

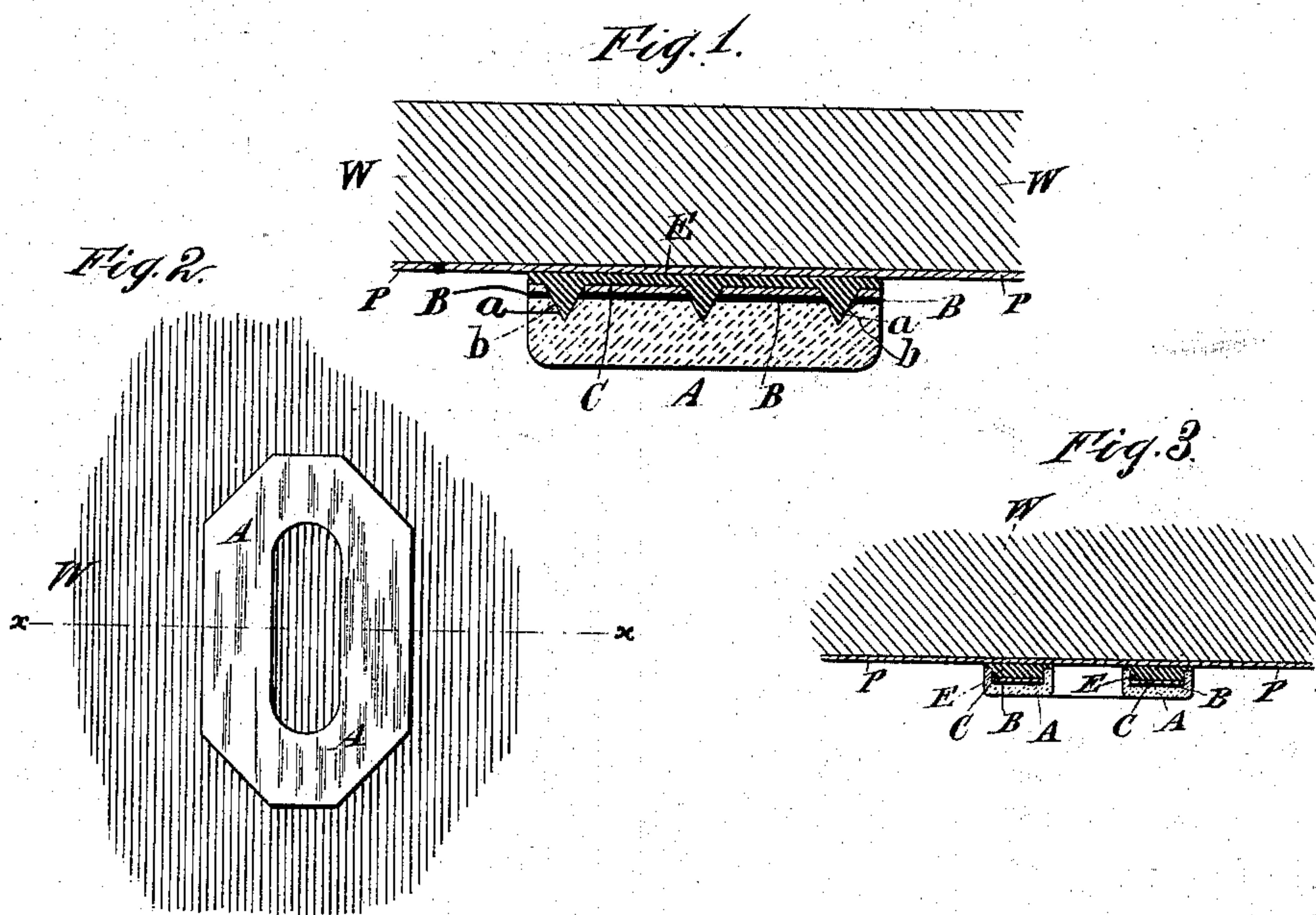
(No Model.)

G. H. BABCOCK.

LUMINOUS SIGN.

No. 284,163.

Patented Sept. 4, 1883.



WITNESSES

Charles C. Stetson.
Wm C. Dey

INVENTOR

George H. Babcock
by his attorney
T. L. Stetson.

UNITED STATES PATENT OFFICE.

GEORGE H. BABCOCK, OF PLAINFIELD, NEW JERSEY.

LUMINOUS SIGN.

SPECIFICATION forming part of Letters Patent No. 284,163, dated September 4, 1883.

Application filed April 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. BABCOCK, of Plainfield, Union county, in the State of New Jersey, have invented certain new and useful Improvements relating to Luminous Signs, of which the following is a specification.

What are known as "luminous paints," the base of one of which is understood to be mainly sulphide of barium, may be procured in the market, and on being applied like any other paint possess the property of absorbing light during the day and giving it off during the early part of the night. I employ such paint, painting therewith the backs of sufficiently thick solid letters of glass. These letters are afterward cemented or otherwise attached on suitable sign-boards having a ground which harmonizes with or contrasts strongly with the color of the painted glass letters as seen by daylight. The result is a sign adapted to serve all the purposes of a sign when seen by daylight, and which will exhibit clearly luminous letters in a moderately-glowing white or pale purple on a black or very dark ground during the early hours of the night. To insure a more complete attachment of the letters to the sign, I remove the luminous paint on small portions of the surface distributed over the letters. The putty or other cementing material engages directly with the glass at those points, and aids to insure against a failure of the cementing effect.

The following is a description of what I consider the best means of carrying out the invention.

The accompanying drawings form a part of this specification.

Figure 1 represents a cross-section through a letter or a portion of a letter and the adjacent parts when applied to use. Figs. 2 and 3 represent a modification, Fig. 2 being a face view, and Fig. 3 a cross-section on the line *x* in Fig. 2.

Similar letters of reference indicate corresponding parts in all the figures.

A is a Gothic or other separately-formed letter of glass, having on one face a series of slight depressions, recesses, or grooves, *a*.

B is one or more coatings of luminous paint, preferably what is known in the market as "Balmain's Luminous Paint," covering the back of the glass A nearly continuously. It

covers all the surface except the small areas occupied by the depressions *a*.

C is a substantial coating of common paint applied on the back of the luminous paint.

W is a sign-board or other substantial surface, on which the letters are to be fixed, and P is a coating of dark paint, of any ordinary or suitable character, applied on the sign-board and allowed to dry in the ordinary manner.

E is a coating of glazier's putty or other suitable cementing material. It forms a continuous coat over the whole of the back face of the paint C, and the points *b* of the cement pass through paint C and luminous paint B to fill the depressions *a* in the letter, where the luminous paint does not extend, and comes at those points in direct contact with the glass A. It adheres strongly to the glass and to the board, or to the common paint thereon. I believe it will also adhere tolerably well to the luminous paint B. The cement, as arranged, unites the glass very thoroughly to the sign-board by inducing a reliable adhesion by the several points *b*, even if the adhesion through the intervention of the luminous paint fails entirely.

The glass letters A are best formed by molding with slightly-rounded edges. The luminous paint is conveniently applied to the plane portions of the back, omitting the depressions *a*, by rolling on the paint with a slightly-elastic roller, similar to the manner in which a coat of ink is applied upon types in some varieties of printing. I prefer to give two coats of the luminous paint in this manner, allowing each to become thoroughly dry, and then one coat of common paint, similarly applied and allowed to dry.

It is the nature of the luminous paint B to absorb light, or to have in some manner its molecular arrangement disturbed by the presence of light during the daylight hours, and then to give off light during the first hours of the night. Experiment has proved that the luminous paint gives some light for more than forty-eight hours after exposure for a brief period to the daylight. It is sufficient for most purposes that the luminous paint B will, with a fair exposure, cause the letters to appear distinctly until after midnight.

The depressions may be produced by suit-

ably forming the corresponding portion of the molds in which the melted glass is pressed to form the letters.

5 Modifications may be made in the proportions without departing from the principle or sacrificing the advantages of the invention. Parts of the invention may be used without the whole. I can use letters which are plane on both faces, and, instead of sinking the de-
10 pressions *a* and supplying sufficient putty to fill such sunken spots, can paint over the entire surface with luminous paint, and afterward erase the paint along certain lines by scraping across the back with any suitable in-
15 strument. A good design in such a case, or in all cases, is to make the bare spots in the form of narrow oblique lines crossing each other diamondwise. I believe it practicable to use the letters with the whole back surface cov-
20 ered with one or more coatings of the luminous paint, and secured either by cementing such painted surface to the sign-board or by slight hooks, or analogous fastenings. (Not shown.)

In the form shown in Figs. 2 and 3 a large
25 portion of the back of the letter A is sunk, only a narrow portion at each edge being full depth. The putty or other cementing material fills the entire cavity. The back of the edges of the letter, and also the bottom of the
30 cavity in it, are coated with luminous paint, the nearly-perpendicular sides of the cavity

being either not painted at all, or so scraped or otherwise treated as to remove the luminous paint in spots. The cement adheres directly to the glass, either along the whole or a por- 35
tion of these perpendicular sides.

I claim as my invention—

1. A sign composed of separately-formed glass letters having depressions on their rear sides, and the spaces between the depressions 40
covered with luminous paint, and cementing material adapted to cover the painted portions of the rear sides of the letters and be forced into the unpainted depressions to secure the letters to the board, substantially as set forth, 45
and for the purpose described.

2. The herein-described sign, consisting of separately-formed letters A, having depres-
sions *a*, united to the sign-board W by the di-
rect contact of the points *b* of cementing mate- 50
rial E, in combination with luminous paint B, covering the back of the letter between the said depressions *a* and common paint C, as and for the purpose specified.

In testimony whereof I have hereunto set 55
my hand, at New York city, this 17th day of April, 1882, in the presence of two subscribing witnesses.

GEO. H. BABCOCK.

Witnesses:

OROS C. WOOLSON,
CHARLES C. STETSON.