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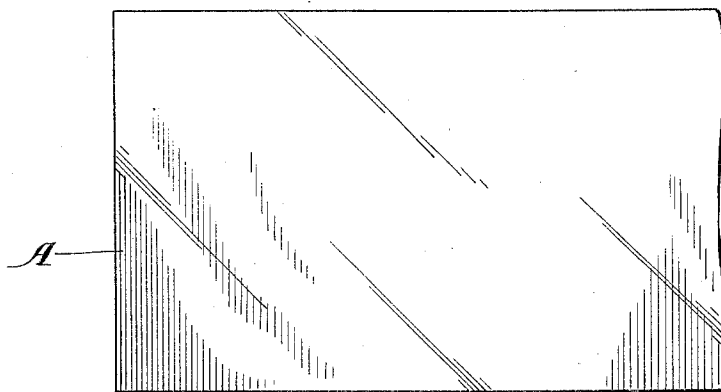
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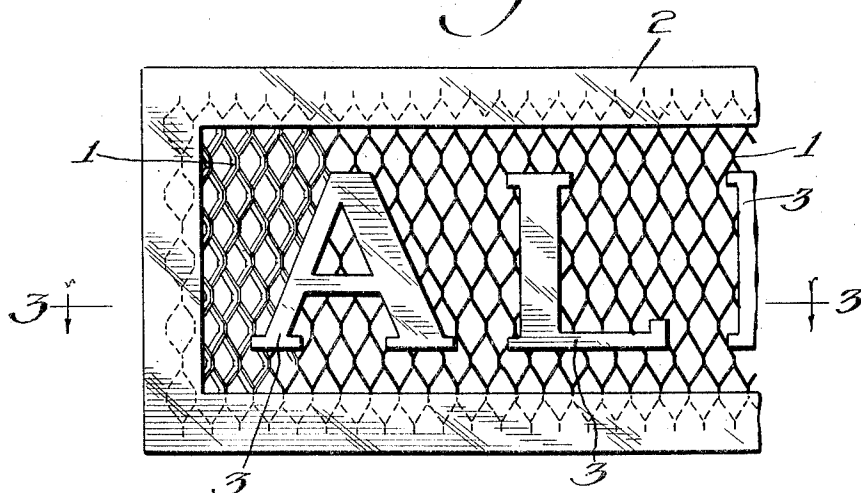
OPEN WORK PANEL

Filed Jan. 27, 1930

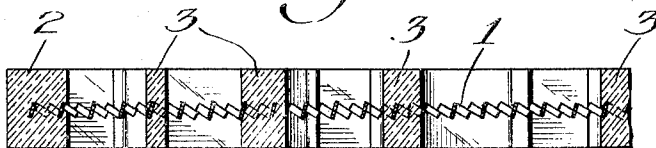
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE

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## OPEN WORK PANEL

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The present invention relates to one-piece open signs, grilles or the like of vitreous material. Grilles or the like have been made of so-called opaque vitreous material, by sand-blasting away parts thereof. However, the character of the designs have been limited by the fact that no area may be completely separated from the remainder and still leave anchoring or supporting means therefor.

The object of the present invention is to make possible the production of open-work panels of the type just mentioned, in which entire sections of vitreous material may be spaced apart from the remainder so as to stand in relief.

In accordance with my invention I cast an opaque vitreous panel with a sheet of metal reinforcing material embedded therein. I then sand-blast the panel, cutting entirely through the same; but without destroying the reinforcing material encountered in the cutting operations. By using a comparatively stiff reinforcing material, such as a sheet of expanded metal similar to expanded metal lath, for large work, the structure as a whole will remain rigid and flat after the design has been cut therein even though some areas are completely separated from the rest of the vitreous body. Consequently letters or other designs may be cut out so as to stand fully in relief.

It will be noted that the reinforcing fabric not only serves as a support and as strengthening means, but as a screen over the openings that have been cut through the panel.

Therefore, viewed in one of its aspects, my invention may be said to have for its object the production of a novel one-piece open-work vitreous panel in which the openings are screened.

The various features of novelty whereby my invention is characterized will hereinafter be pointed out with particularity in the claims; but, for a full understanding of my invention and of its objects and advantages, reference may be had to the following detailed description taken in connection with the accompanying drawings, wherein:

Figure 1 is a plan view of a fragment of a panel before it is worked; Fig. 2 is a view

similar to Fig. 1, showing the completed open-work; and Fig. 3 is a section on line 3—3 of Fig. 2.

Referring to the drawings, A represents a panel of opaque vitreous material having embedded therein, in the process of shaping the mass of molten material to form the panel, a metal reinforcing fabric which is not visible on the face of the virgin panel as it appears in Fig. 1. This reinforcing material, indicated at 1 in Figs. 2 and 3, is a suitable open-work fabric, conveniently expanded metal more or less similar to expanded metal lath. The reinforcing fabric extends over and beyond the area in which openings are to appear in the panel. Covering the panel with a stencil of rubber or the like, a sand-blast is applied to cut entirely through the panel over areas corresponding to the openings in the stencil. In the arrangement shown, the design is simply in the form of letters to produce a one-piece open-work sign comprising a frame 2 and letters 3, 3. All of the vitreous material within the frame and surrounding the elements of the letters is cut away so that the letters stand out in full relief, being completely spaced apart from each other and from the frame. However, the letters are firmly held in place so that they will be held accurately aligned. Instead of letters, any other design may be cut.

The mesh of the reinforcing fabric may be made of any desired size so as to form for the openings in the panel screens that will be effective in the situation under which the panel is used. Furthermore, the design of the reinforcing fabric may of itself be ornamental; the exposed portions of the fabric may be decorated if desired; or the panel may be made of or coated with the rarer ornamental metals.

It will thus be seen that I have produced in a simple way an open-work vitreous panel in which the vitreous material may be divided into many or separate parts, if desired, each part and the fabric as a whole being effectively reinforced, and in which all openings are screened.

While I have illustrated and described with

particularity only a single preferred form of my invention, I do not desire to be limited to the exact structural details thus illustrated and described; but intend to cover all forms and arrangements which come within the definitions of my invention constituting the appended claims.

I claim:—

1. The method of producing a device in the form of a panel composed of sections of vitreous material spaced apart from each other and held together by perforated metal, which consists in casting a panel of vitreous material upon a sheet of perforated metal, and then sand-blasting away portions of the vitreous material and leaving the metal intact.

2. The method of producing a device in the form of an open-work panel of vitreous material in relief, which consists in casting a panel of vitreous material upon a sheet of expanded metal, and then sand-blasting out portions of the vitreous material extending throughout the entire thickness of the panel while leaving the corresponding portions of the expanded metal intact.

3. A device comprising a panel of cast vitreous material having a perforated metal reinforcing sheet embedded in the same, the vitreous material being cut away throughout the entire thickness of the panel and the reinforcing material being left intact throughout such areas that there remains a border of vitreous material and one or more islands of vitreous material in the space surrounded by the border.

4. A device comprising a panel of cast vitreous material having a sheet of expanded metal embedded therein the vitreous material being cut away throughout the entire thickness of the panel and the reinforcing material being left intact throughout such areas that there remains a border of vitreous material and one or more islands of vitreous material in the space surrounded by the border.

In testimony whereof, I sign this specification.

WALTER N. THURN.