No. 790,215. PATENTED MAY 16, 1905.

E. H. LUNKEN.

WINDOW CONSTRUCTION.

APPLICATION FILED MAR. 17, 1904.

Fig. 1.

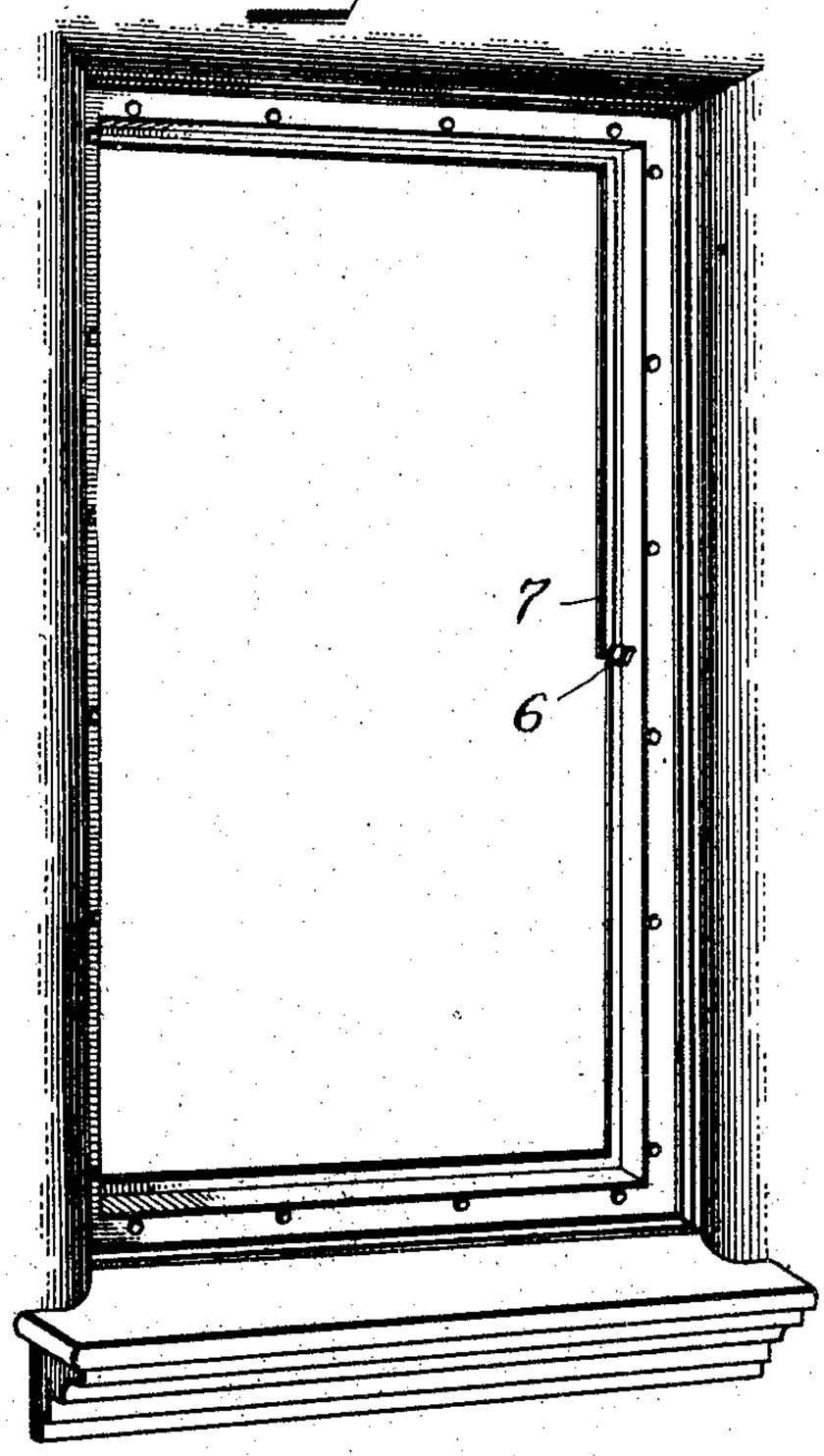


Fig. 2.

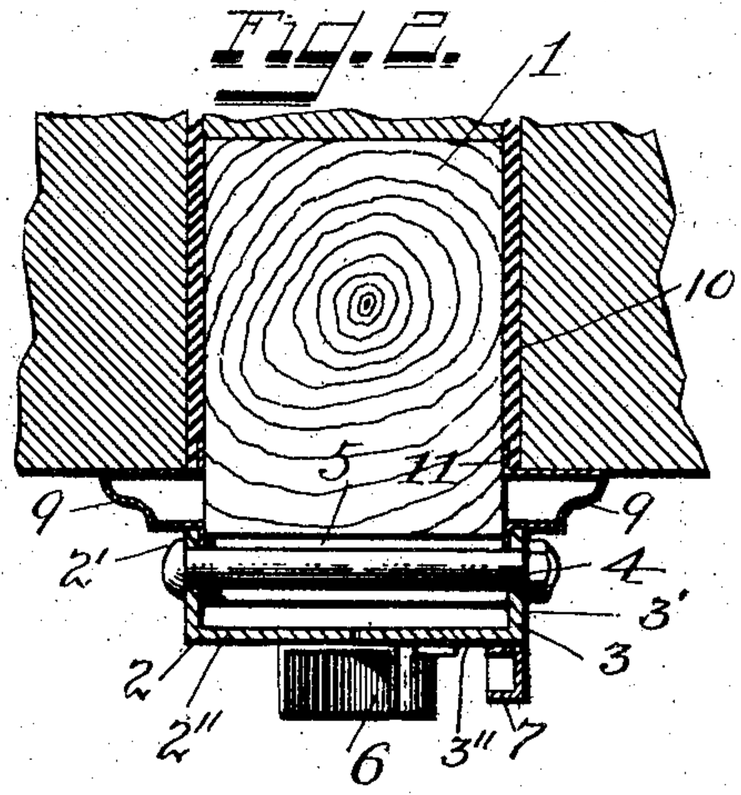


Fig. 3.

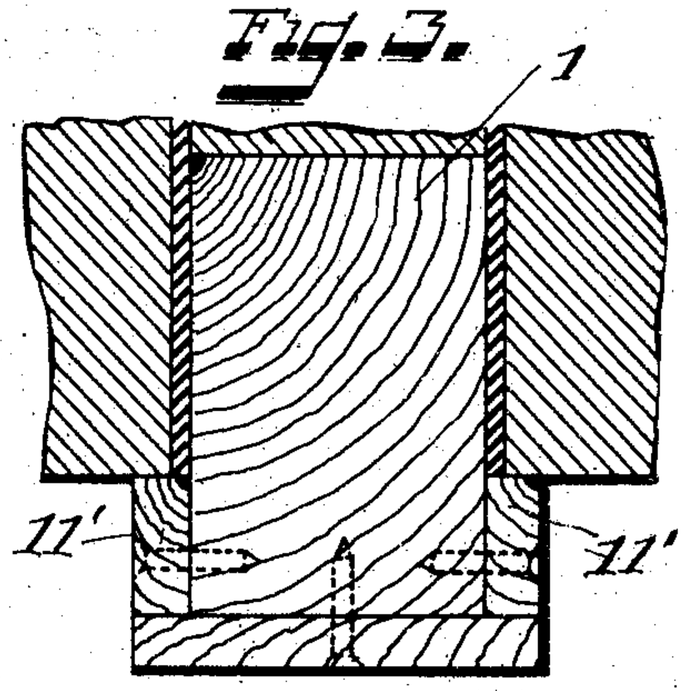


Fig. 4.

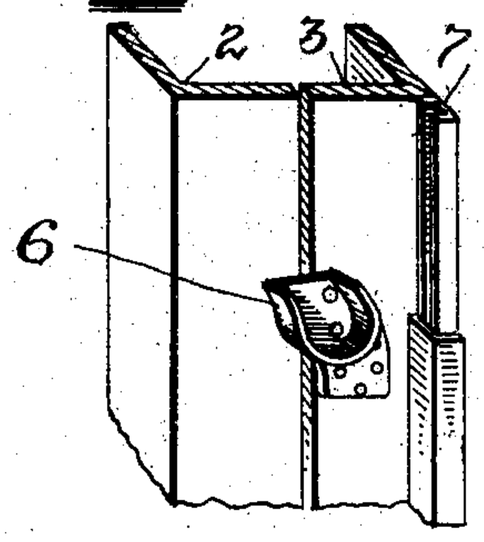


Fig. 5.

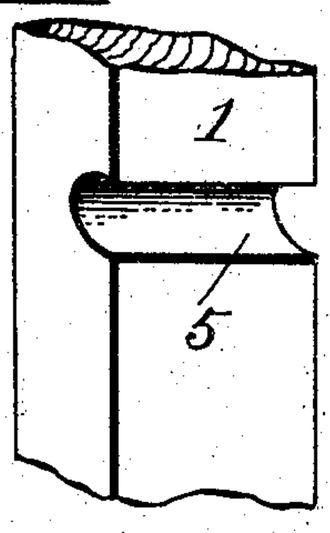
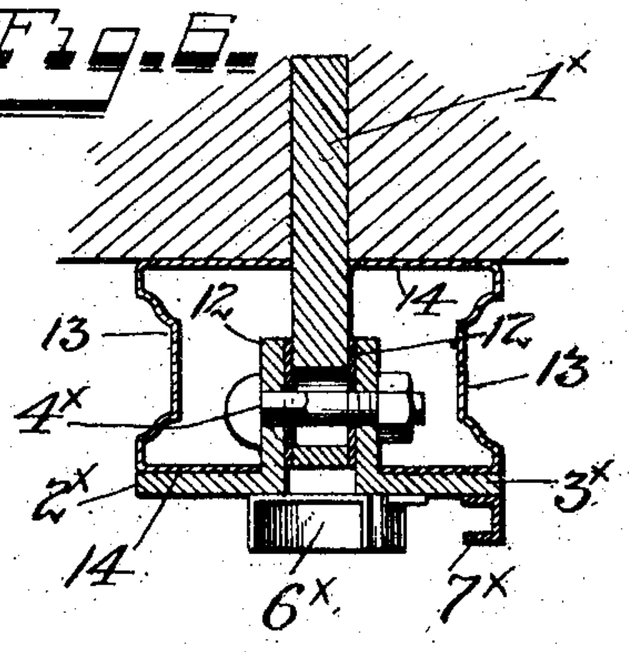


Fig. 6.



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No. 790,215. Patented May 16, 1905.

UNITED STATES PATENT OFFICE.

EDMUND H. LUNKEN, OF CINCINNATI, OHIO.

WINDOW CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 790,215, dated May 16, 1905.

Application filed March 17, 1904. Serial No. 198,682.

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 Window Constructions, of which the following is a specification.

My invention relates to window constructions, and more particularly to that form of window construction disclosed in an application for Letters Patent of the United States, No. 173,118, filed by myself and Bernard J. Hausfeld, as joint inventors, September 14, 1903, in which application a metallic window structure is disclosed in which a main frame carries pivotally a swinging frame, which latter in turn carries the sashes.

While I have shown my invention as adapted more particularly for a window construction of the form shown in the said application, I wish it understood that I do not limit myself in this respect, as certain features of my invention are applicable to other forms of window constructions than that referred to.

My invention consists in the features and combination and arrangement of parts hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view showing one embodiment of my invention. Fig. 2 is an enlarged horizontal sectional view taken at the point above where the inner swinging frame (not shown) is pivoted to the main stationary frame, the said figure showing only one side of a window with the improved frame walled in position. Fig. 3 is a horizontal sectional view similar to Fig. 2, showing the main wooden frame before the metallic sections are applied thereto and with protecting-strips secured to the wooden frame to shield the same while the building is in the process of construction. Fig. 4 is a detail perspective view of the angle-iron section of the frame. Fig. 5 is a detail view in perspective of the main member of the frame. Fig. 6 is a detail sectional view of a modified form of the invention.

One of the objects of my invention is to provide a main frame which will allow adjustment to compensate for the settling of the building, so that in case the frame gets out of true relation to the window-opening it may be changed in position and correctly set.

I have not shown herein the swinging frame, which is supported in the main frame, as my invention does not relate in any way to this part of the window.

The main frame consists of wooden pieces, one of which is shown at 1, Figs. 2 and 3, arranged in the wall of the building and forming the top, bottom, and sides of the frame, the said pieces projecting from the wall into the window-opening. On these projecting portions or edges the other member of the main frame is supported adjustably. This adjustable member in the present embodiment of my invention consists of metallic frame members 2 and 3, angular in cross-section. These are each of substantially right-angular form and have their side flanges 2′ and 3′ arranged against the opposite side faces of the wooden frame, while their other flanges, 2″ and 3″, extend across the inner face of the wooden frame member 1, the said flanges 2″ and 3″ being in the same plane and having their edges substantially abutting each other. The angular frame-sections are clamped to the frame 1 by bolts 4, extending through the side flanges of the angle-iron frames and through openings or recesses 5, formed in the inner edge of the wooden frame members 1, or, if desired, through openings formed through the members near their inner edges. The recesses or openings, as the case may be, are somewhat larger than the bolts, so that in case it is desired to change the position of the metallic frame or member in relation to the wooden members 1 it will simply be necessary to loosen the bolts 4, adjust the metallic frame-sections into proper position, and then tighten the nuts of the bolts, thus securing the metallic portion of the main frame in the desired relation to the window-opening, and in this adjustment it will be understood that the inner swinging or sash-carrying frame will be adjusted also, for the said inner frame is supported on the adjustable metallic main-frame sections, for which purpose the sockets

6 for the pivots of the swinging frame are supported on the angle-iron frame-section 3.

As fully described in the above-mentioned application, stop-strips are employed on the main frame and also on the swinging frame designed to close the space between these frames, and in the present case these stop-strips also are carried, as shown at 7, by the angle-iron frame-section 3.

In order to present a finished appearance, I provide finishing-strips 9 of sheet metal, arranged to fit in the corner between the wall and the frame member 1, one flange of the said sheet-metal strip being held between the flange of the angle-iron frame-section and the side of the member 1, while the other flange, 11, of the finishing-strip fits in a recess in the mortar 10 and against the side of the wooden member 1. These finishing-strips may be of any desired ornamental appearance or they can be entirely dispensed with and the exposed wood between the wall and angles can be covered with a thin sheet of metal, extending from under the angles to cut-out portions in the mortar.

The size of the openings or recesses in the wooden frame 1 in relation to the diameter of the bolts will permit adjustment of the metallic frame members either vertical or horizontal, and it will be noticed that there is sufficient space left between the flanges 2″ and 3″ and the inner face of the frame member 1 to allow this adjustment to be made, and in all positions of the metallic members in relation to the window-opening the finishing-strips will serve to entirely hide the wooden frame members, and the inner projecting portion of these members will be entirely covered by the metal. The metal frame member is made in two parts to facilitate the removal or the placing of the same, the said metal frame being removable as well as adjustable.

While the building is in process of construction, the wooden frame member 1 may be protected against damage by strips 11′, secured to the side and inner faces of the said wooden frame or member, and these wooden strips will not only serve as a shield, but also they will act as a guide for the bricklayers in walling up the frame to the protecting-strips.

I do not wish to limit myself to the use of a wooden frame member 1, as such member may be of metal in the form of a shell or be a solid-metal frame.

Referring to Fig. 6, the member 1× of the main frame, which is walled in the building, is composed of a flat piece, preferably of metal, projecting into the window-opening. The angle frame-sections 2× and 3× are adjustably secured thereto by the bolts 4× passing through the flanges of the said angle frame-sections and through enlarged openings in the member 1×. The socket 6× for the swinging frame and the stop-strip 7× are carried by the angle-section 3×. It will be noticed that this form of the invention, like that first described, includes a walled-in member carrying adjustably another member composed of two angle-sections; but in the present case the free flanges of the angle-sections instead of being directed toward each other are directed away from each other. In this form, however, the projecting part of the walled-in member is embraced by the sections of the other member. Packing 12 is interposed between the angle-iron sections and the member 1× to obtain a tight joint. The bolt 4× has a square portion under its head which fits in a square opening in the flange of the angle-iron section. Finishing-strips 13 are sprung into place between the flanges of the angle-iron sections and the wall, being held in place simply by the spring tendencies of the flanges 14 of the finishing-strips. In both of these forms shown the supplemental frame, composed of angle-iron, is adjustable on the main walled-in member by simply loosening the bolts, adjusting the frame, and then tightening the bolts with the frame in the adjusted position.

Instead of holes being formed in the members 1× recesses or grooves may be formed in the inner edge thereof.

The sockets for the pivots of the main frame and the closing-strips are arranged on the angle-irons, and both may be arranged on the same angle-iron. This is true also of that form of the invention shown in Figs. 1 and 2—*i. e.*, both the pivot-socket and the stop-strips may be placed on the same angle-iron. I do not wish to limit myself to forming the enlarged openings in the main-frame members, as it will be obvious that the secondary frames may be provided with enlarged openings, if desired. Neither do I limit myself to the second main-frame member composed of two sections, as said member may consist of only one section or piece, as shown and described in an application filed by me of even date herewith.

I claim as my invention—

1. In combination in a window construction, a frame member secured to the wall of the building and projecting into the window-opening, and a second frame member and bolts for holding the members together said bolts passing through openings of larger size than the diameter of the bolts to allow adjustment in all directions whereby the second frame member will be supported wholly by the first frame member and adjustably clamped thereto so as to be moved vertically, laterally, or tipped in relation to the first frame member, said second frame member being removable from the first frame member, substantially as described.

2. In combination in a window construction, a frame member secured to the wall of the building and projecting into the window-

opening, a second frame member and bolts for holding the members together said bolts passing through openings of larger size than the diameter of the bolts to allow adjustment in all directions whereby the second frame member will be supported wholly by the first frame member and adjustably clamped thereto so as to be moved vertically, laterally, or tipped in relation to the first frame member, and a swinging frame carried by the said second frame member, substantially as described.

3. In combination in a main frame for a window, a frame member to be secured to the wall of the building and to project into the window-opening, and a second frame member composed of a pair of angle-irons with flanges resting against the outer sides of the frame member first mentioned and bolts each of which passes through the said flanges and through enlarged openings to hold the second frame member, substantially as described.

4. In combination in a window construction, a main frame comprising a frame member to be secured to the building and projecting into the opening, a second frame member adjustably mounted on the first frame member to compensate for settling of the building and carrying a window part or parts and finishing-strips between the adjustable frame member and the wall of the window-opening, said finishing-strips extending over the sides of the projecting portions of the member first mentioned, substantially as described.

5. In combination, the frame to be secured to the wall of the window-opening and having a portion projecting into the said opening, a frame member embracing the projecting portion of the frame member first mentioned, and finishing-strips between the flanges of the embracing member and the side of the said first member, the opposite flanges of the said strips fitting between the sides of the said first member and the wall of the building, substantially as described.

6. In combination, a frame member to be secured to the building and to project into the window-opening, a second frame member composed of sections angular in cross-section, adjustably secured to the projecting portion of the first member, and sockets and stop-strips associated with said angle-iron sections, substantially as described.

7. In a window construction, a main frame composed of a metal frame member walled in and projecting into the window-opening, a secondary frame angular in cross-section adjustably secured thereto by one of its flanges, sockets and stop-strips secured to another flange of the secondary frame, for the reception of a swinging frame, and an angular frame-section adjustable with the secondary frame and supported from the projecting portion of the walled-in member, substantially as described.

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

EDMUND H. LUNKEN.

Witnesses:

BERNARD J. HAUSFELD,

SAML. MOYER.