(No Model.)

J. O. FOWLER, Jr.

ARTIFICIAL STAINED GLASS.

No. 260,559. Patented July 4, 1882.

FIG. 1.

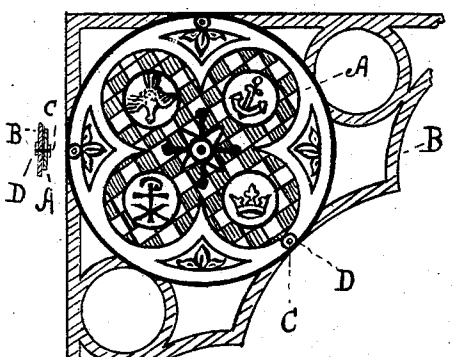


FIG. 2.

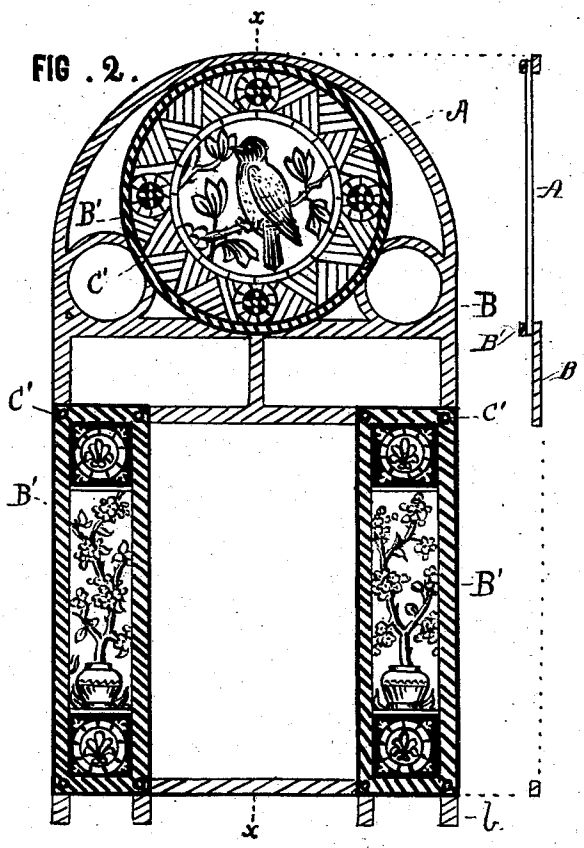


FIG. 3.

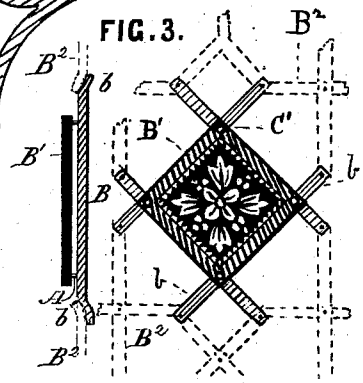


FIG. 4.

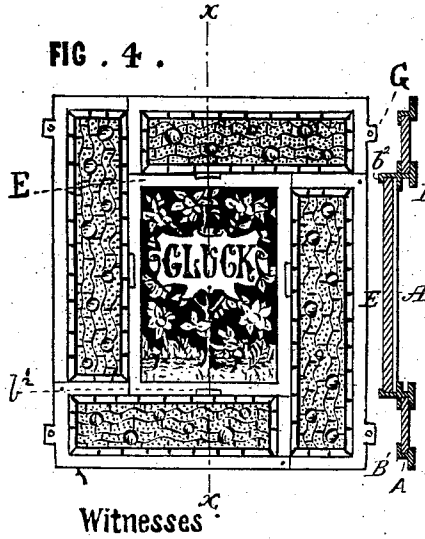
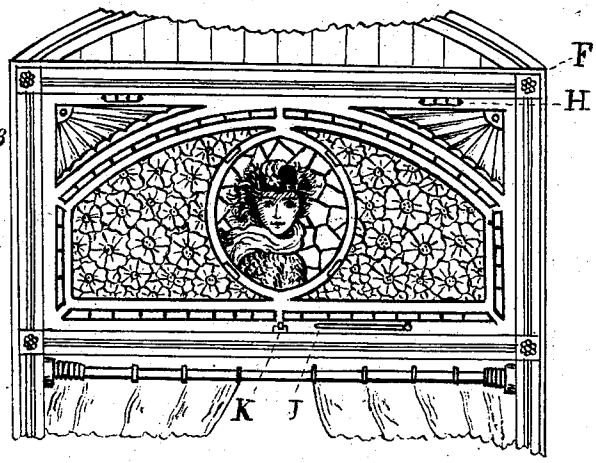


FIG. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

JONATHAN O. FOWLER, JR., OF NEW YORK, N. Y.

ARTIFICIAL STAINED GLASS.

SPECIFICATION forming part of Letters Patent No. 260,559, dated July 4, 1882.

Application filed February 1, 1882. (No model.)

To all whom it may concern:

Be it known that I, JONATHAN O. FOWLER, Jr., of New York, of the county of New York and State of New York, have invented a new and useful Improvement in Artificial Stained Glass for use in screens for church and other windows; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a view of my net-work-supporting frame with a panel of translucent or diaphanous material; Figs. 2 and 3, the same with a superimposed frame-work; Figs. 4 and 5, views of screens of my artificial stained glass with a center panel of glass, also showing hinged and other supporting devices.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide, as a new article of manufacture, an inexpensive and durable substitute for stained glass for use in churches, drawing-rooms, conservatories, libraries, staircase or hall windows, fire-screens, &c.

My invention consists in the use of two or more sheets of diaphanous or translucent material and of a (preferably metallic) frame of diaper or net-work design to connect and hold together the various sections, and also in stationary and hinged supporting devices for the same, and in other minor details, hereinafter described.

In the drawings, A represents the ground or diaphanous body of my artificial stained-glass screen or window, which is obtained by producing upon each of any two or more sheets of transparent or translucent material (either by lithography or, if necessary, with the pencil and brush, or by photography) some color, picture, or design which will give an effect similar to that of stained glass.

The transparent material may be obtained by the use of paper oiled, varnished, or gelatinized, or by the use of gelatinous isinglass or other material capable of transmitting light.

Any sheet or plate obtained by the process above mentioned may also be stiffened by the use of a backing of varnish, or by sheets of mica or gelatine or other colorless or translucent substance, applied to either or both sides of the same, which may then be rendered impervious to the action of water by any approved method. By this process a stiff but flexible transparent water-proof sheet or plate is obtained, the color of which may be modified by increasing or diminishing the thickness of the backing.

B represents a thin flat metallic frame or net-work, similar in effect to the diaper-pattern leaden sash of the stained-glass windows, and which is cut in accordance with the contour or outline of the picture or design and of the ground and bordering required by the subject to be produced. The different pieces of sheets of transparent colored ground or figures, having been cut of a size to fit their respective places in the metallic net-work or frame, are then applied to the same and rigidly attached thereto. If only one side of the screen or window thus formed is to be exposed, the diaphanous tiles may be cemented to the metallic frame or else, as shown in Fig. 1, riveted by the bolts C and washers D to the sash B. I prefer, however, to use two similar frames, B, one on each side of the colored design.

In Figs. 2 and 3 I represent a lower plate, B, and an additional frame, B′, rigidly attached together by bolts C′, with the transparent colored figures, &c., held firmly between the same. The lower frame, B, is made with extensions *b*, by which the screen or window may be enlarged at pleasure. Thus, as in Fig. 3, if B′ be used for the central panel of a window, any desired grounds and borderings may be added thereto by attaching, first, the new lower frame, cut out as designed, as B^2, then the transparent medium, and (when required) finally riveting metallic strips on the top and along the path of the net-work until the whole frame is duplicated.

It will be clearly seen that the metallic frame for the screen may be composed of one piece, with proper openings cut out to suit any design, or it may consist of a number of small sections, each being rigidly attached to its surrounding sections. Screens made in this manner are alike available for displaying

in an artistic manner the number of a house in vestibule-doors or head-lights, or the style or business of a concern in show-windows.

One great advantage of constructing window-screens after this method is that they may be taken apart again at any future time and altered and built up again to fit any other aperture or window, as may be desired, at a nominal expense.

Other material may be used for the frame-work, but for obvious reasons metal is preferable.

Where large panels have to be used I sometimes employ what I call a "decorated" tile. This tile consists of a plate of glass, which may be rendered ornamental by silvering in the well-known manner upon one side, constituting a mirror or reflecting-tile; or it may be decorated by attaching thereto a sheet of the translucent material above described, as in Fig. 4, in which E, employed alone, may represent a mirror-plate, or with the sheet A of diaphanous material may form a decorated tile. This decorated tile, of either construction, is firmly clasped and rigidly attached to the frame B by means of the clamps b^2.

Ordinarily I use the decorated tile to fill one large section or opening in the diaper or net-work frame. By attaching, however, narrow strips of foil or thin metal to the surface thereof it may be divided up so as to represent a number of sections, in order to resemble the rest of the screen, when desired.

The use with a diaper or net-work skeleton frame of a tile, as above described, to fit the center section or opening, and of flexible sheets of transparent or translucent material fitted to the various remaining sections, is applicable to a new method of forming ornamental articles of household use—as, for example, fire-screens.

Instead of the particular construction shown above, it is apparent that all the transparencies may be attached by clamps to the frame B, in the same manner as is the panel E.

After the screen of artificial stained glass is constructed of the designed pattern and fits the required opening, the frame B is provided with projecting ears, hooks, or equivalent devices, as G in Fig. 4, for purposes of support, or else with a hinged or swinging device, as H in Fig. 5, attached to the sash F; or, if preferred, the screen may be suspended by a rod resting on rings or hooks.

A suitable catch or stop, K, is placed on the sash for the purpose of keeping the screen in position when closed, while the bar J serves to hold the same open.

By the use of this invention we get not only the exact similitude of the leaden frames, but also the rich, deep colors which are only found in the older cathedral-windows, and it presents such a striking resemblance to the genuine stained glass that it can only be distinguished from the same upon a critical examination.

This invention possesses some important advantages over the use either of stained or imitation decorated-glass windows. In the first place, in the matter of comparative expense, as its price amounts to but a mere fraction of that charged for stained glass, and also in the fact that should the glass of the window in which this decoration is placed be fractured, the inside screen, being somewhat flexible, would not be injured, or at most a single section would have to be replaced.

When used in dwellings the artificial stained-glass screen, besides possessing the advantage of being readily altered and reconstructed, as shown in Fig. 3, also has that of portability, as it is arranged to go into any building without change of the sash in use, and it may easily be removed to clean or repair the window, or else may be swung up by a binge, as in Fig. 5, to give more light in the apartment whenever necessary. When the screen is made the size of the window, it being at a distance from the exterior glazing, serves as a double or frost window, without, however, interfering with the ventilation of the same in summer.

Owing to the small cost of this artificial stained glass, it may be employed not only in churches and libraries with a pleasing effect (rivaling in richness and fullness of color and transparency, and giving the effect of the costly stained glass of the old process) where expensive ornamentation has hitherto been produced by means of decorative glass-work, but also in show and car windows, conservatories, drawing-rooms, staircase-windows, transoms, and vestibule-doors, bay-windows, and in other localities about dwelling-houses.

Windows may be decorated, as indicated in the drawings, in any style, ancient or modern, and the unsightly view of blackened walls, chimneys, &c., from staircase or other windows (so frequently an annoyance to the eye in houses situated in town) may be completely excluded without materially interfering with the light and that graceful appearance given to an apartment which good stained glass always imparts.

This invention is applicable not only to windows of all kinds and shapes, but also for lamp-shades, window-transparencies, fire-screens, and all other uses for which stained and ornamented glass is ordinarily employed, completely superseding Venetian, the clumsy wire, or other blinds.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination of a skeleton frame-work or back composed of thin narrow (preferably metallic) strips fastened together so as to form openings of diaper or net-work design, with a facing consisting of a number of flexible colored plates of diaphanous or translucent material fitted to the various sections and rigidly attached thereto and entirely covering both the strips and intermediate openings.

2. In a transparency consisting of a skeleton frame or back and a facing of transparent medium, the combination, with one section composed of a frame of thin narrow (preferably metallic) strips fastened together so as to form a part of a diaper or net-work design and a body of diaphanous or translucent flexible material adhering thereto, of one or more sections of similar construction, and a means of attaching the different sections together so that the transparent medium covers all the strips and intermediate openings.

3. The combination, with a portable screen consisting of a skeleton frame or back composed of thin narrow (preferably metallic) strips fastened together so as to form openings of diaper or net-work design and a facing formed of a number of flexible colored plates of diaphanous or translucent material fitted to the various sections and rigidly attached thereto and entirely covering both the strips and intermediate openings, of devices at the outer edge of the screen adapted to support it in a swinging or fixed relation, as set forth.

4. The combination, with a screen consisting of a skeleton frame or back composed of thin narrow (preferably metallic) strips fastened together so as to form openings of diaper or net-work design and a facing formed of a number of flexible colored plates of diaphanous or translucent material fitted to the various sections and rigidly attached thereto, of a decorated panel or tile, and also of a means of holding or clamping the panel of glass to the supporting-frame.

5. In a transparency consisting of a skeleton frame or back and a facing of transparent medium, the combination, with a number of thin narrow (preferably metallic) strips fastened together so as to form openings of diaper or net-work design, of a body of diaphanous or translucent flexible material fitted to the various sections and rigidly attached thereto and entirely covering both the strips and the intermediate openings, and also of a coating of mica, gelatine, varnish, or other backing to stiffen and support the same, substantially as described.

6. The plates A, frame B, rivets C, and washers D, substantially as described.

7. The plates A, frame B, and extensions *b*, superimposed plate B′, and rivets C′, substantially as described.

8. The plates A, frame B B′, extensions *b*, and frame B^2, substantially as and for the purpose described.

9. The plates A, frame B, projections G, panel E, and clamps b^2, substantially as and for the purpose described.

10. The plates A, frame B B′ *b*, rivets C′, window or transom frame F, and stop or catch K, substantially as and for the purpose set forth.

11. The plate A, frame B B′ *b*, rivets C′, window or transom frame F, bar J, stop K, and hinge H, substantially as and for the purpose set forth.

12. The plate A, frame B B′ *b*, rivets C′, a decorated panel or tile, clamps b^2, window or transom frame F, and hinge H, substantially as described.

JONATHAN O. FOWLER, JR.

Witnesses:
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