

E. H. LUNKEN.
FIREPROOF WINDOW CONSTRUCTION.
APPLICATION FILED FEB. 11, 1911.

1,005,249.

Patented Oct. 10, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

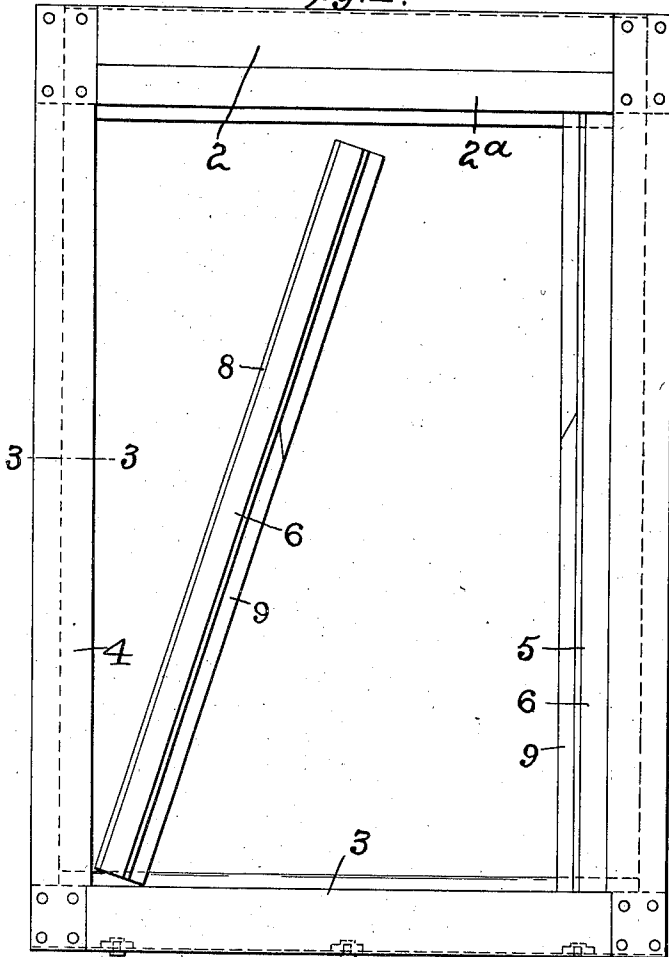


Fig. 2.

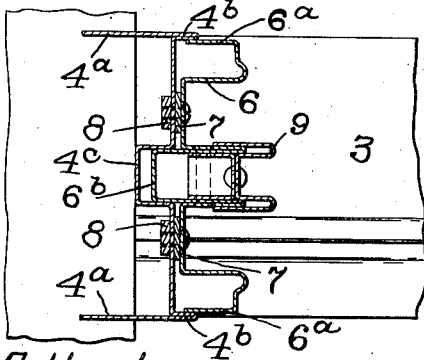
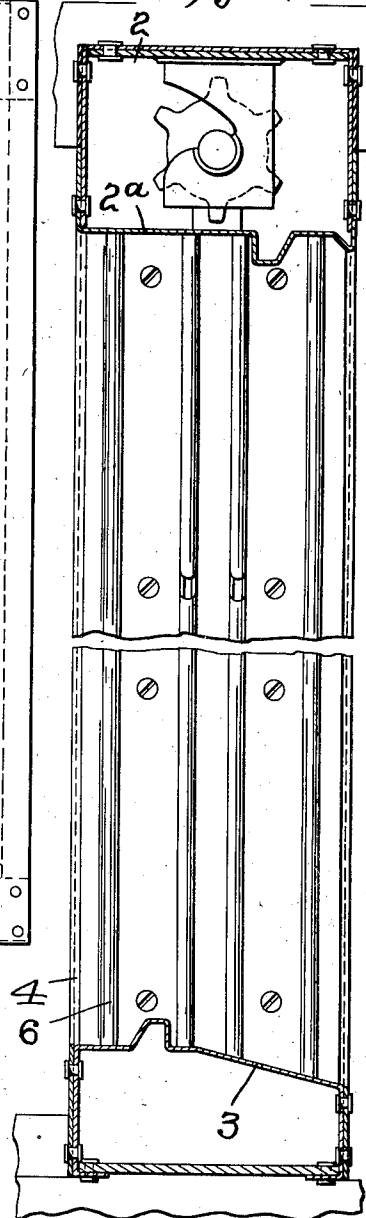


Fig. 3.

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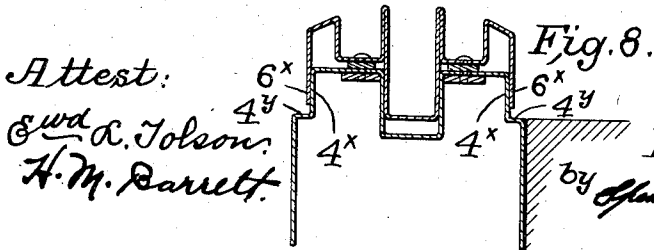
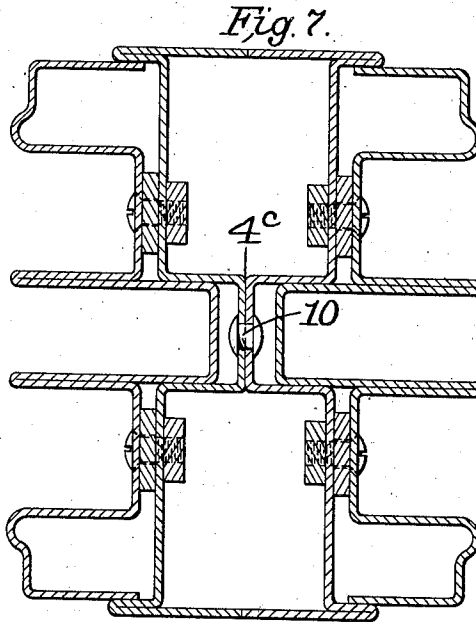
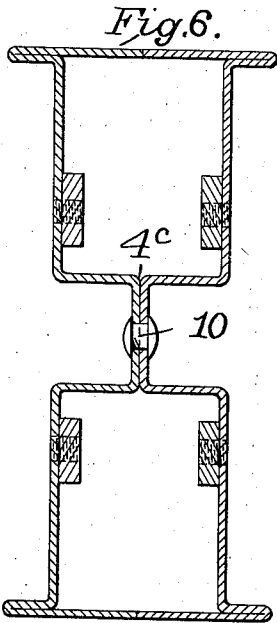
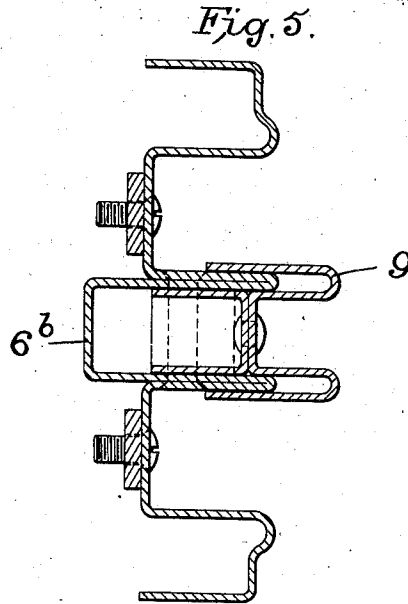
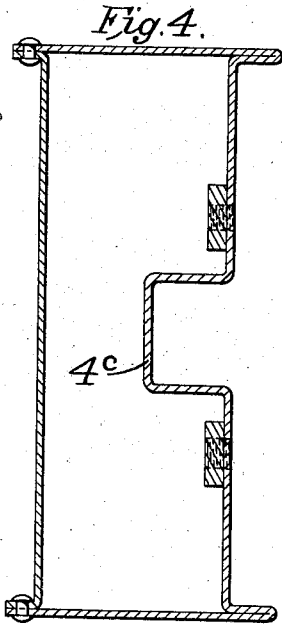
Atty's.

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

EDMUND H. LUNKEN, OF CINCINNATI, OHIO, ASSIGNOR TO THE LUNKENHEIMER COMPANY, A CORPORATION OF OHIO.

FIREPROOF WINDOW CONSTRUCTION.

1,005,249.

Specification of Letters Patent.

Patented Oct. 10, 1911.

Application filed February 11, 1911. Serial No. 608,054.

To all whom it may concern:

Be it known that I, EDMUND H. LUNKEN, citizen of the United States, residing at Cincinnati, Ohio, have invented certain new and useful Improvements in Fireproof Window Construction, of which the following is a specification.

My invention relates to fire proof window constructions of the type shown in Letters Patent of the United States #871127 dated November 19, 1907.

One of the objects of the present invention is to provide a simple outer frame for windows, particularly of the counter-balanced type or those requiring no sash weights or sash weight boxes such as disclosed for example in Letters Patent No. 957693, granted May 10, 1910.

Another object is, in two such window frames which may be connected side by side in a simple and inexpensive manner, to form a double window.

Still another object is to provide a simple form of main frame which may be readily walled in in an air proof manner, or so as to form a wind break at the line of junction between the frame and the masonry, and to which main frame the facing or finishing plates may be readily and adjustably secured.

With these and other objects in view the invention comprises the novel features of construction and arrangement and combination of parts hereinafter described and particularly set forth in the appended claims.

The invention is illustrated by the aid of the accompanying drawings, in which:—

Figure 1 is a front elevation of a window frame with one of the side finishing plates swung partly inward. Fig. 2 is a transverse vertical section on a larger scale. Fig. 3 is a transverse section on line 3—3 of Fig. 1 with the cover or finishing plate in place. Fig. 4 is a transverse sectional view on a larger scale of one of the side members of the frame, of a slightly modified form. Fig. 5 is a similar view showing the cover or finishing plate detached. Fig. 6 is a similar view showing two frame members attached for adjoining or double windows, and Fig. 7 is a view of the same with the cover or finishing plates in place. Fig. 8 is a view of a modification.

Referring by reference characters to these drawings, the main frame consists of a top member or box 2, a bottom member or sill 3

and two side members 4 and 5 all of fire proof material such as sheet metal and of channel form. These parts are connected together at the corners by screws or bolts so that they can be shipped in a knock down condition and assembled at the point of use. The top member 2 which has its open side downward is designed to receive the shaft and sprocket wheels over which the sash supporting chains pass, as described in said Letters Patent #957693, the open side of said top member being closed by the top finishing or cover plate 2^a.

The open channel shape of the side members affords two flanges, as shown at 4^a, in Fig. 3, these being spaced a distance apart sufficient to accommodate one row of bricks, so that when the frame is walled in the flanges lie between adjoining rows of bricks and embedded in mortar forming an effective wind break. The side members are also provided with two forwardly projecting flanges 4^b formed preferably by the doubling of the metal, which overlap the flanges 6^a of the cover or finishing plate 6. The cover plate fits within the flanges and is guided or positioned thereby and carries on its inner side filling strips or washers 7, a greater or less number of which may be used, or which may be replaced by strips or washers of different thickness to secure proper adjustment of the cover plates. On the rear faces of the side frame members are provided reinforcing strips 8 which have threaded holes to receive the screws which secure the cover plates in position. The side frame members are further each provided with an intermediate channel portion 4^c the bottom wall of which serves to abut against the face of the brick work and properly position the member, and the side walls of which serve to receive the central portion 6^b of the cover plate. The central or intermediate portion of the cover plate is similar to that disclosed for example in Letters Patent #902980, granted Nov. 3, 1908, and supports the guide bars 9 in the same manner.

Owing to the simple channel shape of the side bars of the main frame, it is evident that two frames can be secured together by shortening the flanges until the backs of the center channels 4^c butt against each other to enable their being riveted together, as shown at 10 in Figs. 6 and 7.

The seams or joint of the abutting flanges

can be soldered or covered by a molding and two or more frames can easily be placed side by side and riveted together and the abutting channel shape parts forming a mullion between the two windows. After the windows are thus connected and walled in, the side cover plates can be applied, the sashes put in the frame and the top cover plate attached. The top cover plate can easily be taken down without interfering with the side cover plates at any time when it becomes necessary to get access to the top box. In this construction I prefer not to use a sill cover plate but make the sill proper of the main frame of thick material. If desired a sill cover plate can be easily applied. If it is desired to fill the sill with concrete, this can be done by pouring in the hollow spaces of the side frame members as these spaces connect with the hollow sill space through openings cut in the sill at its ends, so that concrete poured in the spaces between the brick and the side frame members will run down and fill the hollow sill.

While my invention applies more particularly to counterbalanced windows, (in which sash weights are dispensed with), it is evident that my invention can be applied to the weighted type of windows by simply adding a back cover to the channel shaped side frames as shown in Fig. 4 to form the weight box and providing an opening at the lower inside faces of the frame to get access to the weights, which opening is closed when the cover plates are applied.

Instead of having the side flanges of the cover plate fit within the flanges of the frame

members as shown in the figures hereinbefore particularly described, I may have them slidably embrace the outside faces of the frame members as shown at 6* in Fig. 8. When this is done, this part of the frame 4* embraced by the flanges of the cover plate is preferably made of somewhat reduced thickness, providing shoulders or offset portions 4* which form a brick line or guide.

Having thus described my invention, what I claim is:—

1. In a fire proof window construction, a main frame of sheet metal having on each face an outwardly and an inwardly projecting flange lying in the same plane and one of said flanges being formed by the doubling of the metal, in combination with cover plates having side flanges to telescopically engage the forwardly projecting flanges, substantially as described.

2. In fire proof window construction, a pair of window-frames having oppositely placed side frame members having central channels with the bases of said channels suitably secured together.

3. In fire proof window construction, a pair of reversely placed side frame members having abutting side flanges and having intermediate channel portions with the bottom walls of said channel portions secured together.

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

EDMUND H. LUNKEN.

Witnesses:

J. W. CARRINGTON,
H. F. SCHAEFER.