

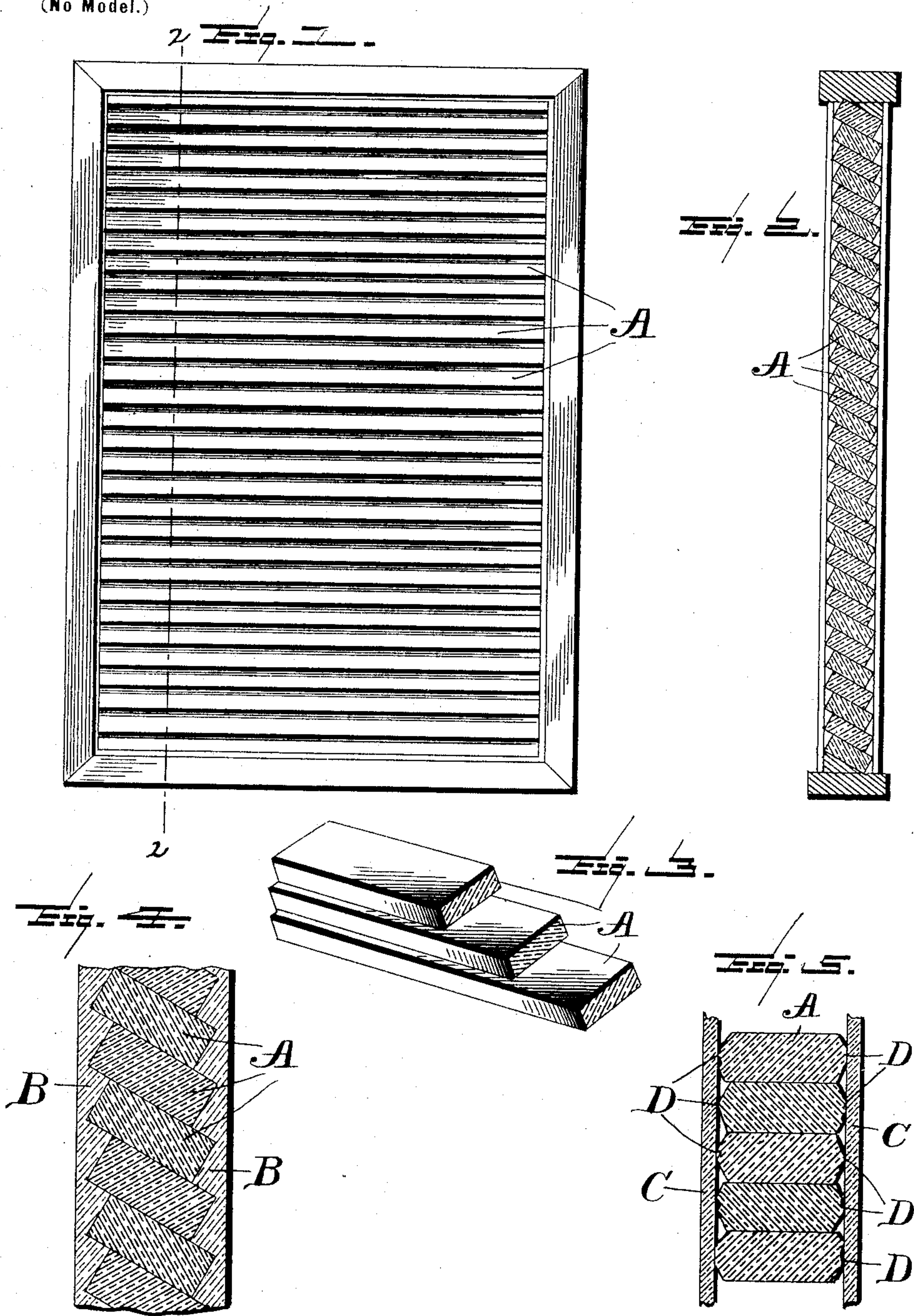
No. 631,220.

Patented Aug. 15, 1899.

C. E. MANNING.
ILLUMINATING WINDOW GLASS.

(Application filed June 8, 1899.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES E. MANNING, OF CHICAGO, ILLINOIS.

ILLUMINATING WINDOW-GLASS.

SPECIFICATION forming part of Letters Patent No. 631,220, dated August 15, 1899.

Application filed June 6, 1899. Serial No. 719,548. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. MANNING, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Illuminating Window-Glass; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in illuminating-panels for windows, transoms, skylights, and the like, and has for its object to provide an illuminating-panel which has good light-reflecting qualities and light-refracting qualities and combines cheapness with utility.

My invention comprises an illuminating-panel fitted into a narrow metallic margin or frame and made up of narrow strips of sheet-glass fitted together in such a manner as to preserve the refracting and reflecting qualities of sheet-glass and contemplates the use of waste strips and cuttings from large sheets.

Reference is had to the accompanying drawings, wherein the same parts are indicated by the same letters throughout the several views.

Figure 1 represents a view in elevation of a window-pane of illuminating window-glass according to the simplest form of my invention. Fig. 2 is a vertical section taken on the line 2 2 in Fig. 1. Fig. 3 is a perspective view showing how the strips of glass are built up one upon another, the ends of the upper strips being broken away to more clearly show the form of the strips. Fig. 4 is a sectional view, on an enlarged scale, showing the arrangement of the strips and the surfaces of the panel as covered with a soluble or easily-melted glass which flows into the corrugated surface and welds into the edges of the strips. Fig. 5 is a sectional view, on an enlarged scale, when the strips are placed with the faces perpendicular to the surface of the pane.

In the simplest form of my invention shown in Figs. 1, 2, and 3 the illuminating-panel is made up of rectangular strips of ordinary sheet-glass of greater width than thickness, built up together, and the width of the individual strips forming the thickness of the panel of illuminating-glass. Hitherto it has

been customary to grind the edges of the strips, so as to form a smooth surface to the panel; but the present improvement leaves the rough edges of the strips until the panel is inclosed in a metallic frame, and then by sprinkling the surface with powdered glass and exposing the panel to sufficient heat the powdered glass melts and fills in the rough surface of the panel to a smooth and impervious surface.

Fig. 4 shows the space filled by the melted glass, on an enlarged scale, the strips A A being the strips of the composing glass, and B B the surfaces composed of powdered glass melted into a solid mass covering the faces of the panel and filling the cavities therein.

In Fig. 5 the composing strips A A are laid flat and have rough edges, and C C represents the surface finish when applied with a brush, using a soluble glass for this purpose. This soluble glass is very thick and viscid when applied and only touches the edges or corners of the strips at D D. The same result would be obtained when a sheet of glass heated to a high temperature were placed over the composing strips, the points or narrower edges D D, Fig. 5, would weld into the surface sheet, thus forming a solid and compact illuminating-panel.

Instead of glass any form of transparent varnish or similar surfacing substance which would accomplish the same result as the applied glass may be used, being the same in effect as to produce an impervious surface.

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

1. In an illuminating structure, a panel formed of a series of transparent blocks assembled in permanent relation, and a transparent sheet of solidifying material applied in a softened state to the face of the panel, substantially as described.

2. In an illuminating structure, a panel formed of a series of transparent blocks assembled in permanent relation, and having a rough surface, and a transparent sheet of solidifying material applied in a softened state to the surface of the panel, substantially as described.

3. In an illuminating structure, a panel formed of a series of transparent blocks ar-

ranged one in contact with another in permanent relation, and transparent sheets of soluble glass covering the light-receiving and light-discharging surfaces of the panel and
5 united with the edges of said blocks, substantially as described.

4. In an illuminating structure, a panel formed of a series of transparent blocks arranged one in contact with another in permanent relation, and a transparent sheet of
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glass applied in a softened state to the surface of the panel and united with the edges of said blocks, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES E. MANNING.

Witnesses:

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