

(No Model.)

W. D. SMITH.  
PLATE GLASS WINDOW FRAME.

No. 344,418.

Patented June 29, 1886.

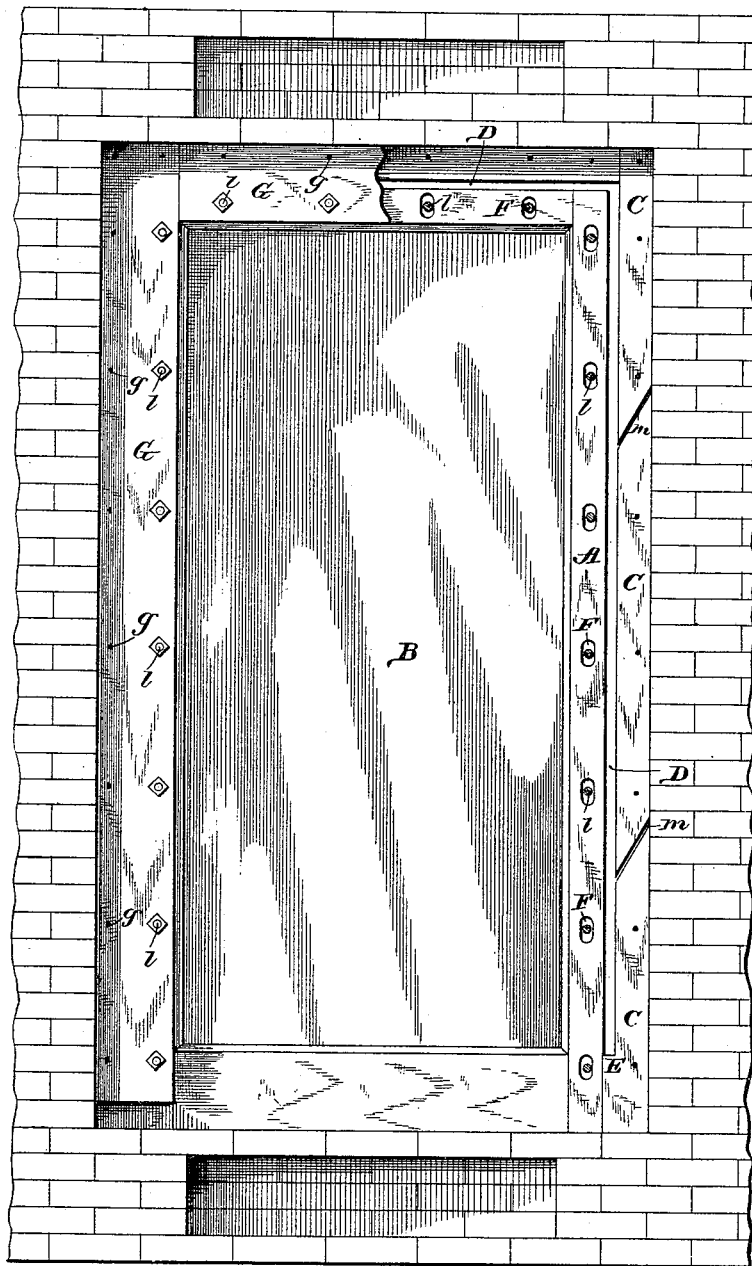


Fig. 1.

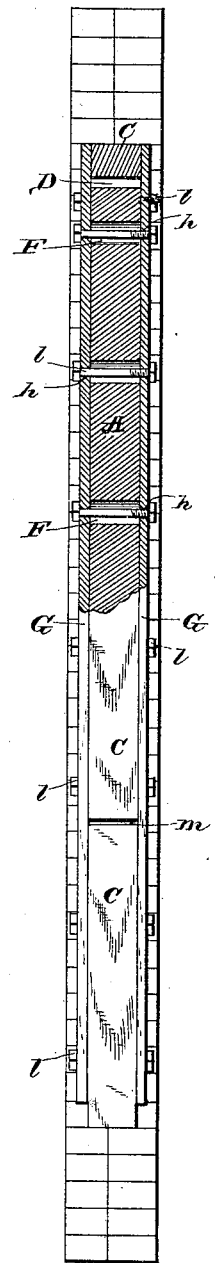


Fig. 2.

Witnesses

*Percy C. Brown,*  
*John G. Warner*

Inventor,  
Walton D. Smith:

By his Attorneys

*C. A. Snow & Co.*

# UNITED STATES PATENT OFFICE.

WALTON DUANE SMITH, OF PROPHETSTOWN, ILLINOIS.

## PLATE-GLASS-WINDOW FRAME.

SPECIFICATION forming part of Letters Patent No. 344,418, dated June 29, 1886.

Application filed January 13, 1886. Serial No. 188,422. (No model.)

*To all whom it may concern:*

Be it known that I, WALTON DUANE SMITH, a citizen of the United States, residing at Prophetstown, in the county of Whiteside and State of Illinois, have invented a new and useful Improvement in Plate-Glass-Window Frames, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improvement in plate-glass-window frames; and it consists in the combination of an outer frame and an inner frame secured in the outer frame and movable therein, the inner frame carrying the glass plate, whereby the crushing force exerted by a building in settling will be prevented from breaking the plate-glass, as will be more fully set forth hereinafter, and particularly pointed out in the claims.

Figure 1 is an elevation of a plate-glass-window frame embodying my invention, a portion of the facing being broken away. Fig. 2 is partly a vertical section and partly an edge view of the same.

A represents the inner frame, in which is secured the glass plate or pane B, in the usual way.

Surrounding three sides of the inner frame, A, is an outer frame, C, a space, D, being left between the said inner and outer frames, as shown. The lower sides of the outer frame are provided with jogs or abutments E, that bear against the lower outer edges of the inner frame, these being the only points at which the inner and outer frames are in contact with each other.

F represents a series of elongated slots that are made in the side and top rails of the inner frame. Face-boards G are placed on opposite sides of the inner and outer frames, covering the said frames, and concealing them and the intervening space D. These face-boards are firmly secured to the outer frame by means of nails or screws *g*, and openings *h* are made through the said face-boards near their inner edges, which openings align with the elongated slots in the inner frame. Bolts or rivets *l* pass through the openings *h* and through the slots F, and thus secure the inner frame in the outer frame, but out of contact therewith. The side face-boards extend nearly but not

quite to the bottom of the window-frame, as shown.

Plate-glass windows have been heretofore frequently broken and cracked by the great crushing strain exerted on the window-frames when the walls of the buildings settle, thus entailing heavy losses.

The object of my invention is to prevent this by placing the glass plate in an inner frame, and securing the latter in an outer frame and allowing the outer frame to move either laterally, vertically, or obliquely for a slight distance as the walls of the building settle, without exerting any pressure upon the inner frame in which the glass plate is secured.

In order to give additional freedom of movement to the outer frame without disturbing the inner frame, the side rails of the outer frame are divided into two or more sections by means of oblique cuts *m*, as shown at Fig. 1. The side face-boards do not extend quite to the lower sides of the outer frame, in order to permit them to move in a vertical or oblique direction for a slight distance before bending against the window-sill.

I have herein shown the window-frame as rectangular in form; but it will be readily understood that it may be made in any shape desired.

Having thus described my invention, I claim—

1. The combination of the inner frame carrying the glass and the outer frame, a space being left between the inner and outer frames, for the purpose set forth, substantially as described.

2. The combination of the inner frame carrying the glass, the outer frame surrounding the inner frame and out of contact therewith, except at the abutments or jogs, and the facing-boards secured rigidly to one of the frames and movably to the other, whereby the outer frame may be moved slightly under pressure without affecting the inner frame, for the purpose set forth, substantially as described.

3. The combination of the inner frame carrying the glass, and having the slots F, the outer frame surrounding the inner frame and out of contact therewith, except at the abutments or jogs, the facing-boards secured to the outer frame and covering the inner frame, and

the bolts or rivets passed through the said boards and through the slots F, whereby the outer frame may be moved slightly under pressure without affecting the inner frame, for the  
5 purpose set forth, substantially as described.

4. The combination, with the inner frame carrying the glass, of the outer frame surrounding the inner frame and out of contact therewith, except at the abutments or jogs,  
10 and connecting means between the two frames,

said means being rigidly secured to one of the frames and adjustably attached to the other frame, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in  
15 presence of two witnesses.

WALTON DUANE SMITH.

Witnesses:

H. F. BROWN,  
JAMES SCARRITT, Jr.