

(No Model.)

2 Sheets—Sheet 1.

W. H. WINSLOW.
PRISM PLATE.

No. 595,275.

Patented Dec. 7, 1897.

Fig. 1.

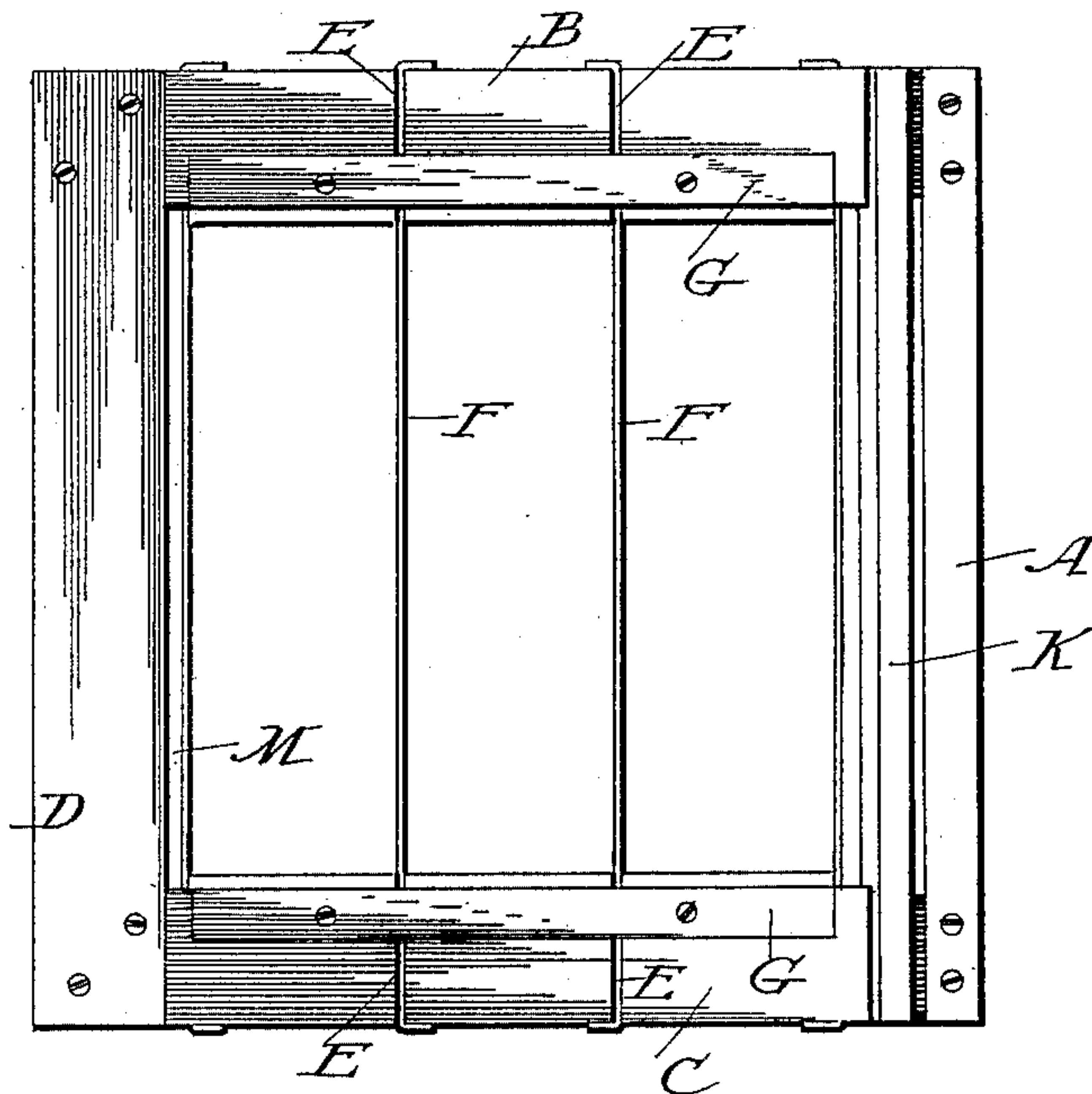
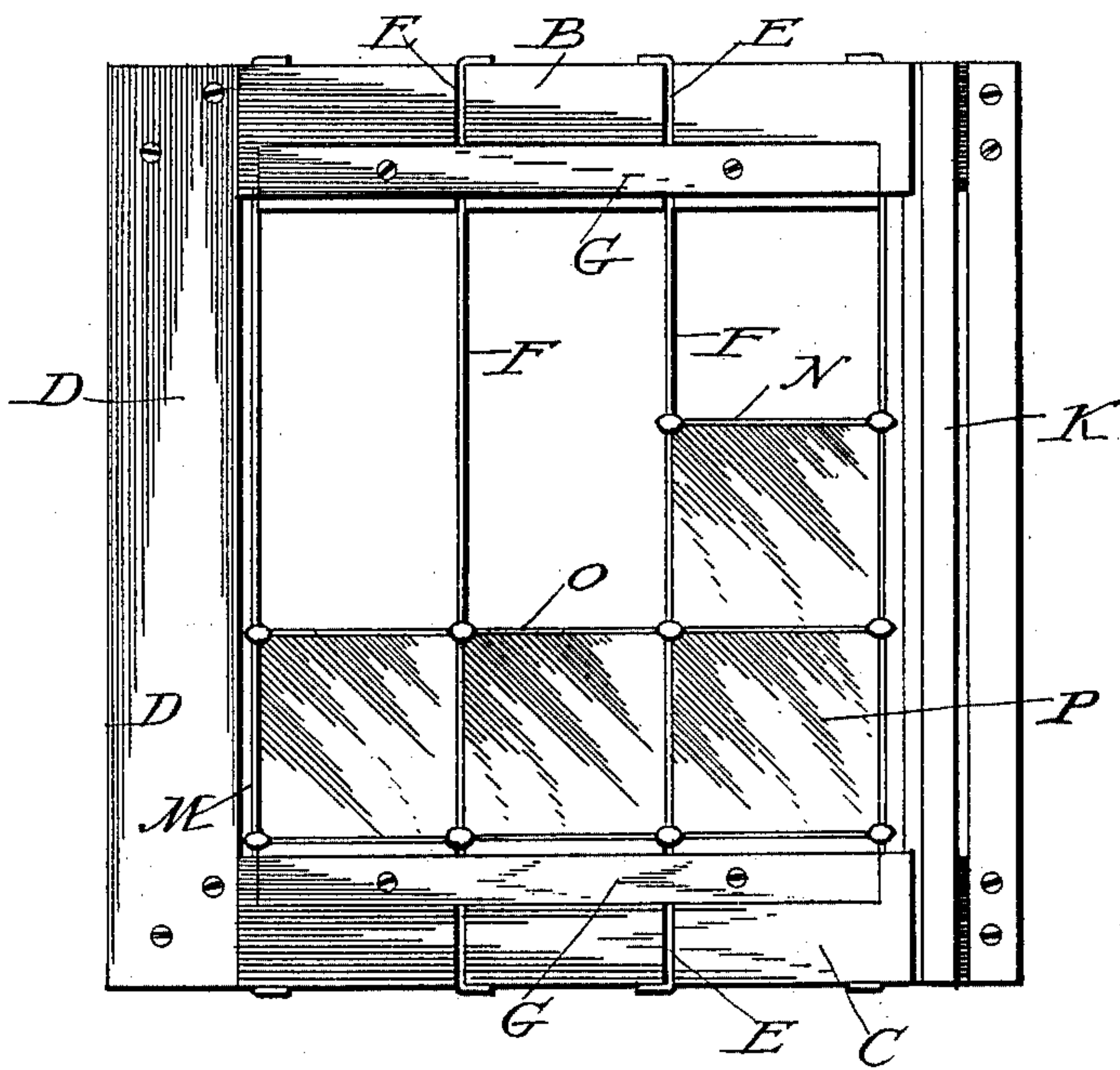


Fig. 2.



Witnesses:

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2 Sheets—Sheet 2.

Patented Dec. 7, 1897.

Fig. 5.

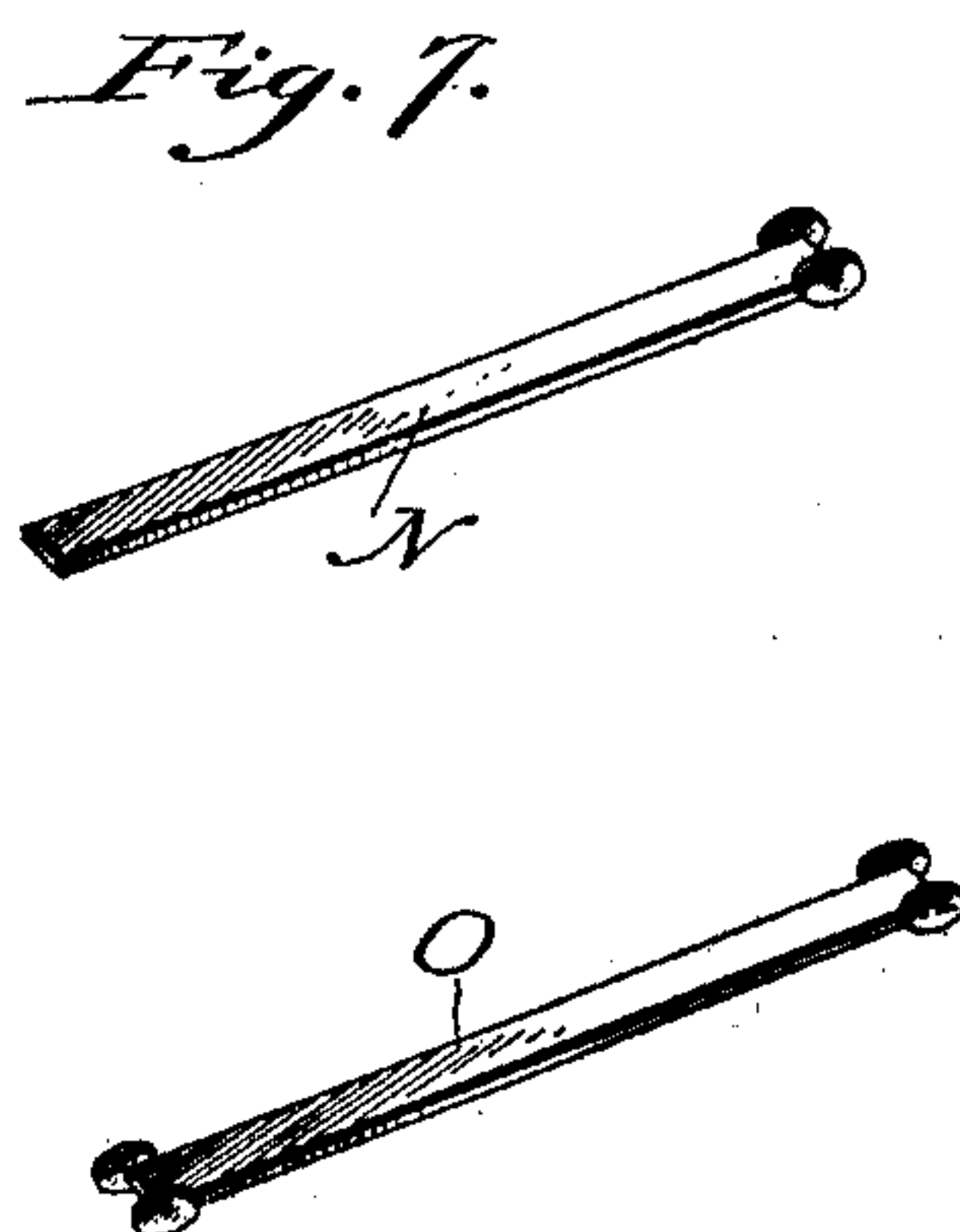
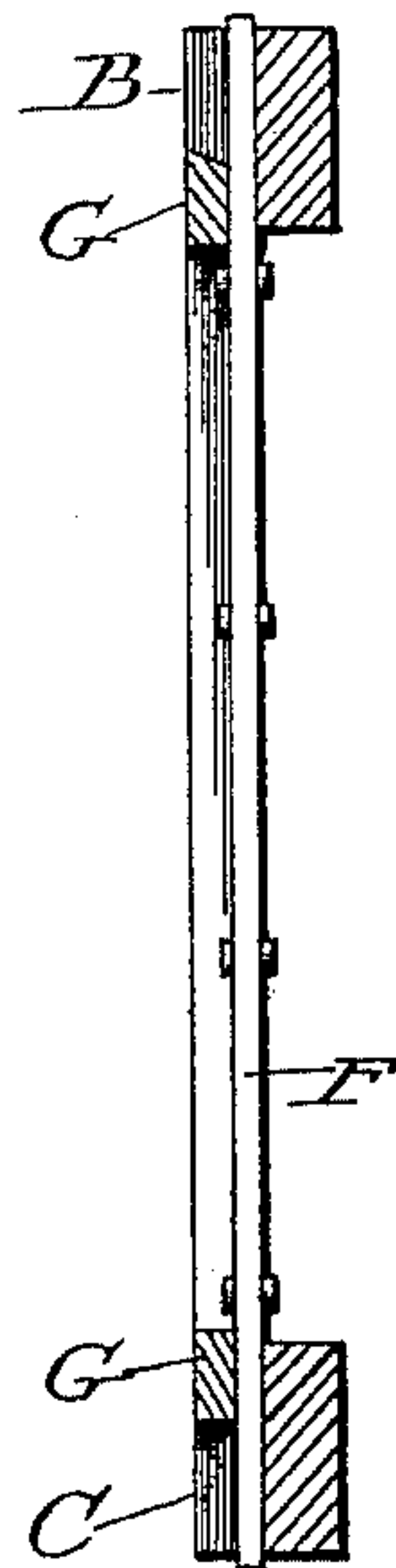


Fig. 6. *Inventor.*
William B. Hinslow



By *James W. Parker,*
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM H. WINSLOW, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE LUXFER PRISM PATENTS COMPANY, OF SAME PLACE.

PRISM-PLATE.

SPECIFICATION forming part of Letters Patent No. 595,275, dated December 7, 1897.

Application filed March 9, 1897. Serial No. 626,634. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WINSLOW, 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 Prism-Plates, of which the following is a specification.

My invention relates to devices for mounting tile, preferably prismatic-glass tile, and particularly for mounting the same in such manner as to make it convenient and satisfactory for immersion in the electrolytic bath, which process is usually necessary to complete or harden or finish the framing or mounting of such tile or prismatic glass.

My invention is illustrated, so far as may be necessary to an understanding of it, in a particular form or with various devices which are at present thought by me to be suitable for the purpose of realizing or putting into practical shape my invention for use.

In the drawings, Figure 1 is a side view of a supporting-frame which is provided at one side with a movable bar and at both ends with removable bars and with slots at both ends for the metal strips. Fig. 2 is a similar view with a portion of the prismatic-glass sections placed in position in the process of building them up. Fig. 3 is a like view when the process has been brought to that point where all the sections are assembled and the frame portions are in place ready for the whole to be submitted to the bath. Fig. 4 is a like view of the complete product after the electrolytic process has been completed and when the framed tile or glass is ready to be removed in a single sheet from the temporary frame. Fig. 5 is a vertical section. Fig. 6 is a cross-section. Figs. 7 and 8 show details of the short strips.

Like parts are indicated by the same letters in all the figures.

A, B, C, and D constitute the four members of the temporary frame, and the members B and C are slotted, as at E E, to receive metal strips F, preferably of copper. These strips are somewhat longer than the diameter of the opening in the temporary frame and are turned over at the ends and are held tightly stretched by a staple or two-pointed tack.

In the drawings I have shown a frame ca-

pable of holding but nine sections. This is intended, however, merely as an illustration, for the frame may be made of any size and to suit any reasonable number of sections. This frame may of course be constructed with some modifications and so as to be permanent and durable, and may, indeed, constitute a part of the finished product; but the preferred form is somewhat like the illustrated form and is intended to be temporary or a part of the temporary frame, serving only the purpose of holding the glass together while it is subjected to the bath and of serving, if desired, as a case or frame in which to ship or store the finished product until it is ready to be withdrawn for use.

G is a removable frame-piece adapted to be secured in position, for example, by means of screws H H, and which is slotted, as indicated, to permit the passage of the several strips. When in position, it forms a ledge projecting upwardly or inwardly in the plane of the product when completed and of about the thickness of the body of the tile or prismatic glass which is intended to be set up in the frame. J is a similar frame-piece at the opposite end and beveled and adapted to be forced into position so as to tightly press the glass sections down upon one another or upon their interposed strips.

K is a movable strip which forms a similar ledge along the edge and in the plane of the completed product. It is adapted to be forced up against the side or edge of the mass of tile sections, as indicated, by the wedges L L. M is a similar ledge projecting from the permanent or fixed frame-piece A.

N N are short strips having each a body portion preferably about the length of the glass or tile and having at each end flanges offset, as shown, so as to project over such end in all directions in the plane of the edge of the body. O O are similar strips having such flanged or offset parts at one end only.

P P are the tile or glass sections. In this case they are the prismatic window-glass, for which my invention is well adapted, though of course they might be other tile pieces or sections or any desired substance or material, size, or shape to which my invention could be conveniently applied.

The use and operation of this method and process and these several devices are as follows:

Given the temporary frame, the strips, preferably of copper, will be attached thereto, as indicated, being tightly drawn by any convenient tool and being fastened securely in position at each end. The left-hand strip, looking at the drawings, will lie along the flange end, having a width substantially equal to the thickness of such flange. The other three strips, as indicated, will be stretched across the frame like the strings of a musical instrument. I now take the removable frame-piece G and securely fasten it into position, as indicated in several of the drawings, thus making a flange-like continuation of the flange end. I now take one of the short strips N and drop it into position between, for example, the two strips toward the right side, its flanged ends projecting beyond the long strips, as indicated, and its body resting upon the flange of the frame-piece G. The strips O O are then dropped into similar positions, and thus I have a continuous metallic border from the left-hand upper corner, down the rib M, across the rib of the piece G, and up the strip on the right side. I now take a piece of tile, or in this case prismatic glass, and insert it in position on top of the strip N, its lower corners resting between the flanges at the ends of that strip, so that its lower edge will be held somewhat loosely, but still securely, between the strips and in the plane of the flanges and of the product when completed. I now put a strip N on top of the piece of glass, as indicated, whereby it is in like manner secured at its upper edge. I now put another piece of glass to the left and between the two middle strips and the short strip O on top of that, and so another tile and strip at the lower left-hand corner. I now begin on top of the first tile placed in position and continue the process as before until all the sections are in position, in this case until nine are in position. This work is all done while the temporary frame is held on edge and results in a complete body of tile or prismatic-glass sections held in a plane in proper relation to each other for a finished product, the whole being bound by a metal strip or strips which pass all the way around. Of course the product in this condition is somewhat loosely arranged and the parts are not very securely held together. Still it could be in this condition submitted to the electrolytic bath, being exposed while held in the same position as that which it occupies while being thus built up. However, I prefer, and particularly in the case of large pieces of glass so to be built up, to secure the parts more firmly together. I therefore insert the strip J, forcing it down to position, its ledge-like projection being in the plane of the complete product, and I also force up, preferably by means of the wedges, the movable strip K. By this means the mass of glass, the several sections

being thus held in close relation to each other and being held in a proper plane, is put under pressure so that all the parts are quite firmly united. At this stage the product might be considered complete, and could be used without being subjected to the electrolytic bath; but of course it would not be either air or water tight, nor could it be removed from the frame or loosened. I prefer to continue the process by subjecting the whole in this condition to the electrolytic bath. It becomes the cathode, its metal portion being properly connected, and it is thus exposed in the bath until the deposit has taken place between the opposed portions of glass and metal to make a water-tight joint, and preferably until the overhanging ledges of deposited copper have been formed on the strips to project into the grooves or angles between the prisms, and preferably until the electrically-deposited copper overhangs the edges of the strips until they are formed each into an I shape. This process may also, further, be continued until an additional amount of electrically-deposited metal has been placed about the corners and the flange-pieces, though this is not probably essential in every instance. Indeed these flange-pieces are, properly speaking, only parts of the strips intended to facilitate the setting of the entire mass together in a complete frame ready for immersion in the bath.

In the old methods of putting these glass sections or tile pieces together in proper shape for immersion in the bath a good deal of difficulty was encountered and somewhat elaborate and expensive and troublesome processes were necessary; and the object of this invention is primarily to present a method or process and suitable means for assembling the sections of glass or tile and holding them in a proper temporary frame or relation, so that they can then be subsequently immersed in the bath, although, as previously explained, for some purposes this final immersion and electrolytic deposit is not essential.

It will be understood that in subjecting the work to the electrolytic bath it is highly important that the same should be properly exposed, so as to secure uniform results, and this can be done best by putting it in the bath in a vertical position. After the work has been exposed to the bath it can be shipped to any desired point, assuming that it is to be removed from what I have called the "temporary" frame, and when ready at its destination for reframing in its permanent frame or sash the movable strip may be released and pushed back and the removable strips at the ends may be taken out, whereupon the product will be found suspended, as it were, in the midst of the frame, being supported only by the exposed strips at top and bottom. By cutting these the work is freed and is ready to be applied in any manner to the permanent frame or sash. The permanent product is a mass of sections of tile, or in this case pris-

matic glass, each section of which is bounded
by the thin strip of metal, preferably copper,
and the whole held in position by the electro-
lytically-deposited metal. These strips of
5 course may be of any size and strength and
the lugs on their ends may be formed in any
desired manner. I have shown them of cop-
per, the lugs being upset or made continuous
with the body of the short strip, for my illus-
10 tration is one which sets out a device adapted
to the electrolytic process. If, however, this
process is not to be applied, the strips might
be stronger and heavier. If electrolysis is
not used, a cement of some kind, applied either
15 to the strips or tile edges in the process of
forming or to the apertures when the work
has been all assembled, could be used to ren-
der the finished product partly or wholly air
or water proof. Such a construction might
20 be very satisfactory in mild climates.

I claim as my invention the following:

A prism-plate comprising a series of prism-
lights substantially uniform in size, with a
series of long framing-pieces extending par-
allel to each other from end to end of the plate 25
between the rows of prism-lights and at the
edges of the outer rows of lights, and a series
of short strips each substantially of the same
length as the distance between the long strips,
and each provided at one end with two lugs 30
secured upon the edge of said strip and pro-
jecting beyond its sides and beyond its end,
one of such strips lying between the prism-
lights in a given row to form the frame, the
parts being all electroglazed together, sub- 35
stantially as shown and described.

March 6, 1897.

WILLIAM H. WINSLOW.

Witnesses:

FRANCIS W. PARKER,
OLIN H. BASQUIN.