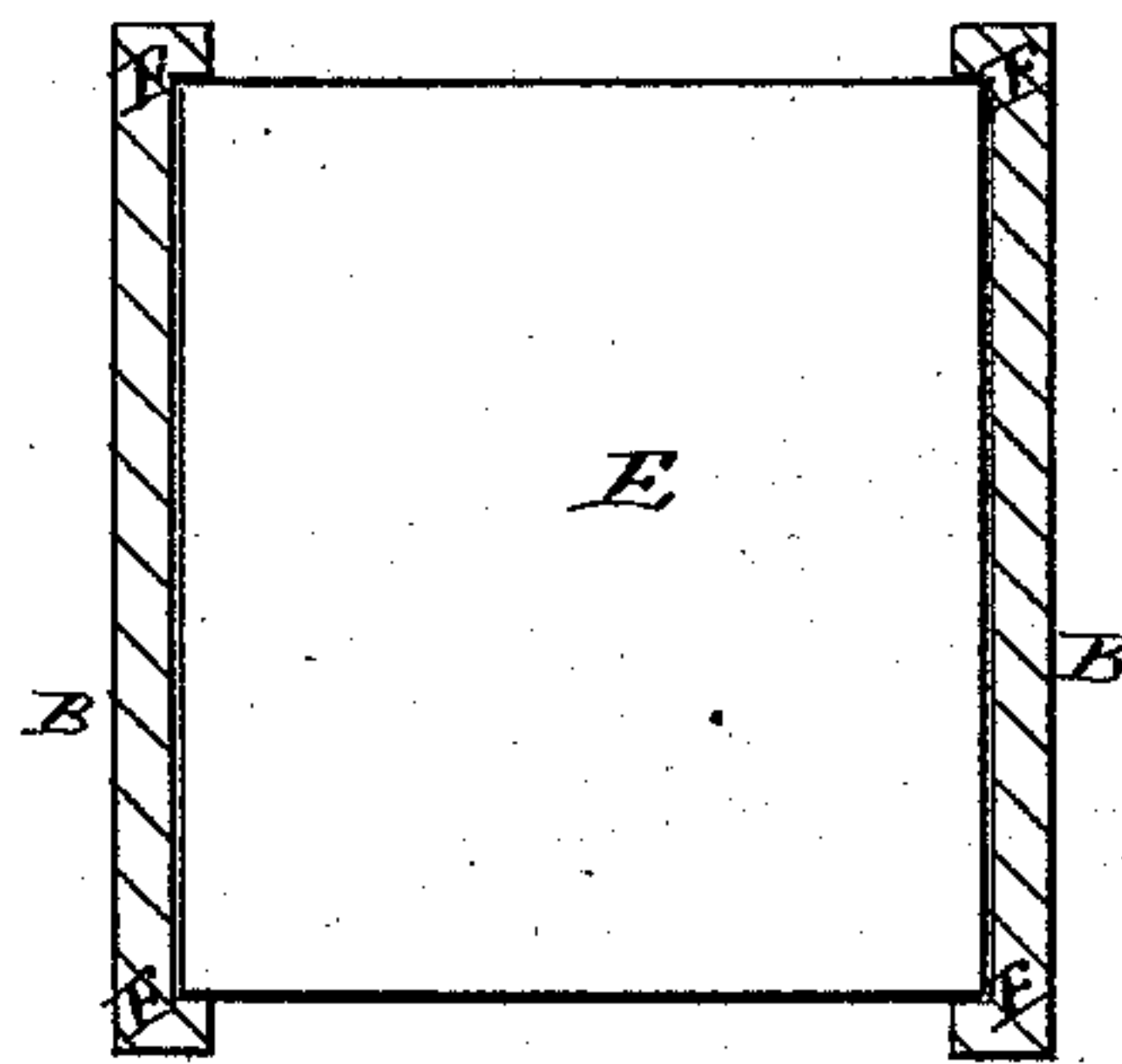


Fig: 3.

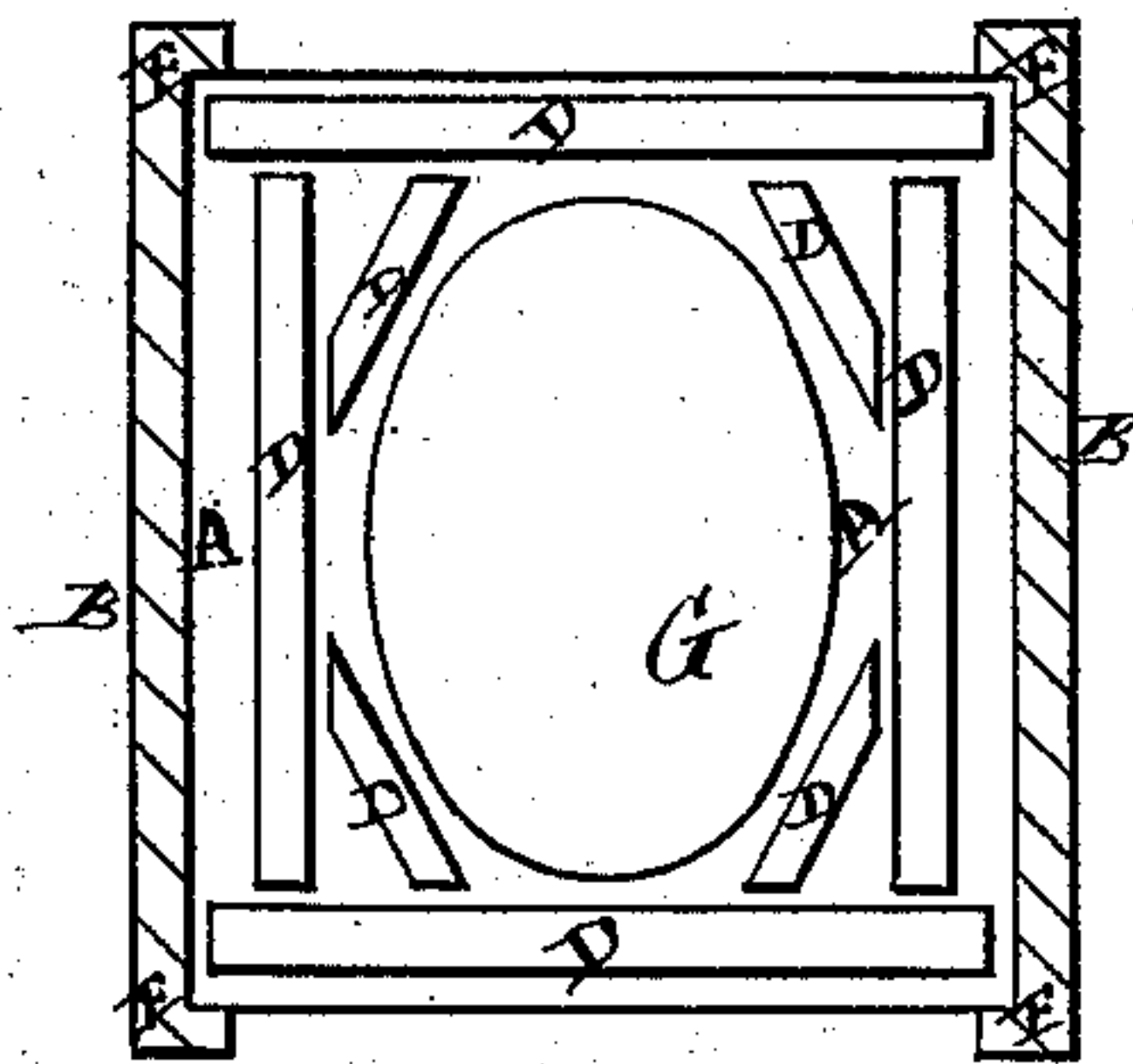
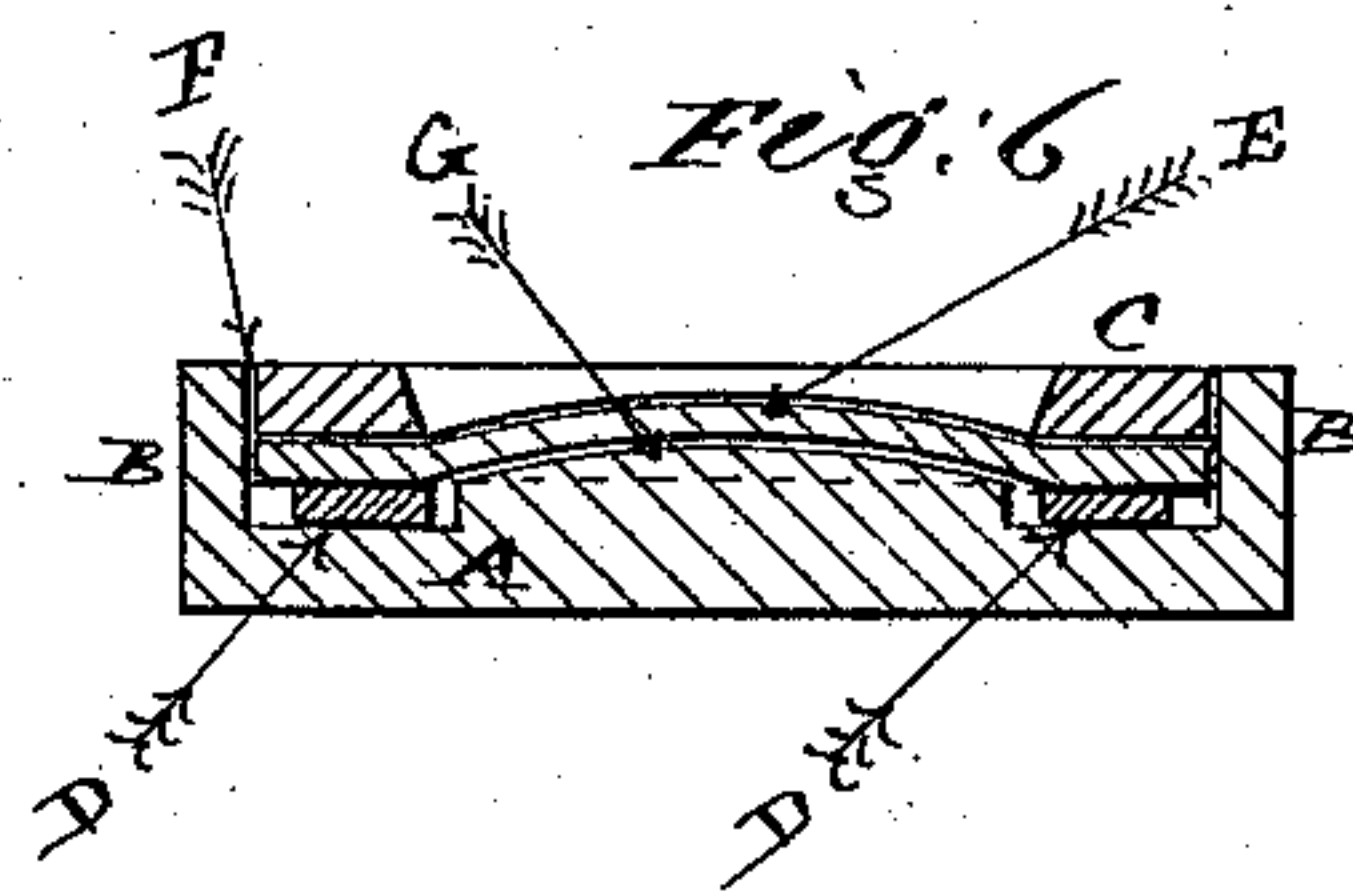
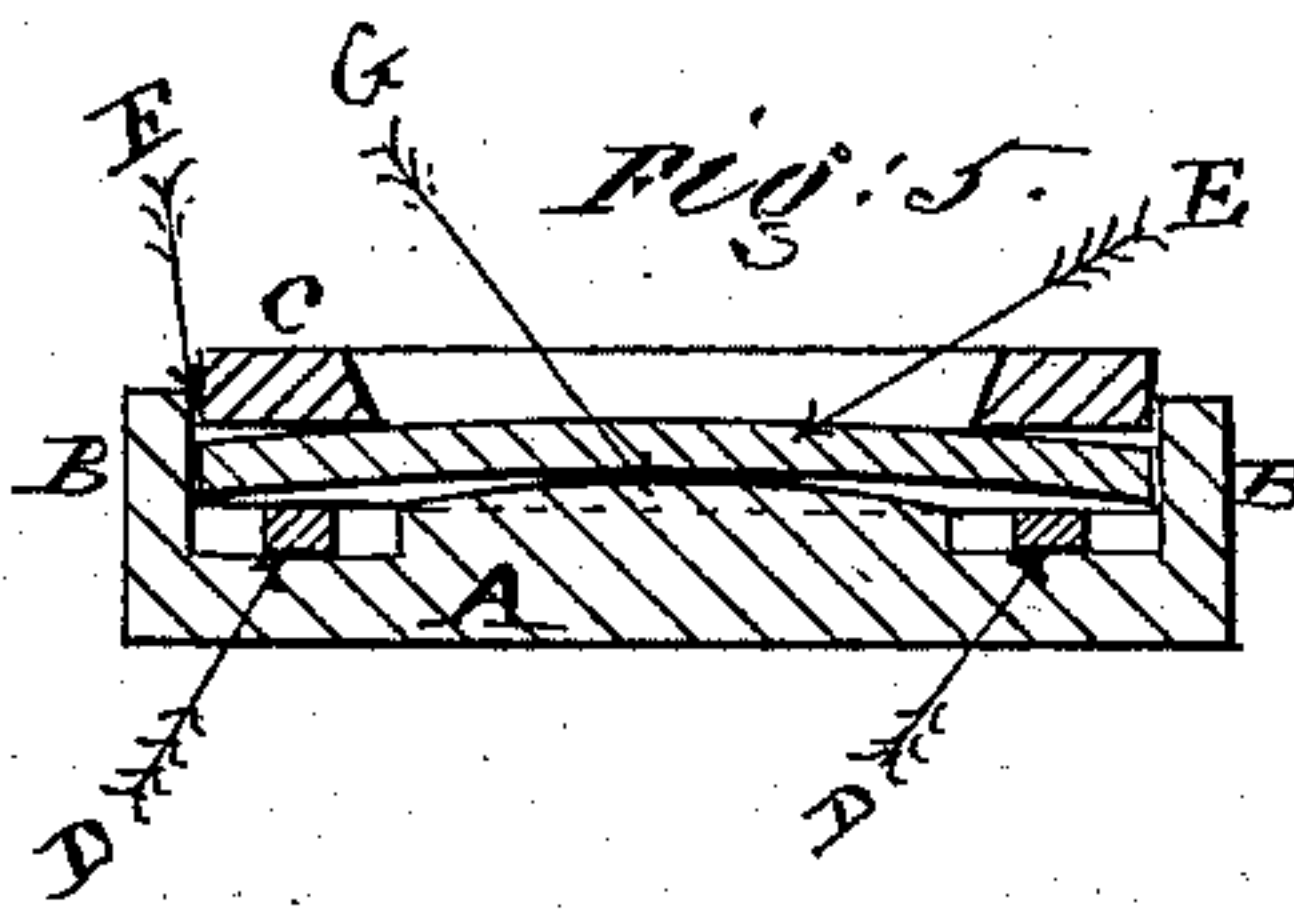
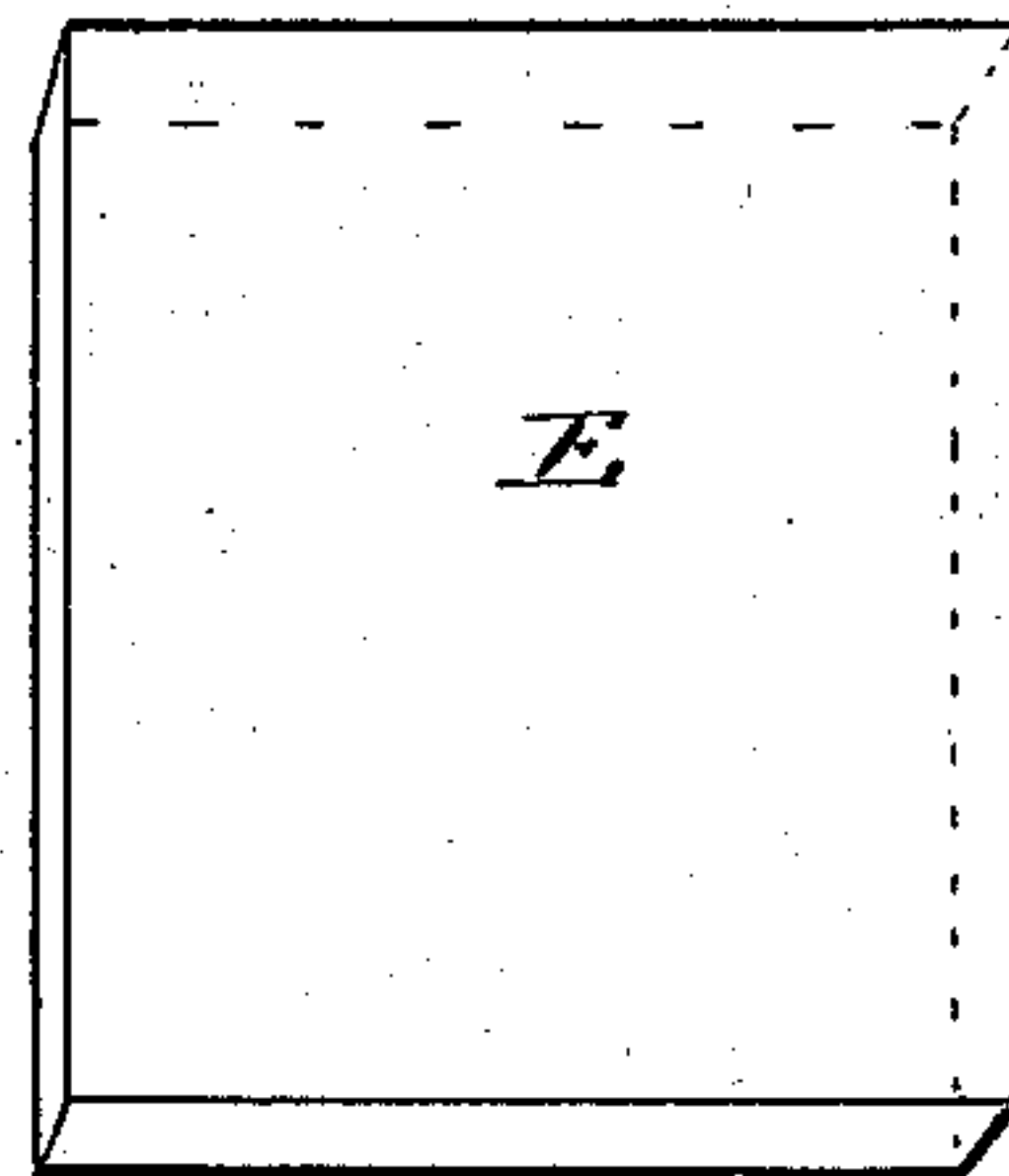


Fig: 4.



Witnesses
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IMPROVEMENT IN DIES FOR EMBOSSING PICTURES.

Specification forming part of Letters Patent No. **154,576**, dated September 1, 1874; application filed July 6, 1874.

To all whom it may concern:

Be it known that I, JOHN BARNETT, of Brooklyn, Kings county, State of New York, have invented an Improved Die for Embossing Photographs and other Pictures, of which the following is a specification:

The object of my invention is to emboss photographs and other pictures, so as to produce a convex medallion-shaped picture, whereby its artistical effects in lights, shadows, and perspective will be greatly enhanced; and the nature of my invention consists in combining a bed-plate, having a solid central boss thereon, with an arrangement of a narrow strip of prepared india-rubber or other elastic material surrounding the same, whereby the embossed impression may be struck up with great uniformity and evenness; also, in combining with the boss and its marginal elastic strips of india-rubber or other elastic material a fencing sheet of elastic india-rubber, for the purpose of diffusing the pressure of the die-plate evenly upon the elastic marginal strips surrounding the boss to obtain a perfectly level embossed medallion, and at the same time obviate all tendency to rupture the paper at the margin of the medallion; and, also, in combining with the bed-plate solid side walls as a means for guiding and automatically limiting the applied power of the screw-press to produce the embossed medallion; but to describe my improvements more particularly, I will refer to the accompanying drawings, forming a part of this specification, the same letters of reference wherever they occur referring to like parts.

Figure 1 is a plan view, showing the die-plate. Fig. 2 is a plan view, showing the die-plate removed to expose the fencing-sheet. Fig. 3 is a plan view of the bed-plate with the central boss and marginal elastic strips thereon. Fig. 4 is a detached perspective view of the fencing-sheet. Fig. 5 is a transverse cut section of the apparatus through the line *x x*, Fig. 1, showing the die before compression. Fig. 6 is a view of the same parts, showing the die after compression.

Letter A represents the bed-plate, made of iron or other suitable metal. On two parallel sides of the bed-plate are cheek-pieces B solidly attached thereto, and extending slightly be-

yond each end of it. The depth of these cheek-pieces above the bed-plate is about one inch, but will be proportioned in depth according to the thickness of the medallion die-plate C and elastic cushions D and E between it and the bed-plate. In the sides of the cheek-pieces are cut guideways F, for holding the die-plate always in a firm and horizontal position. On the bed-plate is formed an oval and convex-shaped boss, G; any other figure may be substituted for the oval shape shown. This boss is made of iron or other suitable metal, and solidly secured to the center part of the bed-plate. Its thickness at its edges is about one-quarter of an inch, and at its center about three-eighths of an inch. Of course the convexity of the boss may be varied to a greater degree, if desired, and as will be required in embossing large-sized photographs. Surrounding the boss is arranged, at a small distance therefrom, strips of elastic india-rubber D. The strips are straight on the four sides of the boss, with four short strips diagonally arranged to fill the angles of the corners of the side strips.

The objects of these elastic strips are, first, to form a yielding elastic cushion that the embossing may be effected; and, second, they are thus made as narrow strips, surrounding the boss a short distance therefrom, so as to admit of their lateral expansion under pressure. If they were made as a solid marginal cushion in shape, like the die-plate C, to surround the boss, it would not expand enough to emboss the photograph.

To prevent any inequalities in the action of the elastic strips, a fencing-sheet of elastic india-rubber, E, of some one-quarter of an inch thickness is laid on top of them. By this means the compression of the elastic strips is equally diffused, and a perfectly-developed medallion embossed.

In making the impression on the photograph it is placed upon the upper side of the fencing-sheet back down. The die-plate C is then placed on top of the photograph after being evenly centered over the boss. When thus arranged the die-plate C will project above the edges of the cheek-pieces B, as shown in Fig. 5. On the application of the platen of the screw-press, it will be compressed, as

shown in Fig. 6, wherein the upper surface of the die-plate C is on a level of the cheek-pieces. By this means the compression of the die-plate C will be automatically limited, and thus not only facilitate the operation of embossing the photograph, but will also prevent all tendency to rupture the card-board on which the photograph is secured by over pressure.

Having now described my invention, I will proceed to set forth what I claim and desire to secure by Letters Patent of the United States—

1. The bed-plate A and boss G, in combi-

nation with the marginal elastic strips of india-rubber or other elastic material D, all arranged to operate substantially as described.

2. The combination of the boss G and marginal elastic strips D with the elastic fencing-sheet E, substantially as described, and for the purposes set forth.

3. The combination of the solid cheek-pieces B, guideways F, and bed-plate A with the die-plate C, as and for the purposes set forth.

JOHN BARNETT.

Witnesses:

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