(Specimens.)

G. W. BLAIR.

MANUFACTURE OF ORNAMENTED GLASSWARE.

No. 342,319. Patented May 25, 1886.

Fig. 1.

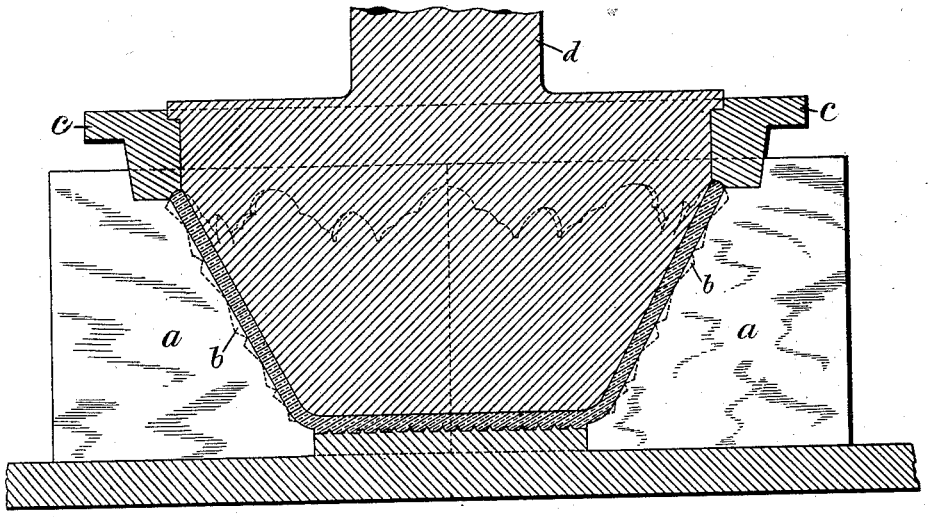
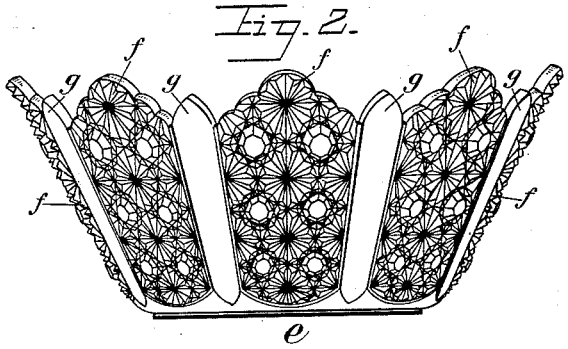


Fig. 2.



Witnesses.
J. A. Burns,
H. L. Gill.

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UNITED STATES PATENT OFFICE.

GEORGE W. BLAIR, OF PITTSBURG, PENNSYLVANIA.

MANUFACTURE OF ORNAMENTED GLASSWARE.

SPECIFICATION forming part of Letters Patent No. 342,319, dated May 25, 1886.

Application filed April 15, 1886. Serial No. 198,933. (Specimens.)

To all whom it may concern:

Be it known that I, GEORGE W. BLAIR, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Manufacture of Ornamented Glassware; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a sectional view of a glass mold and plunger for pressing the article of glassware shown in Fig. 2. Fig. 2 is a view of a glass article for illustrating my invention.

Like letters of reference indicate like parts.

The mold *a* is of proper form to give shape to the desired article, and its molding-surface is provided with an ornamental indented or relief pattern of any desired design, as indicated at *b*. This mold is made in two or more sections, as may be necessary in drawing it off the molded article, as will be understood. It is provided with a top ring, *c*, which forms the upper edge of the article, and through which the plunger *d* works. The requisite quantity of molten clear or crystal glass is placed in the mold, and then the plunger is caused to descend into the mold and press the glass into shape, the result being a clear or crystal glass article, *e*, having an indented ornamental pattern, *f*, on its external surface or portions of the same. The article is then annealed, after which its inner surface is painted or coated with a thin film of liquid lustrous coloring-matter, stain, or paint, smoothly and evenly applied, and then it is placed in a suitable oven and exposed to adequate degree of heat for a proper period of time to fire or fix the color permanently to the surface. The color is preferably applied only to the inner surface opposite to the external figured pattern, because the light passing through is broken up and refracted by the angles and sides of the projecting or indented pattern, and shows on the article in shaded tints of varying degrees of intensity, which, when lustrous colors are used, have also an iridescent quality. This effect is increased if portions of the article are left plain, as at *g*, or are colored with lighter or contrasting tints. I can also produce the same effect, though to a lesser degree, by coating the inner surface of the patterned portions with non-lustrous colors.

I believe that it is entirely new to color the inner surface of a clear-glass article having a molded pattern, back of the patterned part, so that the light passing through the article shall be broken and refracted by the surfaces of the pattern in tinted rays of various shades and intensity. A very beautiful and unique effect is the result of this combination of molded pattern and color, the pattern having a colored or tinted backing. The beauty of the article is greatly increased by painting various portions of it with different colors, especially where the pattern is formed in separate or distinct panels or sections, an example of which is shown in Fig. 2, each of the panels *f* of which may have a backing of a different color from the others. Where lustrous colors are used and applied and baked on the surface of the pattern, a reverse refraction of the light is produced, and the same pleasing and striking effect is obtained. This method of making ornamented glassware is very cheap as compared with the methods heretofore practiced in producing fine party-colored ware, which consisted in the use of glass of different colors, or by cutting and engraving flashed ware, or other expensive methods, while my improved product is not only equally as handsome, but also capable of effects only possible in the products of such methods.

I do not in this application claim the method and article which form the subject-matter of my Patent Reissue No. 10,712, dated April 20, 1886, for making a clear-glass article having alternate prismatic-figured and lustrous-colored plain sections. Such case differs from this one in not obtaining the direct refraction of the colored rays by the faces of the pattern, nor the direct refraction of the colored rays with the iridescent reflection of the colors obtained in my present case.

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

1. The method of making ornamented glassware, which consists in pressing an article of clear glass with an indented or raised pattern or design on its surface, then applying a col-

ored paint or stain to the surface back of the pattern, and finally burning the color in, substantially as and for the purposes described.

2. The method of making ornamented glassware, which consists in pressing an article of clear glass with an indented or raised pattern or design on its surface, then applying different-colored paints or stains to the surface back of different parts of the pattern, and finally burning the color in, substantially as and for the purposes described.

3. A pressed clear-glass article having a raised or indented lustrous-colored pattern, substantially as and for the purposes described.

4. A pressed clear-glass article having a molded pattern on one surface and a film of burned color on the opposite surface, substantially as and for the purposes described.

5. A pressed clear-glass article having a molded pattern on one surface and a film of burned lustrous color on the opposite surface, substantially as and for the purposes described.

6. A pressed clear-glass article having a molded pattern on one surface, and different colors burned on the opposite surface, back of different parts of the pattern, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 20th day of March, A. D. 1886.

GEORGE W. BLAIR.

Witnesses:
W. B. CORWIN,
JNO. K. SMITH.