

Eli'phalet - J. Foss.

Improvement in Photography.

118006

PATENTED AUG 15 1871

Fig. III.

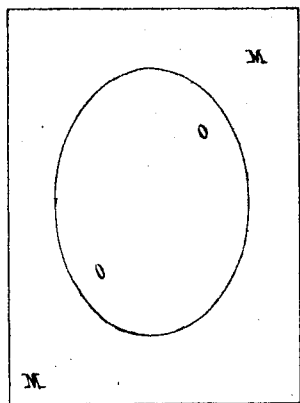
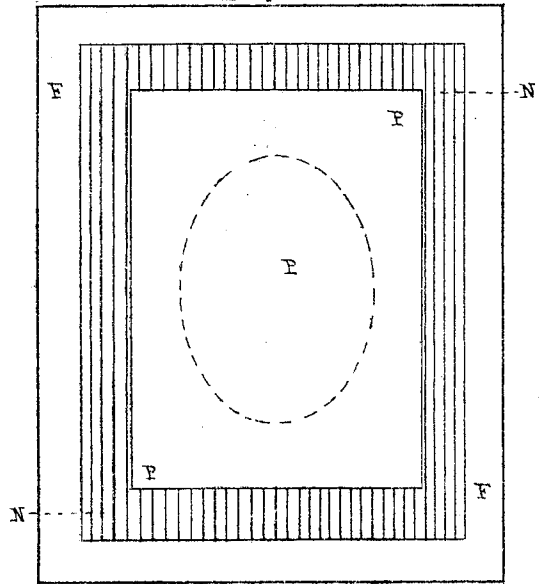
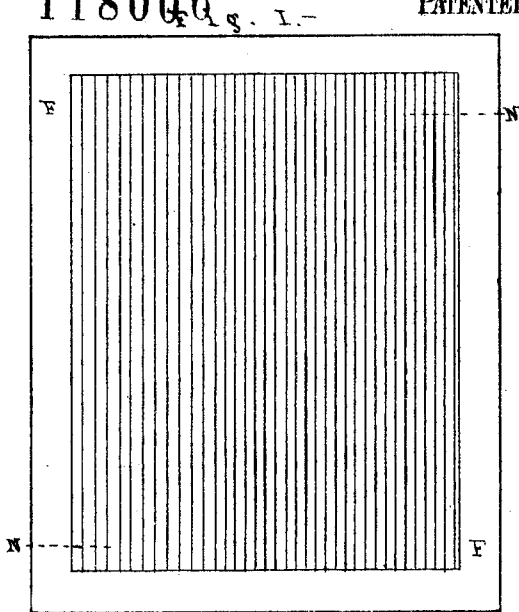


Fig. II

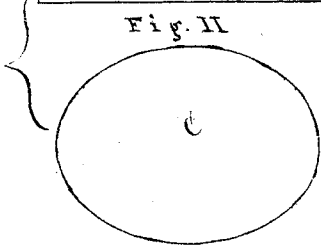


Fig. IV.

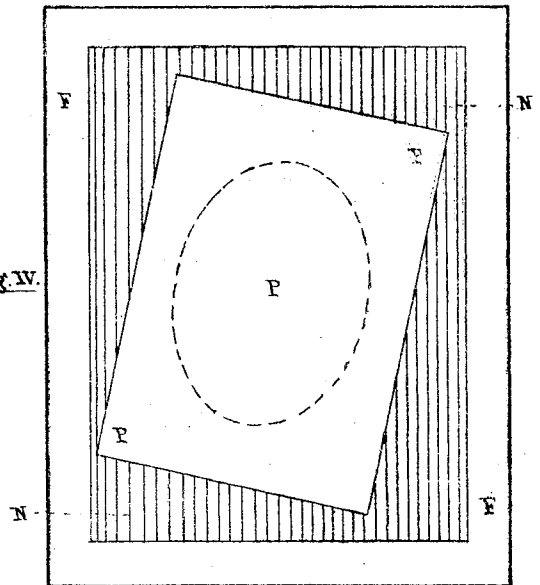
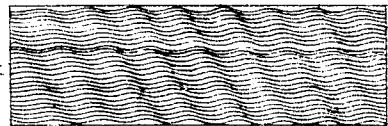


Fig. V.



In presence of
 Henry S. Lowe
 John M. Butcher

Eli'phalet J. Foss.

UNITED STATES PATENT OFFICE.

ELIPHALET J. FOSS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN PHOTOGRAPHY.

Specification forming part of Letters Patent No. 118,006, dated August 15, 1871.

To all whom it may concern:

Be it known that I, ELIPHALET J. FOSS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Photography; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing making a part of this specification.

Figure I is a plan of printing-frame with ruled negative in position; Fig. II, plan of mat with oval opening. Figs. III and IV show the position on the ruled negative of the picture that is to be printed; Fig. V, ruled negative with waved lines.

My improvement relates mainly to the production of the background of a photographic picture, but may be used for making designs for printed goods, and for various other ornamental purposes. The main feature of novelty is a negative of clear glass, having fine lines ruled, drawn, or otherwise produced upon one of its surfaces, and so used in printing by the ordinary exposure to light as to produce a background or tint of a peculiar and novel character.

A plate of clear glass, of suitable size, is coated with collodion in the usual manner for making a negative. It is then exposed to light, which produces a uniform dark color over the whole surface; the plate is then washed, toned, fixed, and varnished. The glass plate thus prepared is now to be placed in a ruling-machine, and fine parallel lines made across it, as represented at N, Fig. I. The tool used in the ruling-machine must have a point or edge that will remove the whole of the collodion-film without scratching the surface of the glass. The exact breadth of the lines for producing the best effect cannot be definitely stated. I have obtained good results with lines of fifty to the inch, but in this much variation may be allowed. The effect is improved by using both fine and coarse lines on the same plate, as in Fig. I, where the lines upon the left are coarser than those on the right side. From this ruled plate or negative others may be made in the copying-camera, but the lines are less sharp, and I prefer to make, in the ruling-machine, each negative that is to be used for making the background of a picture.

I will now describe the successive steps to be

followed in producing one kind of photographic picture, commonly called a "medallion." Cut an oval opening, O, in a piece of paper or card-board, M, Fig. II, place this in proper position upon the common picture negative, put on the prepared paper, and print in the common frame. The open space O, being exposed to the light, now contains the picture or face, while the margin, that is covered by the mat M is not effected. Now, place the ruled negative N in the printing-frame F, as shown in Fig. I, and upon it lay the picture P, as in Fig. III, having first covered the face or part that is to be protected from the further action of light with the oval card C that was cut from the opening O in the card-board M, Fig. II, then expose to light and print. When taken from the frame the background is found to be printed in parallel lines. Now, place it again upon the ruled negative, at a slight angle with its first position, as represented in Fig. IV, taking care to keep the oval card C in place; now expose to light, and print again.

On examination of the picture it is found to have a margin or background formed of lines crossing each other at an angle, a great variety of effects being produced by a very slight change in the relative position of the ruled negative and the picture. It will be observed that there are three successive printings: first, the picture or head; second the background of parallel lines; third, the background of lines, crossing or interfering with the first series of lines. When this last or third printing is to be made the frame should be held up to the light and the picture placed at such an angle as will give the desired effect. It may be very light and delicate tracery-work, or it may be dark and have a great variety of curved, shaded, and watered figures.

To produce other styles of background the ruled lines on the glass negative may be of various kinds. One of these, representing waved lines, is shown in Fig. V.

Instead of making the negative-ruled plate by the photographic process as first described, the clear glass may be coated with paint or black varnish, and when dry the lines may be cut through this coating by the ruling-machine or other suitable mechanism.

What I claim, and desire to secure by Letters Patent, is—

1. A clear-glass negative, having a series of fine lines engraved, ruled, or printed upon it, and used for the purpose of producing the backgrounds of photographic pictures, substantially in the manner described.

2. As a new article, a photographic picture, card, or print, having a lined or reticulated back-

ground, when the same is produced in the manner herein described, or by other equivalent process.

ELIPHALET J. FOSS. [L. S.]

Witnesses:

HENRY S. ROWE,

JOHN M. BATCHELDER.