

(No Model.)

J. E. BARRETT.
SIGN LETTER.

No. 468,720.

Patented Feb. 9, 1892.

Fig. 1.

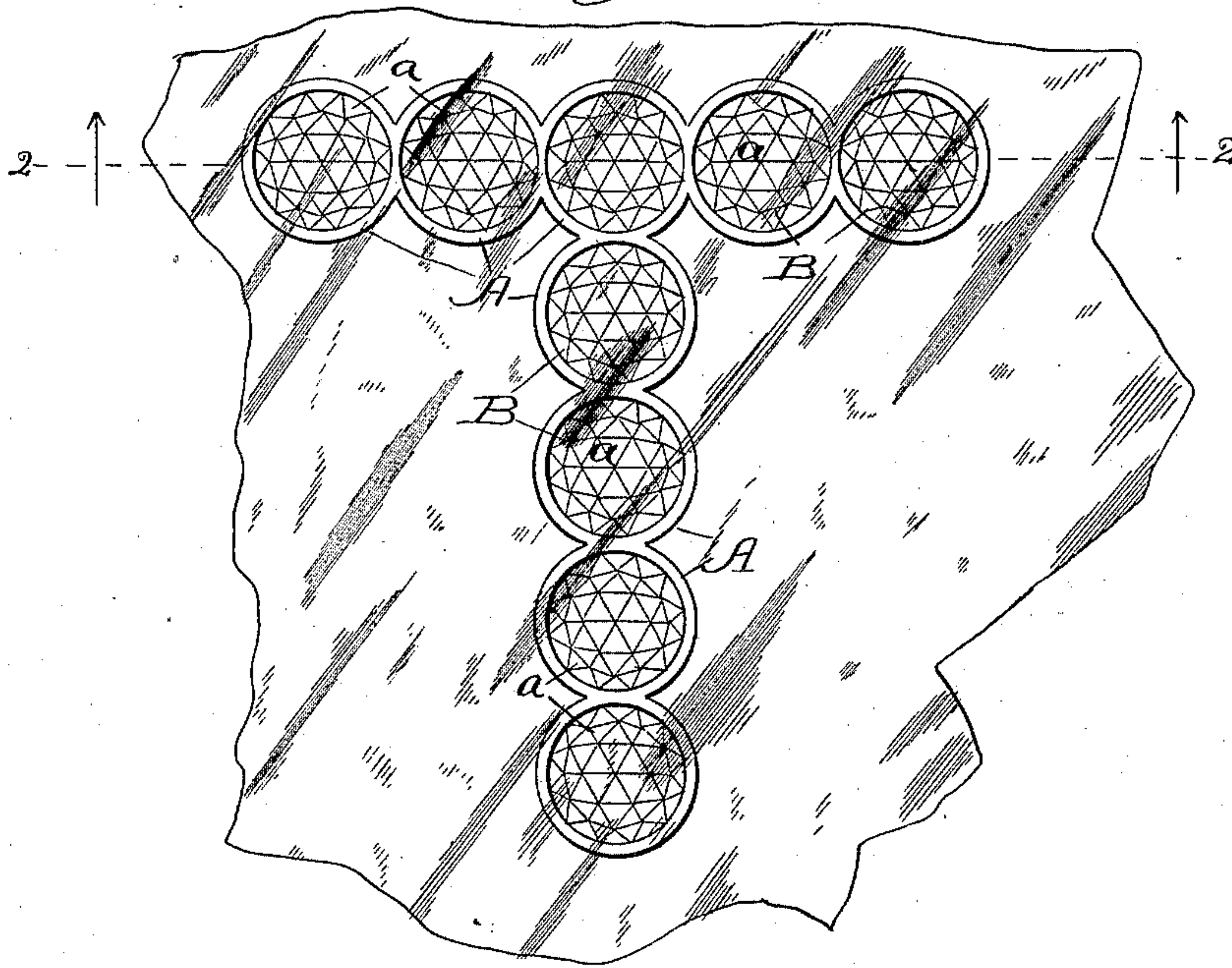


Fig. 2.

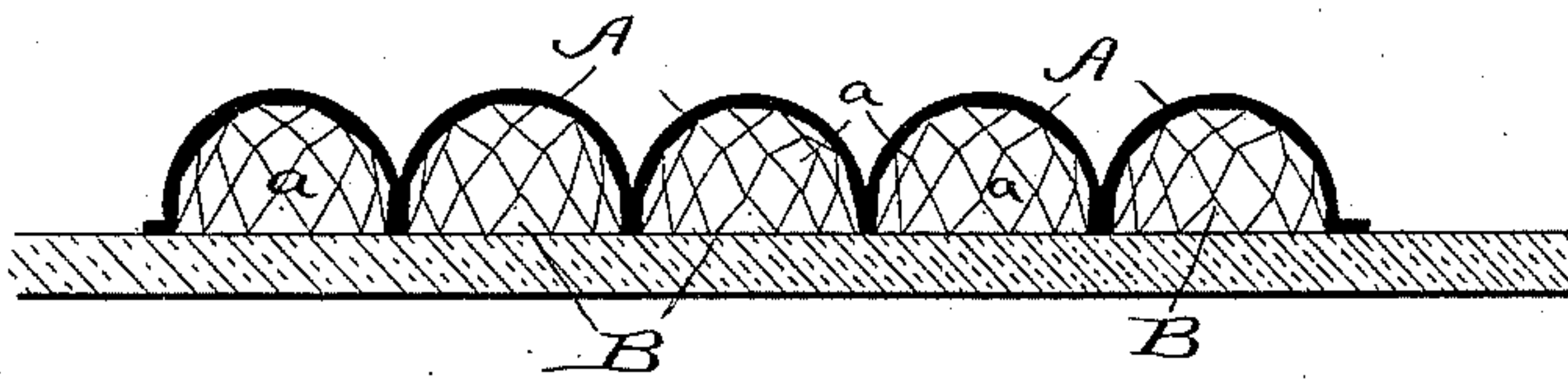
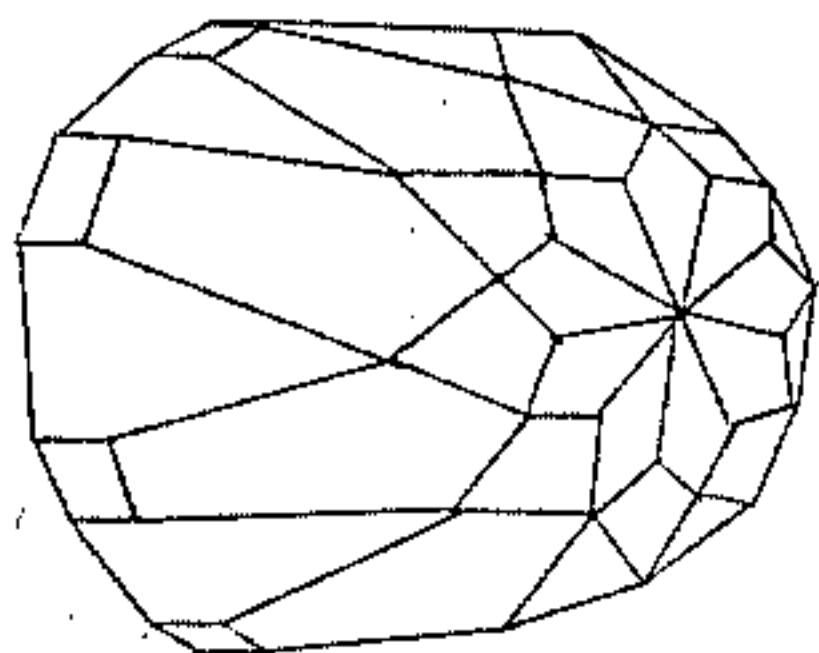


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN E. BARRETT, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE RODWELL MANUFACTURING COMPANY, OF NEW YORK.

SIGN-LETTER.

SPECIFICATION forming part of Letters Patent No. 468,720, dated February 9, 1892.

Application filed July 1, 1887. Renewed March 30, 1891. Serial No. 386,961. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. BARRETT, a subject of the Queen of Great Britain and Ireland, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful article of manufacture, consisting of letters, figures, and ornamental designs to be attached to glass or other transparent material for forming signs, designs, and for other like purposes, of which the following is a specification.

My invention relates to the class of letters, figures, and ornamental designs heretofore constructed of metal, glass, porcelain, or other suitable material and intended to be secured by cement or like means to glass or other smooth surfaces for the purpose of forming signs of various character and having different effects. Heretofore the several letters, figures, or designs forming signs when properly grouped and arranged have been made to be attached to the surface upon which said letters or figures are to be placed by the putting of cement on the back of said letters or figures or ornamentation and of bringing the back of said letters, figures, or ornamentation in contact with the glass or other surface on which they are placed. The letters, figures, or ornamentation thus placed upon the glass or other surface forming the background or body of the sign are therefore between the person reading the same and said background, said letters, figures, or ornamentation being upon the side of the glass forming the window-pane toward the party reading the same. Hence the surface of the letter, figure, or ornamentation viewed by the person reading the same has necessarily been heretofore that surface not in contact with the glass or other surface forming the background or body of the sign. Letters, figures, or ornamentation formed of a single piece of metal, glass, or porcelain, or of several pieces, as is sometimes done, when placed in the manner hereinabove described upon glass forming outside windows (and it is upon such glass that said letters or figures are customarily employed) must be exposed to the action of wind, rain, dust, and the varying temperature of the weather, as must also the cement or other material by which said letters, figures, or ornamentation

are secured to said glass, and hence said letters, figures, and ornamentation and the material securing or attaching the same to the glass will be affected by the action of the several elements and conditions named, and it has been found as the result thereof that such letters, figures, or ornamentation have been frequently materially injured and often detached from the glass; and even when such results have not followed the use of letters of the character described frequent cleansings have been necessary in order to preserve the fresh and cleanly appearance requisite in making and preserving a sightly sign, especially where delicate tints and colors are employed or a white letter used. Further, when letters formed of one piece or of several pieces of metal, glass, porcelain, or like material are placed upon the outside surface of glass forming a window or door within reach of persons standing upon the adjacent street or highway such letters or figures oftentimes are destroyed or injured by the direct agency or effort of maliciously-disposed passers-by.

The object of my invention is to obtain a letter which may be attached to a glass or other transparent plate by cement or other suitable means, the front face of said letter or figure coming in contact with the glass to which it is attached, thus enabling one to attach said letters or figures, in the case of a plate of glass forming an outside window-pane, to the inner surface thereof, avoiding thereby the many difficulties hereinbefore named attending the use of a letter, whether composed of one or more pieces of metal, glass, or porcelain, when attached to the outer surface of the said glass; and in order to obtain a letter adapted for use in the manner sought by me I make use of the herein-described process, producing thereby as a new article of manufacture a metallic letter having a concave surface composed of one or more faces or facets or of a concave curved surface, as preferred, and having a smooth rim or edge around said concave surface, said rim or edge being in a plane adapted to be fitted closely against a glass or other transparent plate. A letter formed as thus described, more particularly when having several facets therein, as

said letter is usually and preferably manufactured by me, may be secured to glass or other transparent material by placing cement upon the smooth rim or edge surrounding said facets and afterward pressing the letter against the glass in such manner as to exclude from the concave portion thereof or from said facets free or any circulation of air, and hence the several brilliant effects produced by innumerable facets of bright reflecting metallic surfaces is maintained, as the said facets are protected thereby from the tarnish or change wrought by the action of the air or gases mixed therewith.

I am aware that toys or ornaments have been heretofore made by the process herein described having one or a large number of facets of high reflective power.

I have illustrated my invention by drawings accompanying this specification and forming a part hereof, in which—

Figure 1 is a front view of a letter formed by my process. Fig. 2 is a cross-section of the same on line 2 2 of Fig. 1. Fig. 3 is a perspective view of one of the protuberances or convex surfaces having facets thereon used in forming an ordinary glass, metal, or porcelain letter of the kind hereinbefore referred to as now and heretofore in use attached to glass or other plane surfaces. The letter formed of a number of these projections, constituting thereby an ordinary letter, whatever the form of said projections may be, whether round, square, or oblong, is used in this process or in one of the steps thereof for producing the letter illustrated in Figs. 1 and 2, the shape of the front face of the letter formed by said convex pieces being alone used in my process, and in case any other form be used or desired in the completed letter such shape is employed in the negative letter formed by the piece illustrated in Fig. 3.

Like letters refer to like parts throughout the several views.

A is the rim or edge of my improved letter. *a a a* are the facets (illustrated by me in the letter here shown as being on the concave portion of my letter.) B is the concave portion of said letter. Facets *a a a* may be omitted, if preferred, from the concave portion B.

By comparison of the several parts of the letter illustrated in Figs. 1 and 2 and representing my improved letter and the portion or part of a letter, figure, or design illustrated in Fig. 3 as made in the ordinary way it will be readily seen that the principal difference in the form and construction of my letters and the letter ordinarily made for the purpose of being attached to glass or other plane surfaces consists in my having the rim or edge A, which is a necessary portion thereof, but which rim or edge does not appear in Fig. 3 and is not necessary in a letter formed in the ordinary manner from said part or portion or piece when added to other like pieces and grouped in the proper manner and in the further fact that the several facets illus-

trated in Fig. 3 are upon the convex surface formed by the bulging and protruding shape thereof, while in my improved letter the facets, if any there be in the letter, are formed in the concave portion thereof, and said concave portion of the letter is surrounded by the rim or edge A, which when secured to a pane of glass forms a perfect protection against the entrance or circulation of air in the concave portion of the letter. The brilliant appearance of the concave portion of my letter is thus maintained for a much longer period of time than would be possible were said letter constructed in the ordinary manner.

The following is one of the various methods by which my improved letter, figure, or ornamental design may be produced, to wit: First, a letter, figure, or ornamental design is made by grouping in suitable form the required number of pieces, duplicates of the piece illustrated in Fig. 3, the letter when completed having an equal number of convex surfaces, upon which are put the several facets which it is designed to have in the concave part of my improved letter. The convex letter, figure, or design forming a negative is placed on a smooth plane surface and secured thereto. A vat or pan of the molten metal of which my improved letter is to be formed and from which it is to be obtained is then prepared and the negative letter above described is dipped into the molten metal and quickly withdrawn therefrom. A film of greater or less thickness is thereby formed upon that portion of the negative letter which is exposed to the said molten metal and also upon the plate upon which said negative letter is secured wherever such plate is brought in contact with the molten metal. The letter is dipped in the manner described into said molten metal more than once, if necessary, and a sufficient number of times to obtain the requisite thickness to the film or coating of metal adhering to said letter and plate, and when such thickness has been obtained the said film or coating of metal is detached from the negative letter and plate and that portion of the film or coating in contact with said letter and plate will be found to be an exact positive of the said negative letter and of the plate exposed to contact with the molten metal in the vat. The flat portion or edge of the letter may be trimmed after being detached from the negative letter by cutting it down to any desired depth, and in attaching the letter to glass or other transparent plates the cement is placed on the flat portion or edge of the letter, which is then pressed firmly against the glass.

One of the preferred metals for forming the letter, figure, or ornamental design by the aforesaid process is of the class or kind known as "white metal," having a bright reflecting-surface, and, when attached to a glass plate in the manner described with colorless or nearly colorless cement, is very deceptive in appearance, presenting to the eye of the

person looking at the same through said plate of glass the appearance of being constructed or built up of convex surfaces having facets thereon, where facets are placed on the concave portion of my letter and formed of clear glass, cut crystal, or other like substances.

Where it is desired to have colors on said letters or on the whole or any part of that portion of the letters exposed to view, the letter may be easily colored or tinted any desired shade.

In the manner I have described I am enabled to obtain a letter adapted to be attached to the inner surface of an outside window and to secure a very bold and striking appearance in said letter.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, a letter adapted to be secured by a rim or edge forming its front face to a plate of glass or other transparent material, the said letter having such flat edge or rim touching said plate of glass, and a concave portion surrounded by said edge or rim and having any desired number of facets arranged regularly in relation to each other and to said edge or rim in said concave portion of the letter, all substantially as described, and for the purpose set forth.

2. As a new article of manufacture, a metallic sign-letter having depressions therein, said depressions presenting a series of facets which form brilliant or reflecting surfaces on said letters, substantially as described.

3. An improved sign letter or symbol of the class herein specified, formed recessed in its front or obverse side, as set forth.

4. An improved sign letter or symbol formed

recessed in its front or obverse side and raised correspondingly on its back or reverse side, as set forth.

5. A sign letter or symbol formed recessed in its front or obverse side and with an attaching-edge on said side, as set forth.

6. A sign letter or symbol formed recessed in its front or obverse side and with an attaching-edge on said side and raised correspondingly on its back or reverse side, as set forth.

7. A sign or advertisement composed of letters or symbols formed recessed in their obverse sides and secured thereat on the inner side of a glass pane, as set forth.

8. A sign letter, symbol, or ornament formed recessed in its front side, the said recess being shining, gilded, or otherwise ornamented, an attaching-edge surrounding said recessed face to receive the cement which holds the sign letter, symbol, or ornament in position with its polished, gilded, or otherwise ornamented face next the glass or other transparent material, as set forth.

9. A sign letter, symbol, or ornament recessed in its front or obverse side, the said recess being shining, gilded, or otherwise ornamented, in combination with a transparent cover placed over the recessed face, as set forth.

10. A sign letter, symbol, or ornament having a recessed face shining, gilded, or otherwise ornamented, in combination with a transparent cover cemented air-tight to said recessed face, as set forth.

JOHN E. BARRETT.

Witnesses:

JENNIE A. BARRETT,
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