

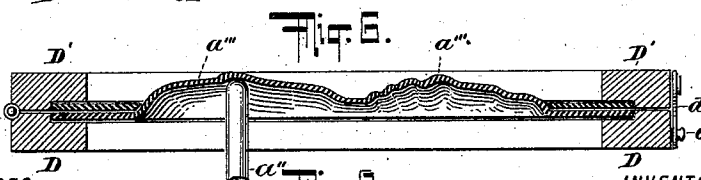
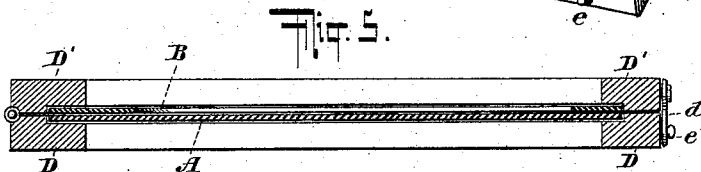
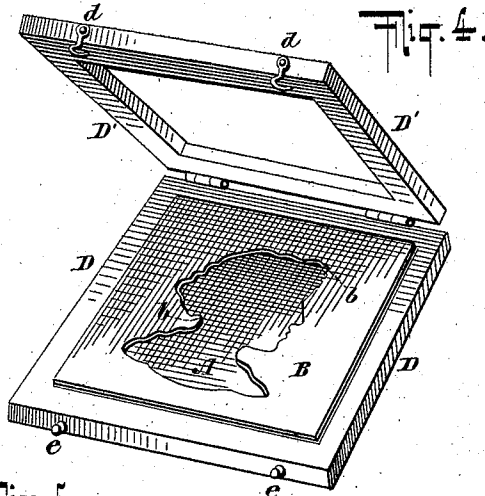
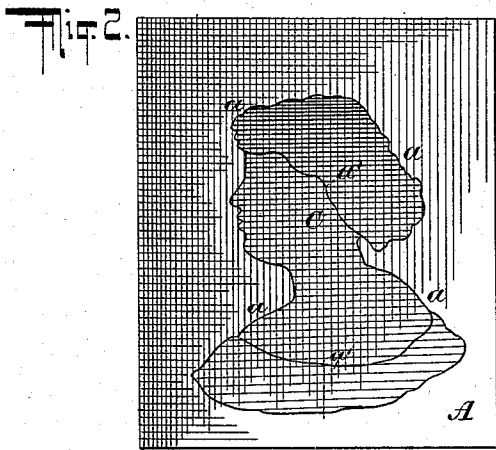
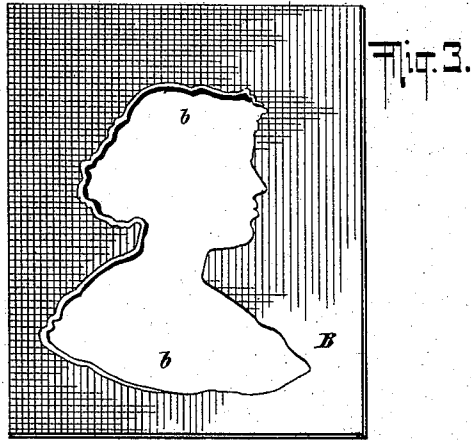
(No Model.)

H. C. FAIRCHILD.

METHOD OF PRODUCING PHOTOGRAPHS IN RELIEF.

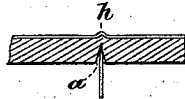
No. 576,047.

Patented Jan. 26, 1897.



WITNESSES:

Gustave Dietrich
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UNITED STATES PATENT OFFICE.

HARRY C. FAIRCHILD, OF SANDY HOOK, CONNECTICUT.

METHOD OF PRODUCING PHOTOGRAPHS IN RELIEF.

SPECIFICATION forming part of Letters Patent No. 576,047, dated January 26, 1897.

Application filed October 22, 1896. Serial No. 609,639. (No specimens.)

To all whom it may concern:

Be it known that I, HARRY C. FAIRCHILD, a citizen of the United States, residing at Sandy Hook, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Methods of Producing Photographs in Relief; and I do hereby declare that the following is a full and clear description of my invention, which will enable those skilled in the art to which it appertains to use the same.

My invention relates to a method whereby photographic images are produced in relief, so as to have a lifelike and natural appearance.

The objects of my invention are, first, to produce photographs in relief without the use of metal or wood dies or molds; second, to produce photographs in relief cheaply and speedily. I attain these objects by the method substantially as herein set forth, reference also being had to the accompanying drawings, in which similar letters are used to designate similar parts throughout.

Figure 1 is a front view of an ordinary photograph mounted. Fig. 2 is a rear view of the same photograph mounted, showing a furrowed outline of the image or portrait portion thereof to be put in relief and also a furrow in the interior of said image or portrait portion desired to be put in relief. Fig. 3 is a front view of a duplicate mounted photograph, showing the same image or portrait portion thereof cut out, leaving what is herein termed, for purposes of description, an "open mask," the edges of this open mask being beveled where the outline of the figure to be put in relief is not desired sharply brought in relief and clean or sharply cut out where the outline of the figure is desired to be sharply brought out. Fig. 4 is a perspective view of the frame for holding both the furrowed photograph and the duplicate photograph having the open mask, said frame being open. Fig. 5 is a longitudinal sectional view of the frame having said furrowed photograph and said open mask inclosed, the portrait or image portion thereof being put in relief by an embossing-tool. Fig. 7 is an enlarged view of a

portion of the furrowed photograph, showing the manner of cutting the furrow. Fig. 8 is a longitudinal sectional view of the furrowed photograph, showing the portion in relief, the filling to retain the same in relief, and the final backing of the photograph.

In operation my method is as follows: The image of a mounted photograph A is desired to be put in relief. The photographic print should be mounted upon cardboard or any suitable metal or material which will allow of the cutting of the furrow hereinafter described, the print being attached to the mount by some strong adhesive.

A furrowed outline C of the portion of the photograph to be put in relief is cut with a suitable sharp instrument upon the back of the photograph A. The furrow *a a* extends substantially, but not entirely, through the material upon which the photograph is mounted to the photographic print, Fig. 7, the operator being enabled to watch from the front side of the photograph the course of the furrow as it is cut by the bulging *h*, Fig. 7, of the material upon which the photograph is mounted. An interior furrow or furrows *a'* may be similarly and are preferably cut within the figure or portrait portion to be put in relief, the object being to allow interior portions of the image to be placed more prominently in relief than some other portions of the image. Thus in Fig. 2 the interior furrow *d'* is cut to allow the hair of the figure to be raised more prominently than other portions of the face. A duplicate mounted photograph B is then used, the image or portrait portion thereof *b b* being cut out with a sharp instrument, making what has been herein termed an "open mask," this open mask *b b* corresponding to the furrowed-outline portion C of the photograph to be put in relief. In cutting the open mask the edges of the open mask should be beveled somewhat where it is not desired that the outline of the figure to be put in relief should be sharply brought out, as B, Fig. 3, the back and upper portion of the head; but the edges of the open mask should be cut clean or sharp where a portion of the figure to be placed in relief is desired to be sharply brought out, as B, Fig. 3, the face.

Instead of using a duplicate photograph to make the open mask, a duplicate image of the

portrait to be placed in relief may be obtained
 by tracing, drawing, or otherwise and by
 means of it an open mask cut from any suit-
 able material. The furrowed portion C of the
 5 photograph A to be put in relief is then damp-
 ened, preferably with water, on its rear side
 within and along the lines of the exterior fur-
 row *a a* and also along the lines of the interior
 furrow or furrows *a'*. A paste may then be
 10 applied to the dampened portion, which paste
 while it is wet acts as a lubricant for the em-
 bossing-tool hereinafter mentioned and when
 dry stiffens and thereby further retains the
 portion to be put in relief, preferably a paste
 15 containing a proportion of glue. The fur-
 rowed photograph A is then placed face up-
 ward in a suitable frame D D'. The dupli-
 cate photograph B, with open mask *b b*, is
 placed over it in the frame D D', so that the
 20 open mask *b b* shall register with the furrowed-
 outline portion *a a* of the photograph A, Figs.
 4 and 5. The frame D D' is an ordinary open-
 work frame arranged to hold the photographs
 A and B securely in a position registering
 25 with each other. The dampened furrowed
 portion C of the photograph A is then pressed
 or molded upward through the open mask *b b*
 with a suitable tool *a''*, forming a portion
 in relief *a''' a'''* to such an extent as the face,
 30 figure, and costume to be placed in relief may
 require and in accordance with the artistic
 taste of the manipulator, this operation being
 facilitated by the dampened condition of the
 furrowed portion C of the photograph A, ren-
 35 dering the material upon which the photo-
 graph is mounted more flexible. The func-
 tion of the furrow is to relieve the embossed
 or raised portion of the picture encompassed
 within it from the strain or tension of the
 40 mount, or, in other words, overcomes the tend-
 ency of the mount to draw the raised por-
 tion of the photograph out of place or flatten
 it, and allows the raised or embossed portion
 to retain its form, or the frame D D' may be
 45 inverted and the dampened furrowed portion
 C of the photograph A may be kept down-
 ward and pressed or molded downward at
 the option of the operator. The photograph
 A, with the portion C then in relief, is removed
 50 from the frame D D'.

A suitable plastic filling *f f*, Fig. 7, prefer-
 ably of melted paraffin, may be spread over
 the back of the relief or embossed portion of
 the photograph to retain it permanently in
 55 position, and this is of advantage where the
 photograph is large in size. The photograph
 A, with the desired figure or portrait portion
 thereof thus in relief, may then have a suit-
 able backing *g g* affixed to it for purposes of
 60 finish.

Although my invention is primarily appli-
 cable to photographs, it may also be used
 upon crayons, lithographs, and, in fact, upon
 any image displayed upon and mounted upon
 65 a material which will allow of the cutting of
 the furrowed outline on the back thereof

hereinbefore described, and which will be
 sufficiently flexible to allow of the molding
 or embossing through the open mask.

Having fully described my invention, what 70
 I claim, and desire to protect by Letters Pat-
 ent, is—

1. The method of producing embossed pho-
 tographs which consists in cutting into the
 rear face of a plain photograph a furrow in 75
 the outline of the picture on the print, and
 then pressing the portions of the mount in-
 closed by said furrow outward with the print
 to form the embossing, substantially as herein
 described and set forth. 80

2. The method of producing photographs in
 relief which consists in cutting in the mounted
 photograph from the rear side thereof a fur- 85
 rowed outline of the portion to be put in re-
 lief, providing a separate open mask of said
 furrowed-outline portion, dampening the fur-
 rowed-outline portion of the photograph to
 be put in relief, inclosing in a frame the last-
 mentioned photograph and the open mask, 90
 the open mask being placed on top so that
 the open mask and the furrowed-outline por-
 tion of the photograph shall register with
 each other, and molding into relief the fur-
 rowed portion through the open mask, sub-
 stantially as herein described and set forth. 95

3. The method of producing photographs in
 relief which consists in cutting in the mounted
 photograph from the rear side thereof a fur- 100
 rowed outline of the portion to be put in re-
 lief and furrows interior to said outline, pro-
 viding an open mask of said outline portion,
 dampening the furrowed-outline portion and
 the furrows interior thereto of the photograph
 to be put in relief, inclosing in a frame the 105
 last-mentioned photograph face uppermost
 and the open mask, the open mask being
 placed on top so that the open mask and the
 furrowed-outline portion of the photograph
 shall register with each other, and molding 110
 into relief the furrowed portion through the
 open mask, substantially as herein described
 and set forth.

4. The method of producing photographs in
 relief which consists in cutting in the mounted 115
 photograph from the rear side thereof a fur-
 rowed outline of the portion to be put in re-
 lief, providing an open mask of said furrowed-
 outline portion in a duplicate mounted pho-
 tograph, dampening the furrowed-outline por- 120
 tion of the photograph to be put in relief, in-
 closing the first-mentioned photograph face
 uppermost and the duplicate photograph hav-
 ing the open mask in a frame, the duplicate
 photograph being placed on top so that the
 open mask thereof and the furrowed portion 125
 of the other photograph shall register with
 each other molding into relief with an em-
 bossing-tool the furrowed portion through the
 open mask, filling the portion so molded into
 relief with a plastic material to retain it in 130
 position and backing the photograph, sub-
 stantially as herein described and set forth.

5. As a new article of manufacture an embossed photograph comprising the print and mount, the latter in its rear face having a furrow cut into it along the outlines of the picture on the print and the portions of said mount encompassed by said furrow being pressed outward with the print, substantially as herein described and set forth.

In testimony whereof I have hereunto set my hand this 20th day of October, 1896.

HARRY C. FAIRCHILD.

Witnesses:

W. L. SAWYER,
A. J. KEHLENBECK.