

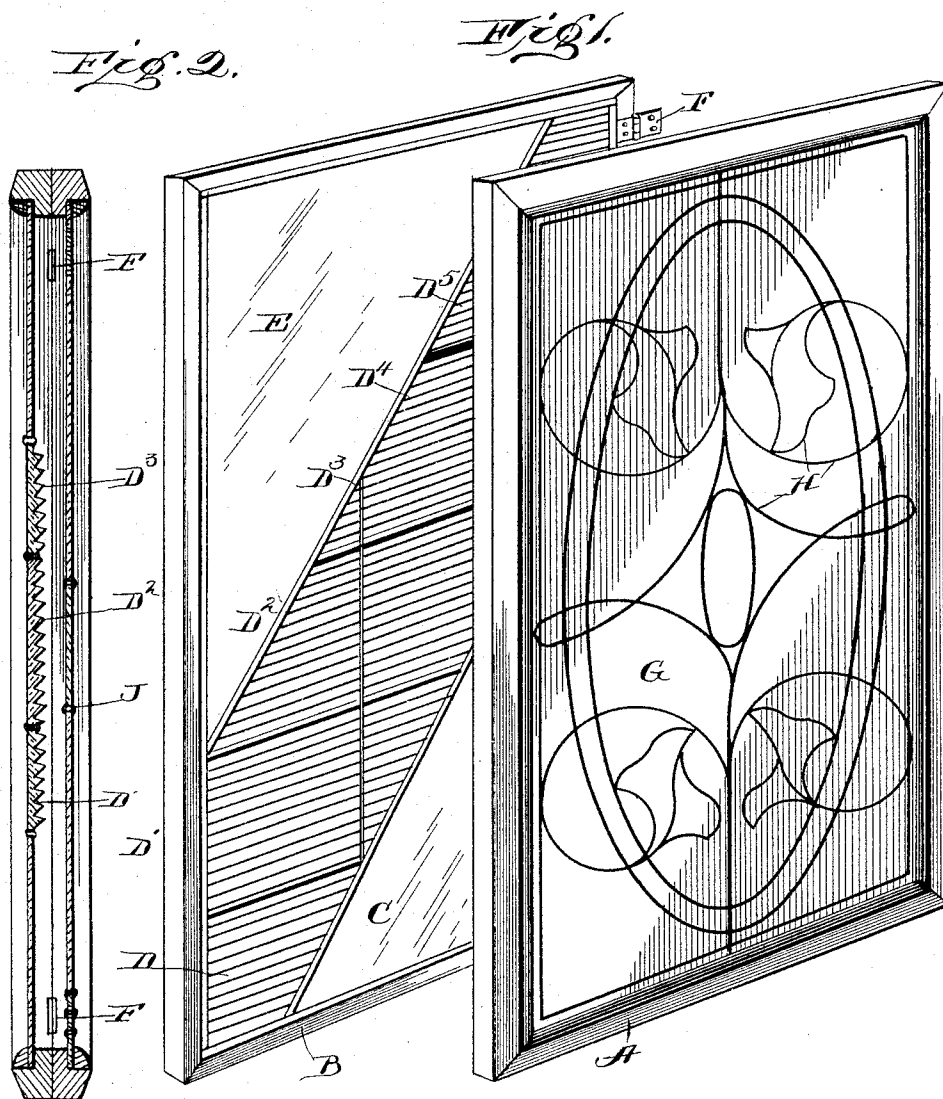
(Model.)

H. F. BELCHER.

COMBINED PRISM AND ORNAMENTAL GLASS.

No. 586,226.

Patented July 13, 1897.



witnesses:
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UNITED STATES PATENT OFFICE.

HENRY F. BELCHER, OF NEW YORK, N. Y., ASSIGNOR TO THE LUXFER PRISM PATENTS COMPANY, OF CHICAGO, ILLINOIS.

COMBINED PRISM AND ORNAMENTAL GLASS.

SPECIFICATION forming part of Letters Patent No. 586,226, dated July 13, 1897.

Application filed April 19, 1897. Serial No. 632,702. (Model.)

To all whom it may concern:

Be it known that I, HENRY F. BELCHER, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Combined Prism and Ornamental Glass, of which the following is a specification.

My invention relates to the combination of prism lights or plates and ornamental or stained glass windows for the purpose of securing new and different effects in the form of ornamental glass. For example, by my invention I may vary the shading, so as to produce in any given portion of a window higher lights, thus bringing out dark objects; or I may produce a regular variation in color or shade from one part of the stained or ornamental window to another; or I may leave a part of the window in obscurity or in its natural condition and throw an increased illumination over another part; or I may secure new effects by superimposing pieces of glass of different colors and associating therewith the prisms to increase the volume of light; and I may secure new colors or shades not otherwise easily attainable.

The attempt to secure variation in color or shade by placing one colored glass over another results, of course, in reducing the volume of light, and hence destroying the effect which otherwise would be produced. I by the use of the prisms can overcome this defect, and can secure the required volume of light. The prisms themselves may be colored. Of course it would be impossible, certainly impracticable, to exhibit all of the various uses to which my invention can be put, and I have attempted to do no more in this application than simply to illustrate, as it were, my invention.

Referring to the drawings, Figure 1 is a perspective view of a stained-glass window and a partly-filled prism-window separated from each other, so as to illustrate the invention; and Fig. 2 is a section through the two when in permanent position.

A is the frame of a stained-glass window; B, the frame of a prism-window; C and E, bodies of non-prismatic glass.

D, D', D², D³, D⁴, and D⁵ are prism-lights

one above the other, and joined together to make the prism-plate.

F F are hinges whereby the two windows may be hinged together.

G illustrates the effect produced on the stained-glass window by the light from the strip of prisms in the prism-window.

H indicates the colored design worked into the stained-glass window.

J is the metal framing or lead by which the parts of the stained-glass window are secured together.

Obviously it is impossible to properly illustrate the differences in the colors, but the window of the frame A is intended to be any stained or colored glass window in which designs are produced, and in such a window there is of course variation in the color and the translucency as between the different parts of the window. In like manner it is difficult to illustrate all the variations of the prisms. There may be a greater or less area of prism-glass, and the angles may vary, and the prisms themselves might in some instances be colored, and the various sections of prisms and stained glass can be united in any desired manner. It frequently happens that in stained-glass windows an effect composed of dark shadows with brilliant illuminations is desired. For example, it might be anticipated that in stained-glass windows it would be desirable to have a scene somewhat dark and forbidding on sea or land with a brilliant burst of light issuing from some particular point—i. e., the sky.

Now in the art of stained glass as it has existed up to the present time such effects have been attempted to be produced by the coloring of the glass itself, and in many instances this has proven to be not only difficult, but impossible to accomplish. By my invention it will be seen that the artist avails himself not only of the coloring of the glass, but also of the daylight, which he, so to speak, scatters or concentrates upon or about his window in such manner as to coöperate with his stained glass and contribute to the result desired. Some of the most beautiful stained-glass windows in the cathedrals of Europe have been practically dead to the world for centuries because of the insufficiency of the

light behind them. These prisms will bring such obscure pictures into bold relief and contribute not only to the illumination of the church, but will also at the same time exhibit to the world the masterpieces in the stained-glass work.

In the figures I have shown that the prism-plate and the stained-glass windows may be separated from each other or be separable, and I mean by this view to suggest that many of these effects which I have described would be greatly heightened or improved by separating the prism-plate from the stained glass by a considerable distance. Moreover, this separation is necessary in some cases, particularly where the stained-glass window is placed in an interior wall and the exterior wall is removed therefrom. This is a common occurrence in church architecture. A stained-glass window thus has to take its light from a secondary source, and by placing prism-lights in the outside or exterior wall and arranging the angles properly the light may be concentrated upon such interior stained-glass window and the desired result be attained.

The figures also indicate that one window may be movable with reference to the other, so that by varying the position of the prism-

plates, for example, from time to time, with the change in the position of the sun or the variations in the seasons, or when a particular result desired is sought for at a particular hour of the day, we may, so to speak, control the window to make it respond to such varying requirements.

I wish to suggest again that in a subject so broad and interesting it is only possible for me to make, as it were, a few passing suggestions touching the use and operation of my invention.

I claim—

The combination of a stained-glass window with varying colors and varying degrees of translucency, with a prism-plate window comprising a transparent body having a series of prisms on one side systematically arranged to produce an increased illuminating effect and adapted to receive the light from without, bend the rays and direct them upon the stained-glass window in a predetermined manner to vary the effects produced by the stained-glass window.

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Witnesses:

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