

No. 632,008.

Patented Aug. 29, 1899.

C. P. DORPOLS.
ORNAMENTING GLASS.
(Application filed Nov. 21, 1898.)

(No Model.)

FIG. 1.

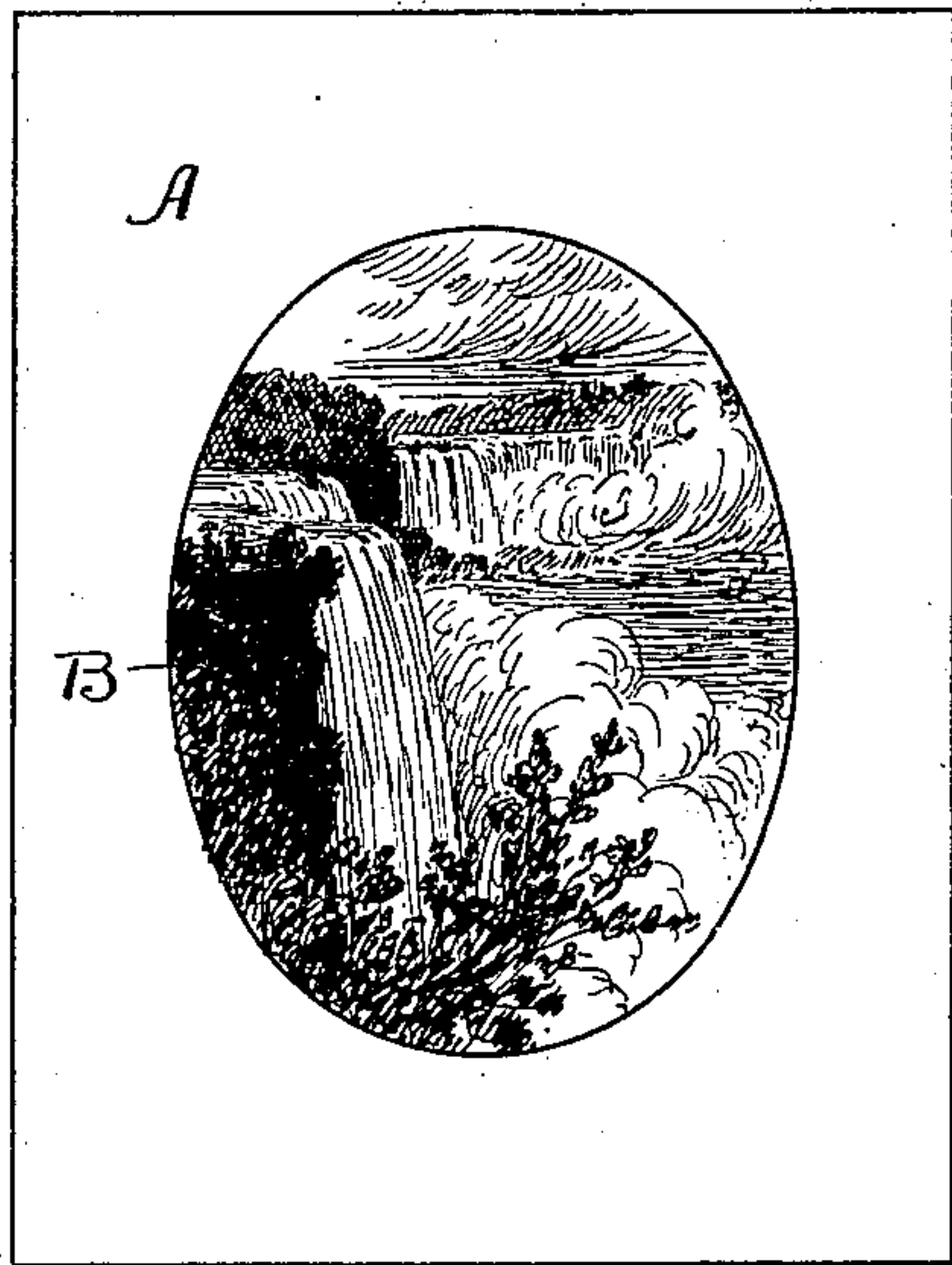


FIG. 2.

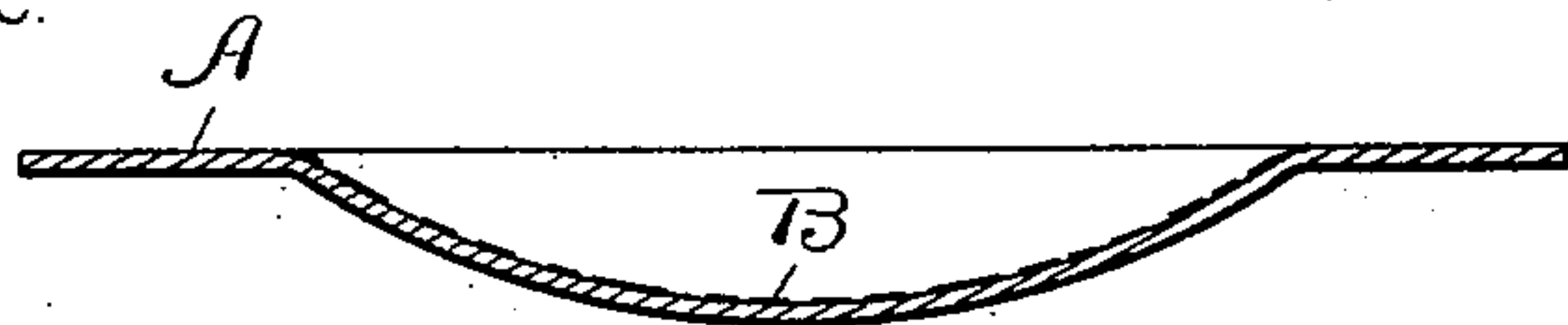
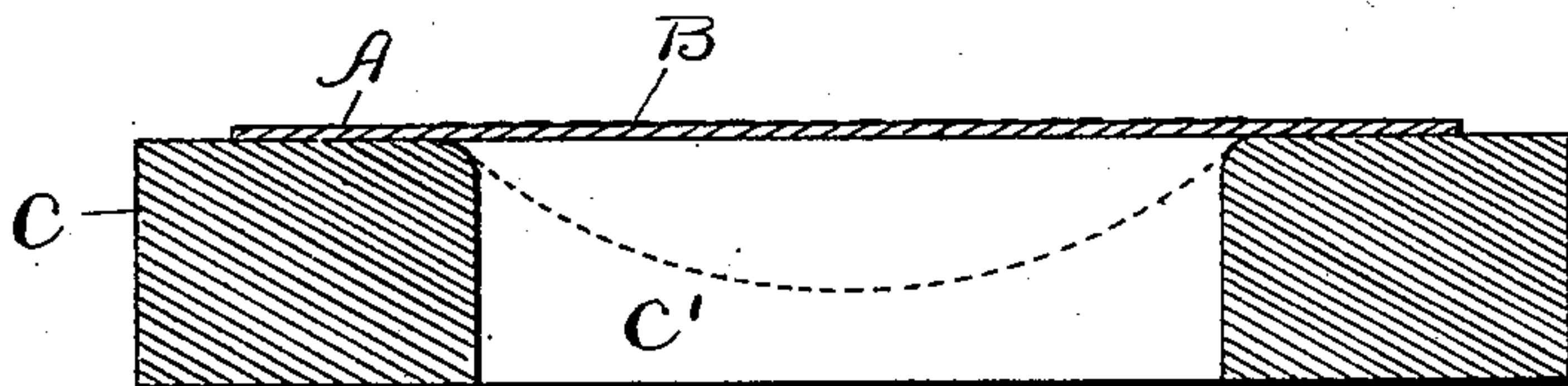


FIG. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CORNELIUS P. DORPOLS, OF BERWYN, ILLINOIS.

ORNAMENING GLASS.

SPECIFICATION forming part of Letters Patent No. 632,008, dated August 29, 1899.

Application filed November 21, 1898. Serial No. 696,999. (No specimens.)

To all whom it may concern:

Be it known that I, CORNELIUS P. DORPOLS, a citizen of the United States, residing at Berwyn, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Ornamenting Glass, of which the following is a specification.

My object in the present invention has been to devise a method of producing sheets of stained or ornamental glass having portions of their surfaces raised above or sunken below the general plane of the sheet. These raised or depressed portions may form medallions or panels in the sheets or they may be nearly coextensive with the sheets.

In the practice of the invention I apply a design in color to the sheet or some portion thereof in some such manner as that set forth in my Patent No. 615,479, the paints used being such as are used in staining the glass for church-windows and embodying both ground and finishing colors. After the picture or design has been thus applied to the glass I fire the same in the usual manner, except that the sheet of glass is supported while being fired upon a plate which is cut out or recessed under those portions of the sheet which it is desired shall be raised or sunken, so as to allow such portions to sink into the recess. For this purpose the plate may be cut entirely away under the part which is to be bent, or it may be simply hollowed out, as preferred. The outline of the sunken or raised portion will correspond with the outline of the recess. During the firing of the sheet whereby the colors are burned into the glass that portion of the sheet over the recess in the supporting-plate will sink by reason of its own gravity into the recess and thus form the raised or sunken surface desired, one side of the sheet being thus raised and the reverse side being sunken. In this manner I avail myself of the softened condition of the glass produced by the heat by which the colors are burned as a means of causing the bending of the glass and avoid the necessity of subjecting the glass to a separate firing for the latter purpose.

In the accompanying drawings I show at Figure 1 an elevation of a sheet embodying my invention; at Fig. 2, a section of the same,

and at Fig. 3 a section of the supporting-plate used during the firing.

In said drawings, A represents a plane sheet of glass, in the center of which a picture or design in colors B has been laid on without firing, the colors being such as are usually employed in what are commonly known as "stained windows." After the colors are thus applied the sheet is laid upon a supporting-plate C, the center of which is cut out or recessed, as seen at C', and is then placed in a heated oven. The same heat which now acts on the colors and unites them to the glass also so softens the glass as to cause that portion of the sheet over the recess in the plate, and which in the case illustrated is the portion to which the design is applied, to stretch and fall by gravity into the recess, thereby bending such portion into a concavo-convex form. The sheet when removed from the oven and properly annealed will have been bent in the manner shown in Figs. 1 and 2. The design may be applied either to the side which in the bending will be raised or to the side which will be sunken, according to the effect desired. The appearance of the design may be much heightened by thus bending the glass, as upon the convex side especially a rich opalescent effect is produced.

I do not wish, of course, to be limited to any particular shape, form, or outline in the bent portion of the sheet, nor to the bending of a portion only of the sheet, nor to the bending of any particular part of the sheet.

I claim—

1. The process of producing ornamental glass, consisting in applying the design in colors to the glass without firing and then simultaneously fusing the color and bending the glass by heat, substantially as specified.

2. The process of producing ornamental glass, consisting in applying the design in colors to the glass without firing and then simultaneously fusing the color and bending the glass by firing the glass while it is supported upon its edges, substantially as specified.

CORNELIUS P. DORPOLS.

Witnesses:

H. M. MUNDAY,
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