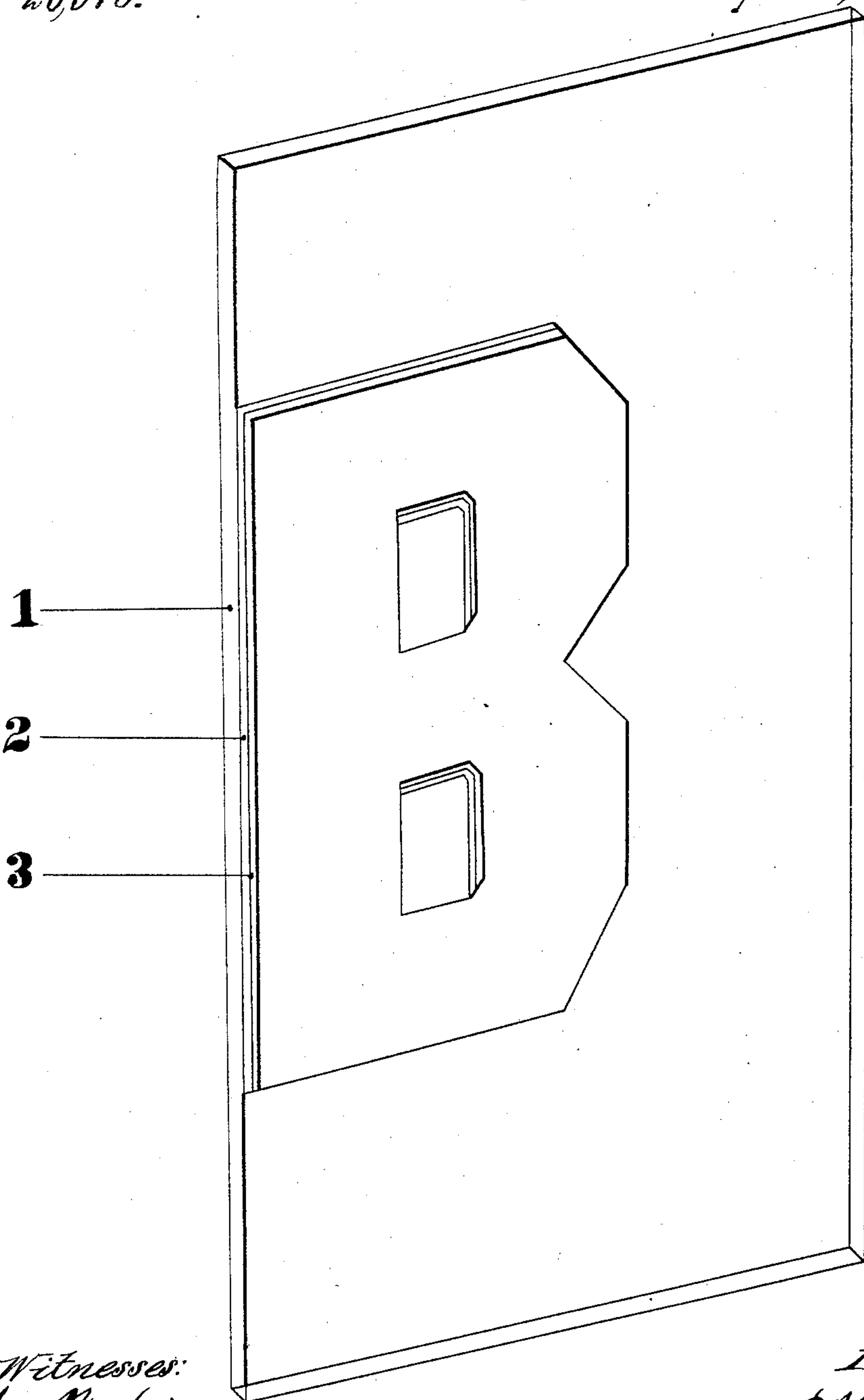


P. V. Mathews,

Ornamenting Glass.

N^o 20078.

Patented Apr. 27, 1858.



Witnesses:

Wm. Maupson

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UNITED STATES PATENT OFFICE.

P. V. MATHEWS, OF PHILADELPHIA, PENNSYLVANIA.

MODE OF PROTECTING GILDING ON GLASS.

Specification of Letters Patent No. 20,078, dated April 27, 1858.

To all whom it may concern:

Be it known that I, PETER V. MATHEWS, of Philadelphia, in the county of Philadelphia, in the State of Pennsylvania, have invented a new and Improved Mode of Securing Gilding on Glass from the Effects of Frost, Steam, Water, and the Sun's Rays; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in the application of tin-foil, or other thinly laminated or rolled metal, as a backing for the gilded letters, figures, &c., which are now generally applied on the inner side of the panes of glass in the windows, transoms and doors of stores, offices, hotels, &c., in cities and elsewhere, so as to protect and preserve the said letters, figures, &c., from being damaged—either by the sun's rays, steam, frost, or the soap and water commonly used in cleansing the said glass—without obstructing thereby the transmission of light through the surrounding parts of the glass.

It is common in our large cities to have gilded letters, figures, &c., applied on the inner surfaces of the panes of glass of the windows, transoms and doors of stores, hotels, offices, &c., but as they have heretofore been "backed" simply with paint, varnish or other like substances, they are exceedingly liable to injury, and even to entire destruction when in contact with moisture and either heat or freezing cold; or when exposed to the direct rays of the sun; and especially when subjected to contact with the soap and water commonly used in cleansing the side of the glass upon which they are applied. Many of these ornamental signs are beautifully executed and costly, therefore any effectual mode of preserving them from such injury or destruction without thereby obstructing the rays of light, which must be permitted to pass in and out through the surrounding glass, is a matter of great utility and importance.

To enable others, skilled in the art of gilding upon glass, to use or practice my invention, I will proceed to describe the manner or mode in which I apply the laminated metal to the backs of the said letters, figures, &c.

In the accompanying drawings, 1 repre-

sents the pane of glass; 2, the gilding; and 3, the metal backing. Having applied or fixed the gilding—or gold or silver leaf—directly on the surface of the glass in the usual well known manner, I proceed to cover the same with a thin coat of any strong resinous adhesive fluid substance, and then upon this, after it has become "tacky", or before it has become dried, I apply in their proper order of arrangement, the letters or figures, &c., previously cut out in the desired form from the sheets of tin-foil, or other similar thinly laminated or rolled metal, and press them firmly and smoothly against the gilded glass. I now carefully remove all the resinous adhesive substance and gilding which may be around or outside of the edges of the said letters or figures, and the work is completed.

I sometimes practice another mode of applying the metal-backing when the letters or figures are of large size. This mode consists in applying the resinous, adhesive, fluid substance directly to one side of the tin-foil or metallic-backing letters or figures, and letting them lie horizontally until the said adhesive coating has become sufficiently "set," or "tacky," not to flow when the letter or figure is turned up into a vertical position, and then applying them in the required order directly upon the dry gilding on the glass, subsequently washing off, with water, the superfluous gilding left around the same. In either case the gilding and adhesive substance form such thin strata between the backing and the glass, that the former is brought by the pressure used in applying it, almost in actual contact with the latter around the boundary edges of the letters or figures, and therefore, after the adhesive substance has become dry and hard, there is scarcely a possibility of any moisture getting access to the gilding, or anywhere between the gilding and the backing—and thus it is secured against injury from freezing-cold; and the metallic backing, closely covering every part of the back of the gilding and also the adhesive substance, the soap and water used in washing the glass, or even steam itself, cannot come in contact with them; nor will the direct rays of the sun produce the cracking to which the gilding is liable, from its action, when backed only with paint or varnish as heretofore. The gilding is also securely protected by this metallic backing against be-

ing scratched or defaced by rubbing or tapping the backing with the finger. Almost any of the oily resinous varnishes, or gold-size will answer the purpose of securing the
5 metallic backing in the manner described.

I am aware that "block letters, block numeral figures," &c., have been "made in detached frames of metal, wood, or composition"; and that "stained glass" has been
10 "fitted into the said frames; or gold or silver leaf, tin-foil, or other coloring matter", has been "inclosed behind glass, or other transparent substance in the said frame, with cement so as to make it impervious to
15 air or moisture". I am also aware that "letters or figures for door and other plates" have been made by "inserting a transparent plate of glass, with the letters or figures thereon, within a frame or case, and backing the whole of the said glass
20 plate, so lettered or figured, with an opaque metallic plate or leaf as a background for displaying or exhibiting the said letters or figures"; but neither of these devices embrace
25 my invention; nor are they applicable to the purpose of protecting the gilding required to be on the panes of glass of windows and doors of stores, offices, hotels, &c., as described, because in such cases all the parts

of the glass not covered by the said letters 30 or figures themselves must be left free and unobstructed for the transmission of the rays of light from both sides of the window. I therefore do not claim anything described in such devices; nor confine my claim to the 35 use of any particular kind of adhesive substance, or sizing for causing either the gilding or the metallic-backing to adhere to the glass, or to each other, as described; but

What I claim as my invention and desire 40 to secure by Letters Patent is—

The use of tin-foil, or other thinly laminated or rolled metal, as a backing for the gilded letters, figures, &c., which are generally required on the inner surfaces of the 45 panes of glass of windows, transoms, and doors of stores, offices, hotels, &c., for the purpose of securing and protecting the said letters, figures, &c., from being damaged as described, and without obstructing the free 50 passage of the rays of light through the immediately surrounding parts of the glass from either side of the same, as described.

P. V. MATHEWS.

Witnesses:

RUFUS R. THOMAS,
JOHN THOMPSON.