E. H. LUNKEN.

FIREPROOF WINDOW CONSTRUCTION.

APPLICATION FILED FEB. 20, 1912.

1,026,520.

Patented May 14, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

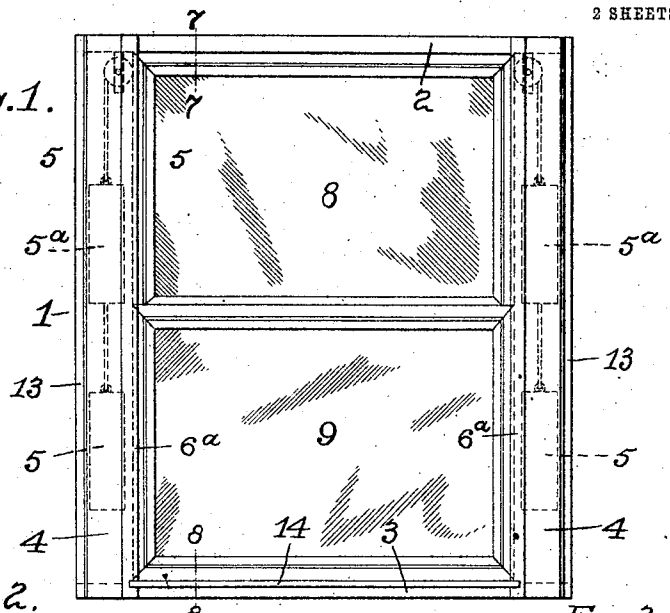


Fig. 2.

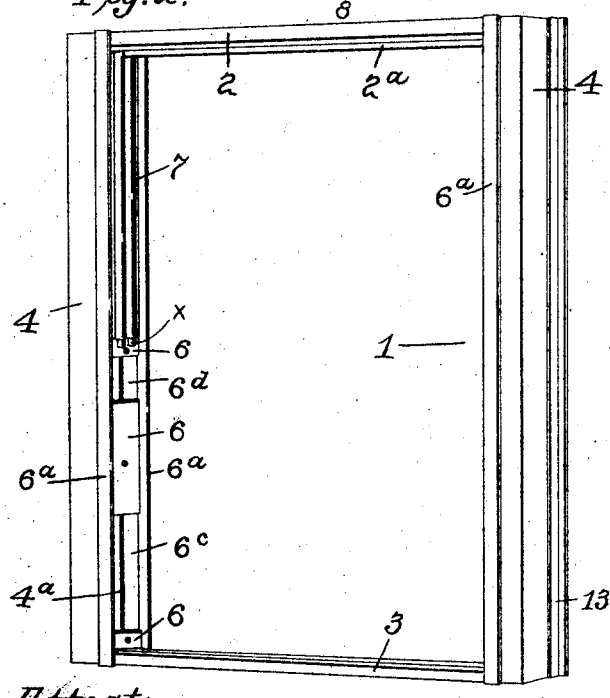


Fig. 3.

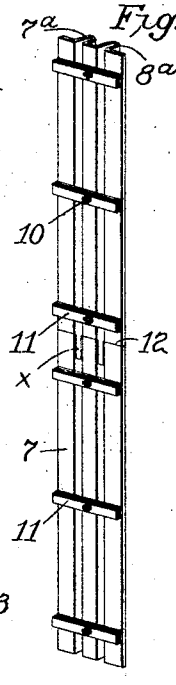
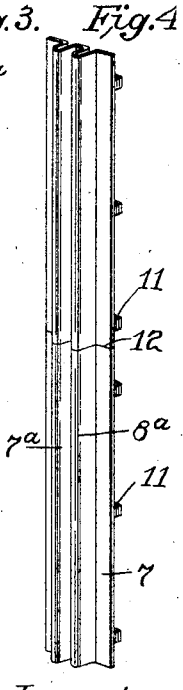


Fig. 4



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2 SHEETS—SHEET 2.

Fig. 7.

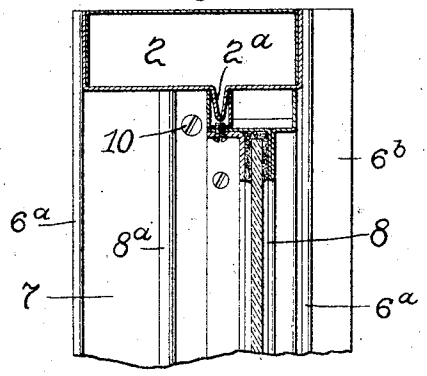


Fig. 8.

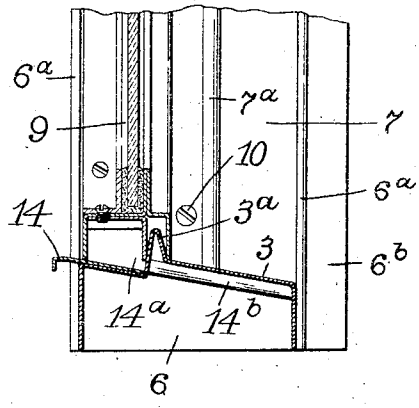


Fig. 5.

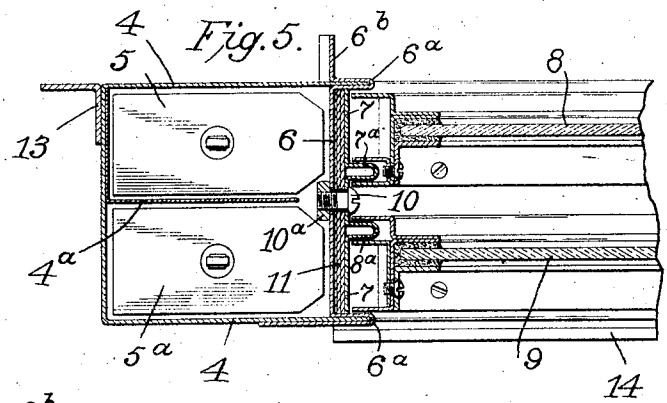
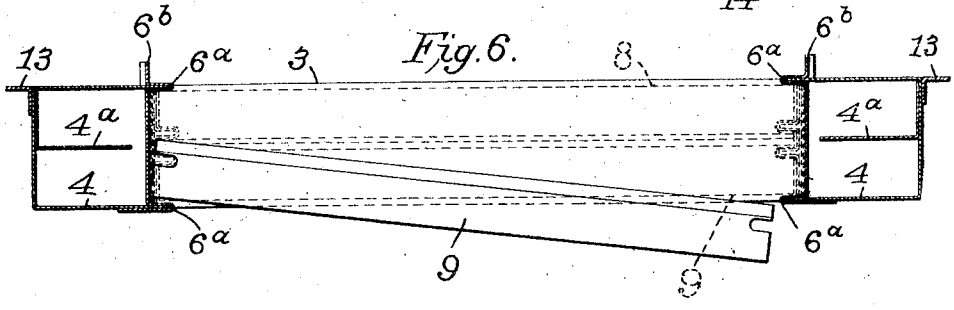


Fig. 6.



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UNITED STATES PATENT OFFICE.

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

FIREPROOF WINDOW CONSTRUCTION.

1,026,520. Specification of Letters Patent. Patented May 14, 1912.

Application filed February 20, 1912. Serial No. 678,913.

To all whom it may concern:

Be it known that I, EDMUND H. LUNKEN, a 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 present invention relates to improvements in fire proof window construction of the type in which weight balanced sliding sashes of the irreversible type are used.

Among the objects of the invention are to provide a simple and economical construction, one which shall be strong and durable in use, in which the sashes may be readily inserted and removed, and the weights and pulleys be readily accessible, and in which adjustment to cause proper fit of the sash may be readily made.

With these and other objects in view the invention includes the novel features of construction and arrangement and combination of parts hereinafter described and particularly defined by the appended claims.

A window constructed in accordance with my invention is illustrated in the accompanying drawings in which,

Figure 1 is a front elevation of the window; Fig. 2 is a perspective view with the sashes and one of the lower cover plates removed; Fig. 3 is a perspective view of the rear, and Fig. 4 a perspective view of the front of one of the cover plates; Fig. 5 is a horizontal section on line 5—5 of Fig. 1; Fig. 6 is a sectional plan illustrating the manner of removing the sash; Fig. 7 is a vertical section on line 7—7 of Fig. 1; Fig. 8 is a vertical section on line 8—8 of Fig. 1, Figs. 5 to 8 being for convenience of illustration drawn on a larger scale than the others.

Referring by reference characters to these drawings, the main frame 1 comprises a top member 2, preferably of box like form, a bottom or sill member 3, and two side members 4, 4, preferably constructed of sheet metal of 18 gage. The side members are of channel form with a central partition 4^a, providing two parallel weight boxes within which move the weights 5 and 5^a for the upper and lower sashes respectively. The open sides of the members 4 are closed by cap plates 6, which are flanged, crimped or folded over the edges of the side members 4 as indicated at 6^a, to afford a firm connection, being preferably secured thereto by spot welding.

Upon the outer face of the window the cap plates are provided with projecting flanges 6^b to furnish masonry guides and means for securing fly screens or shutters. These cap plates are provided with openings 6^c and 6^a for access to the pulleys and weights, which openings are covered by the cover plates 7 upon which the upper and lower sashes 8 and 9 are guided.

The cover plates are provided with vertical ribs 7^a and 8^a which engage with corresponding channels in the edges of the upper and lower sashes, as clearly shown in Fig. the cover plates being secured to the cap plates by any suitable means, such for example as the screws indicated at 10, which engage with the threaded holes provided in bars 10^a. In order to enable the insertion or removal of the sashes or their adjustment when desired the cover plates are divided horizontally on a line slightly above the top of the lower sash when said lower sash is closed, such line of division being clearly indicated at 12 in Figs. 3 and 4, and the cover plates are provided with a plurality of transversely arranged filling strips or bars as indicated at 11, held in place by the screws 10 and some of which may be removed or more added as circumstances may require. When the sashes are pushed clear to the top of the window and one of the lower cover plate sections removed, which enables the sash, when lowered, to be crowded sufficiently to one side to enable it to clear the flanges 6^a of the cap plates upon the opposite side, as indicated in Fig. 6, then, of course, the sash may be readily removed. In the replacement of the sash a reverse operation takes place, and after the sash has been put back into position and shoved to the top of the window, the upper end of the cover plate section is put into place by engaging the projections a carried by the upper sections and sliding it up between the lower end of the sash and the cap plate at an angle and then forcing it back into position to be fastened by the screws. It is thus evident that without the two part or sectional adjustable cover plates the insertion and removal of the sashes would be impossible, as there would not be sufficient side play for the sashes to clear the flange 6^a. The filling strips 11 are placed transversely so as to give

support to the entire width of the cover plates.

The side members 4 are also preferably provided with flanges formed by angle irons as indicated at 13, secured in place by spot weldings and forming wind breaks.

Referring more particularly to Fig. 8, it will be clear that the sill 3 is provided with and upwardly extending flange 3^a which engages a channel formed on the lower edge of the sash. In order to drain away any leakage or condensation from the sash, I provide a drain tube 14^b which leads from the depressed portion 14^a on the inside of the flange or rib 3^a to the outside of the sill. The sill is also provided with an inwardly projecting flange 14, under which the stool of the sill is placed when attaching the trim.

The upper cross member 2 is provided with a flange or rib 2^a, also wedge shape in cross section, which coöperates with the upper edge of the sash to form a tight joint in the same manner described in connection with the sill and lower sash.

I claim as my invention:

1. In a fire proof window construction, a main frame including side members of channel form providing weight boxes, channel shaped cap plates secured to the edge of the side members and having openings for access to the pulleys and weights, upper and lower removable cover plates secured to said cap plates and having guides for sliding sashes and transversely arranged spacing strips interposed between the cap and cover plates, substantially as described.

2. In fire proof window construction, a main frame including side members of channel form provided with weight boxes, channel shaped cap plates, the legs of which are secured to the outer edges of the side members forming projecting flanges, openings in the cap plates for access to the weights and pulleys, and upper and lower cover plates removably secured between the projecting flanges of the cap plates, said cover plates having guides for the sashes.

3. In fire proof window construction, a main frame including side members of channel form provided with weight boxes, channel shaped cap plates, the legs of which are secured to the outer edges of the side members forming projecting flanges, openings in the cap plates for access to the weights and pulleys, and upper and lower adjustable cover plates removably secured between the projecting flanges of the cap plates, said cover plates having guides for the sashes.

4. In fire proof window construction, a main frame including side members of channel form provided with weight boxes, channel shaped cap plates the legs of which are secured to the outer edges of the side members forming projecting flanges, openings in the cap plates for access to the weights and pulleys, and upper and lower adjustable cover plates removably secured between the projecting flanges of the cap plates, and having guides for the sashes, the lower cover plates being longer than the upper cover plates.

5. In fire proof window construction, a main frame including side members of channel form provided with weight boxes, channel shaped cap plates the legs of which are secured to the outer edges of the side members forming projecting flanges, openings in the cap plates for access to the weights and pulleys, and upper and lower adjustable cover plates removably secured between the projecting flanges of the cap plates, and having guides for the sashes, the lower cover plates being longer than the upper cover plates, said upper and lower cover plates having interlocking ends.

6. In fire proof window construction, a main frame including side members of channel form provided with weight boxes, channel shaped cap plates the legs of which are secured to the outer edges of the side members forming projecting flanges, openings in the cap plates for access to the weights and pulleys, and upper and lower adjustable cover plates removably secured between the projecting flanges of the cap plates, and having guides for the sashes, the lower cover plates being longer than the upper cover plates, and having spacing strips interposed between the cap and cover plates, substantially as described.

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

EDMUND H. LUNKEN.

Witnesses:
O. H. Rousseau,
Nellie B. Lunken.