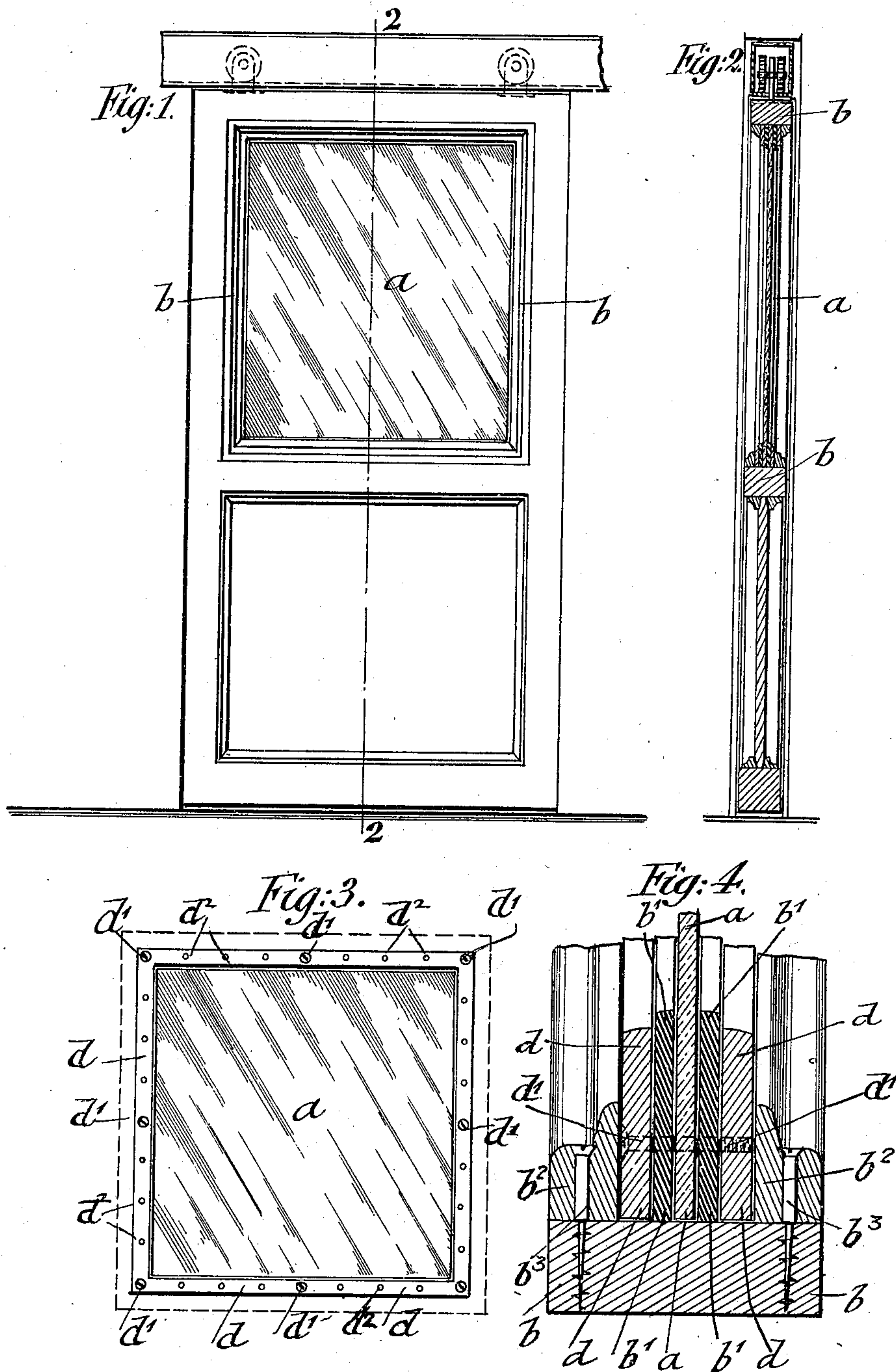


A. WOLFF.  
DOOR AND WINDOW.  
APPLICATION FILED MAR. 17, 1910.

983,794.

Patented Feb. 7, 1911.



Witnesses:  
John Murtagh  
L. J. Murphy

Inventor  
August Wolff  
By his Attorneys  
J. M. J. J. J.



# UNITED STATES PATENT OFFICE.

AUGUST WOLFF, OF NEW YORK, N. Y.

DOOR AND WINDOW.

983,794.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed March 17, 1910. Serial No. 549,817.

*To all whom it may concern:*

Be it known that I, AUGUST WOLFF, a citizen of the United States of America, residing in New York, in the borough of the Bronx, county and State of New York, have invented certain new and useful Improvements in Doors and Windows, of which the following is a specification.

This invention relates to an improvement in doors and windows in which, instead of a pane of glass or wire-glass, a transparent flexible sheet of water and fireproof celluloid, known as cellit, or a similar non-breakable substance is employed.

In glass doors and windows that are subjected to shocks and concussions in handling, it happens frequently that the glass-pane breaks by the force of the shock. Especially is this the case with elevator-doors, wind guard-plates for automobiles, etc., which frequently cause injury by the breaking of the glass-panes into small pieces.

The object of this invention is to do away with these objections to glass-doors and windows and substitute for the glass-panes of the doors or windows transparent flexible sheets of water and fire proof material which is unbreakable, and which can resist concussions in an effective manner; and for this purpose the invention consists of a door or window the panes of which are made of a transparent flexible water and fire proof material, which is retained by means of layers or strips of elastic material and metal and which are clamped by connecting screws and pins in connection with an exterior frame of wood or other suitable material having moldings at both sides of the holding strips for the pane, as will be fully described hereinafter and finally pointed out in the claim.

In the accompanying drawings, Figure 1 represents a front-elevation of my improved door, Fig. 2 is a vertical transverse section of the same on line 2, 2, Fig. 1, Fig. 3 is a front-view of a window-sash, and Fig. 4 is a detail vertical transverse section through the frame of the door or window, drawn on a larger scale.

Similar letters of reference indicate corresponding parts throughout the several figures.

Referring to the drawings, *b* represents an exterior frame of a door or window and *a* the pane, which is made of a sheet of

transparent flexible and water and fire proof material, such as cellit, or a similar non-breakable substance. The sheet *a* is held in position in the frame *b* by means of inner elastic strips or layers *b*<sup>1</sup> and outer strips or layers *d* of steel or other metal that are connected by means of fastening screws *d*<sup>1</sup> which pass through registering holes in the sheet *a*, elastic strips *b*<sup>1</sup> and metal strips *d*. At the corners and intermediate points of the frame are arranged the fastening screws *d*<sup>1</sup>, while at points between the screws *d*<sup>1</sup> connecting pins *d*<sup>2</sup> are located, so as to hold the sheet *a* firmly in position and prevent the warping or buckling of the same. The frame *b* is provided with moldings *b*<sup>2</sup>, one at the inside and one at the outside, which moldings are attached by wood screws *b*<sup>3</sup> to the frame *b*, as shown in section in Fig. 4, thus binding the screws *d*<sup>1</sup> and pins *d*<sup>2</sup>. The moldings can also be made of suitable sheet-metal where protection against fire is necessary.

The transparent sheet *a* is held firmly in stretched position by the elastic and metal strips *b*<sup>2</sup>, *d* and by the moldings *b*<sup>1</sup> of the frame *b*.

The flexible pane is specially useful for swing-sashes, transoms, elevator-doors, wind-guards for automobiles and other applications where the windows and doors are subjected suddenly to shocks or concussions, so that the annoying breakage of the glass-panes is avoided.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

A door or window, consisting of a sheet of transparent flexible material, superposed elastic and metallic strips at the edges of the sheet, fastening screws and pins passing through the sheet and strips, a frame extending around the sheet and strips, and moldings attached to the frame, extending along the metallic strips and covering the ends of the screws and pins.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

AUGUST WOLFF.

Witnesses:

PAUL GOEPEL,  
FANNIE FISK.