(Specimens.)

F. BECK.

STENCIL.

No. 318,943. Patented June 2, 1885.

Fig. 1.

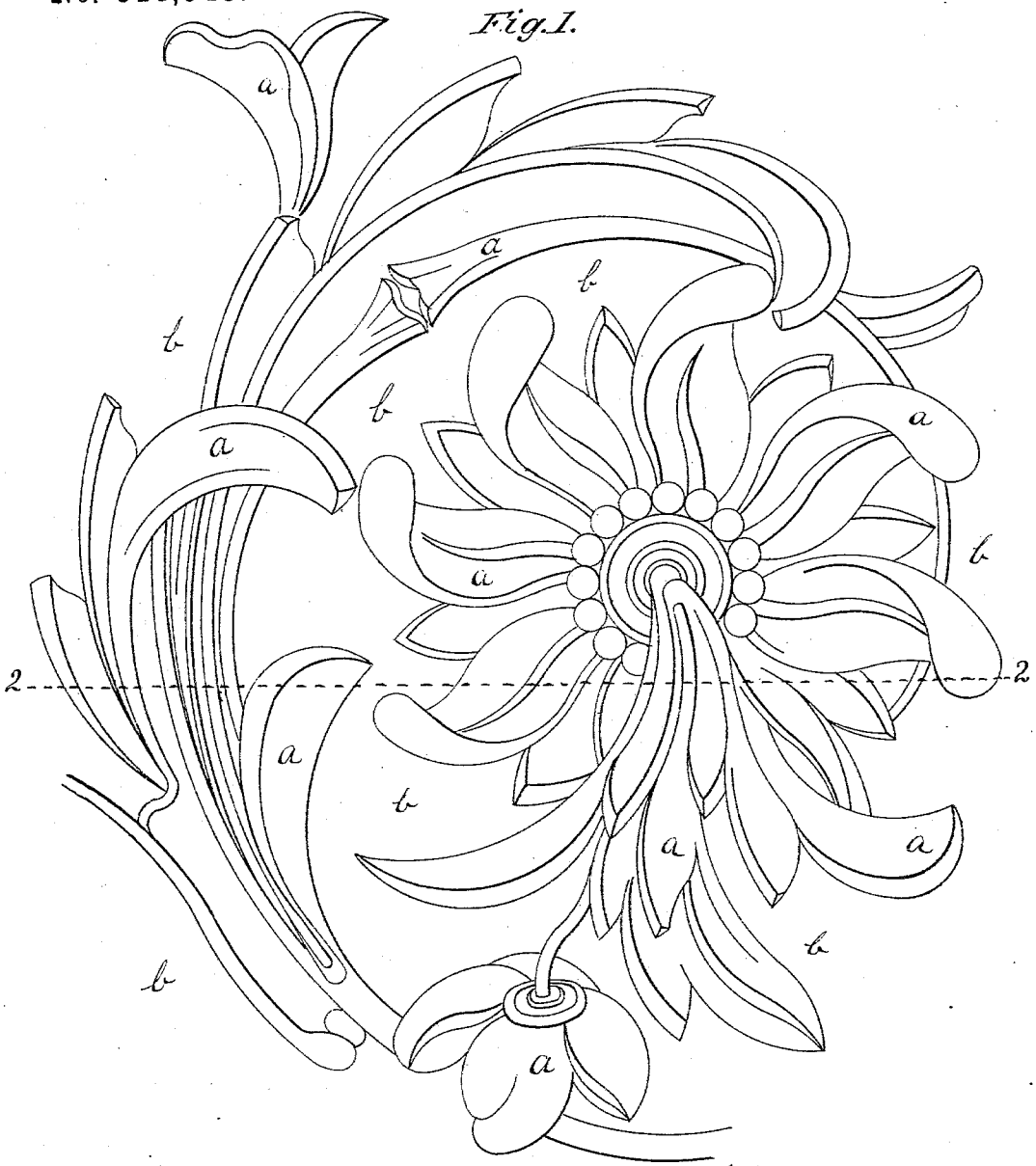


Fig 2

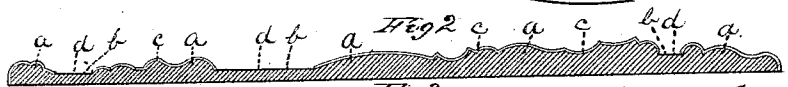


Fig 3.



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UNITED STATES PATENT OFFICE.

FREDERICK BECK, OF NEW YORK, N. Y.

STENCIL.

SPECIFICATION forming part of Letters Patent No. 318,943, dated June 2, 1885.

Application filed March 6, 1884. (Specimens.)

To all whom it may concern:

Be it known that I, FREDERICK BECK, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented a certain new and useful Improvement in Stencils, of which the following is a specification.

My invention relates to a new and useful stencil and in the process whereby the same is produced.

Prior to my invention it has been customary to employ a stencil made of thin metal, cardboard, or similar material, having portions cut out therefrom, through which the color is applied to walls and ceilings, thus quickly and inexpensively producing vari-colored fresco ornamentation; but such stencils can only be practically employed on flat or at least uniform surfaces, because when used on irregular surfaces—such, for example, as molded work made of papier-maché, linerusta, (*i. e.*, oxidized oil and wood or other fiber,) plaster of paris, or the like, resulting in irregular figures in relief—the stencil, even if so cut as to expose the parts of the relief desired to be colored, would not fit the relief, but on the contrary, being a flat plate, would rest only against the most projecting parts of the relief, and consequently the bristles of the brush used to apply the color would not be confined by the stencil, but would spread laterally into the unoccupied space underneath the stencil and apply color where it was not wanted, and practically ruin the work.

My invention consists in a method whereby I make a stencil which exactly fits the relief, and which will protect the parts requiring protection as completely as though the relief were a flat surface.

It will be understood that in almost all relief decoration of the kind referred to by me a certain defined design, figure, or group of figures is successively repeated, and that if a stencil be made which will fit the design, figure, or group of figures, which is successively repeated, it may be used on all the other like designs, figures, or group of figures, because it will fit any one just as well as that which it was especially made to fit. This being the case, I take a complete design, figure, or group of figures, which being successively repeated constitutes the ornamentation, and preferably give it a light coat of oil, so that when the paper is applied to it, as hereinafter set forth, it will not adhere to it. I then take a sheet of paper, preferably unsized paper, large enough to completely cover the relief and extend beyond it somewhat all around to allow for the taking up of the paper when pressed into the irregularities of the relief, as hereinafter stated. Blotting-paper may be advantageously used, although any other kind which will become soft and pliant when moistened will answer the purpose, and I soak or dampen it until it is thoroughly pliant and soft. This first sheet may be dampened with water alone, or with paste, glue, or other like substance, the same as those placed on top of it, as hereinafter stated. I then place it over the design and beat it down into the same by repeated light blows of a brush, which should preferably have somewhat stiff and open bristles. This I continue until the piece of paper has been beaten down into all the interstices and inequalities of the relief. I then take another piece of paper of substantially the same size as the first, and paste one side of it thoroughly, and wait until the paste has penetrated the paper and made it pliant and soft. It may be also soaked in water to facilitate the softening, if desired. I then place it, pasted side down, on the top of the piece which has already, as stated, been beaten down upon the relief, and I then beat this second sheet in like manner down upon the first, and I then continue applying in like manner such number of additional sheets as may be necessary, preferably crossing the grain or fiber of the several sheets, so that they may strengthen each other. The outer sheets, which are put on last, may be made of a strong paper, or one or more pieces of muslin or other like fabric, pasted as above described, may be used between any of the sheets, or on the outside thereof, to strengthen the stencil, and glue or any other suitable substance which will stiffen when dry and harden the stencil may be used on one or more of the pieces of paper, cloth, or other like substance used to build up the stencil.

Figure 1 is a plan view of the stencil. Fig. 2 is a section of the stencil on the line 2 2 of Fig. 1. It does not show the separate layers of material of which the stencil is composed, such separate layers being shown in Fig. 3.

Fig. 3 is an enlarged sectional view of the stencil on the line 2 2 of Fig. 1.

In the drawings, *a* is the relief covered with the stencil. *b* is the base or back ground on which the relief is formed, shown as flat in the drawings; and *c* is the stencil. It is shown only in the sectional Figs. 2 and 3 at *d d*.

In Fig. 2 I show three spaces where the stencil has been removed, these being the spaces where the color is to be applied, it being assumed that the stencil shown in the drawings is one prepared to color the background.

In Fig. 3, which is considerably enlarged from the actual size, five thicknesses of the material composing the stencil, either paper or cloth or other suitable material, as the case may be, are shown at *e e e e e*. As already stated, there may be more or less such layers or thicknesses, as desired. The stencil is shown as intact in this figure—*i. e.*, the spaces marked *d d*, &c., are not cut out. This is done the better to illustrate this figure. I have found that from six to ten sheets of paper produce a very stiff and serviceable stencil; but the number will depend upon the character of the paper, cloth, or other material used, and also whether any stiffening material, such as glue, is used or not; also a single comparatively-thick sheet of suitable material may be used, it being treated with glue or other substance to stiffen and hold it together. After the pieces of paper have become dry, (the drying operation being preferably done under pressure of cloths bunched or folded together in such manner as to press upon substantially all parts of the relief and with a weight placed on top,) I remove them from the face of the relief, and they will be found to constitute a single stiff and compact piece, the underside of which will exactly conform to the face of the relief. I then, with a fine saw or knife, or in any other desired manner, remove such portions of the paper, or paper and cloth, as cover the parts of the relief or design which I desire should appear in color, as usual, in the manufacture of ordinary stencils, and then carefully smooth its under side. I thus produce a stencil or shield which not only accurately fits and in use will completely protect the parts of the relief requiring protection, but also because its irregular form possesses the stiffness of corrugated material, and will not readily get out of shape, and also when in use will accurately register itself, since it must be in exactly the right position on the relief, or it will not fit over it and cannot be used.

The parts sawed or cut out from the stencil may themselves be fastened together by gluing or otherwise fastening arched pieces of any suitable stiff material from one to the other, thus forming another stencil, which I will call "stencil No. 2," by the use of which different colors can be applied to the parts protected by the use of the stencil first obtained; or a series of stencils can be made in the same manner that the first one was made for the application of different colors to different parts of the relief.

In making stencil No. 2, the connections between the several pieces should be arched to such a degree that they will not touch any part of the relief, and also, preferably, so much that the brush can be inserted under them, if desired, so as to apply the color underneath them.

After the stencil has been completed by cutting out the parts necessary to be removed, or prior thereto, I prefer to give it on both sides one or more coats of varnish, oil, or other preservative material.

Having thus described my invention, I claim—

1. As a new article of manufacture, a stencil for use on irregular surfaces, composed of paper, cloth, or other like pliant material, stiffened and bound together with an adhesive substance which stiffens when dry, the under side whereof matches the irregular surface, substantially as and for the purposes set forth.

2. As a new article of manufacture, a stencil adapted to act as a counterpart to another stencil and made by uniting by arched connections the parts cut out of the other stencil, the said parts being arranged and located in the same relative position which they occupied prior to being removed from the counterpart stencil, substantially as and for the purposes set forth.

Signed at New York city, in the county of New York and State of New York, this 19th day of February, A. D. 1884.

FR. BECK.

Witnesses:
PHILLIPS ABBOTT,
JOHN J. CAULDWELL.