No. 837,418. PATENTED DEC. 4, 1906.

H. McCANN.

MEANS FOR MOUNTING WINDOW SASHES AND TRIMMINGS THEREFOR IN CONCRETE WALLS.

APPLICATION FILED JULY 26, 1905.

4 SHEETS—SHEET 1.

Fig. 1.

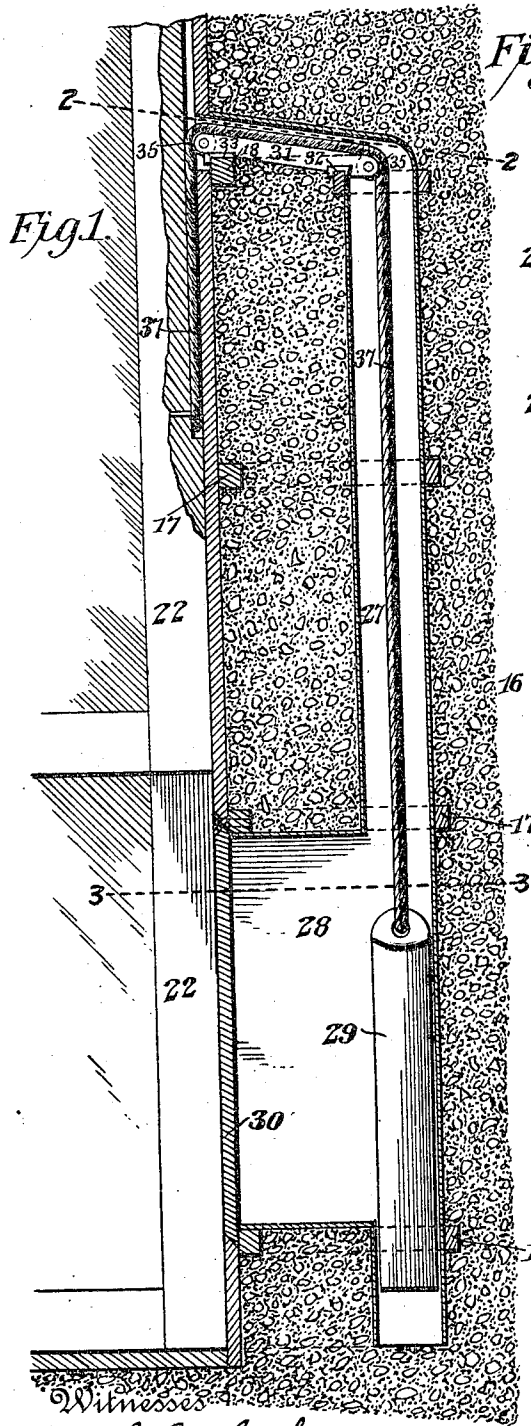


Fig. 2.

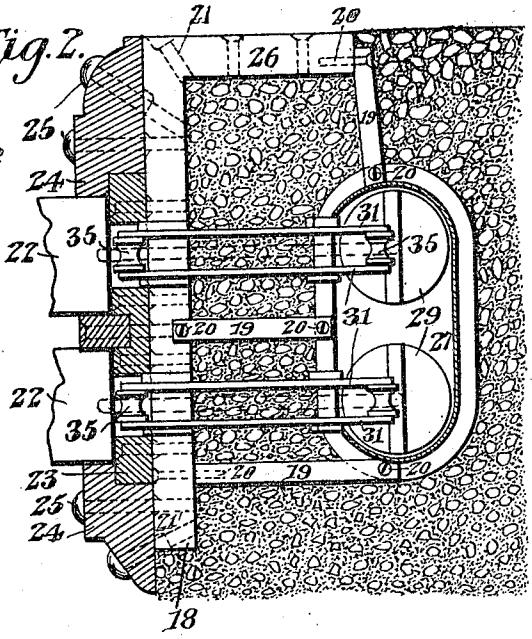
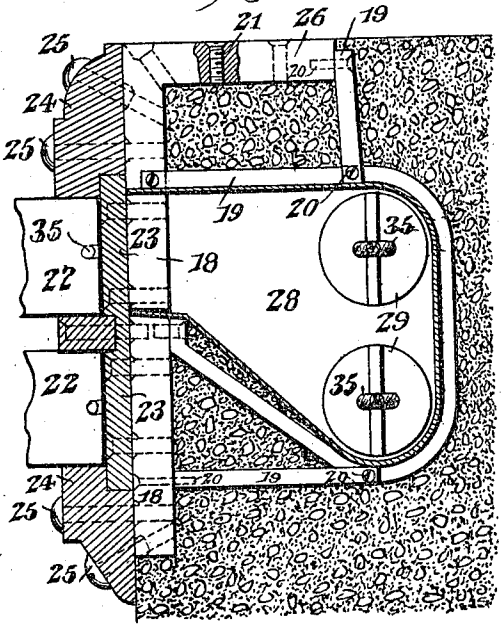


Fig. 3.



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4 SHEETS—SHEET 2.

Fig. 4.

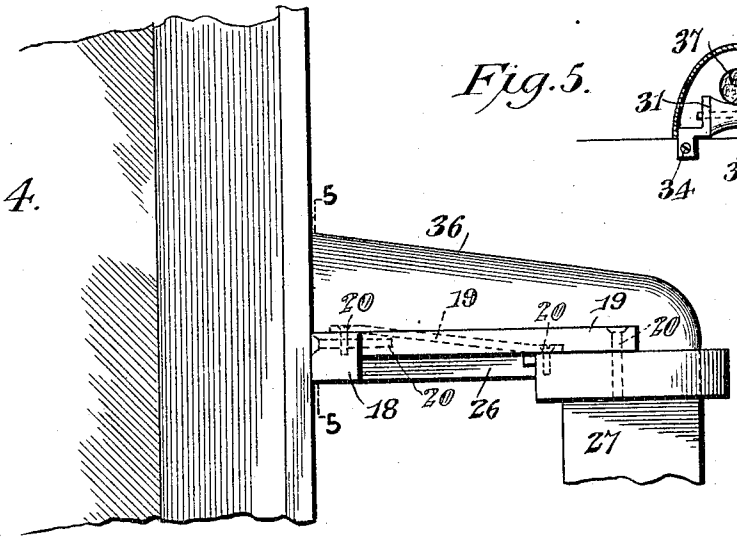


Fig. 5.

Fig. 9.

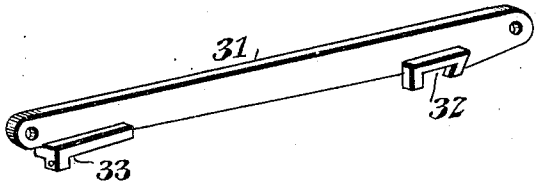


Fig. 6.

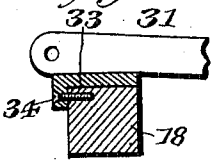


Fig. 7.

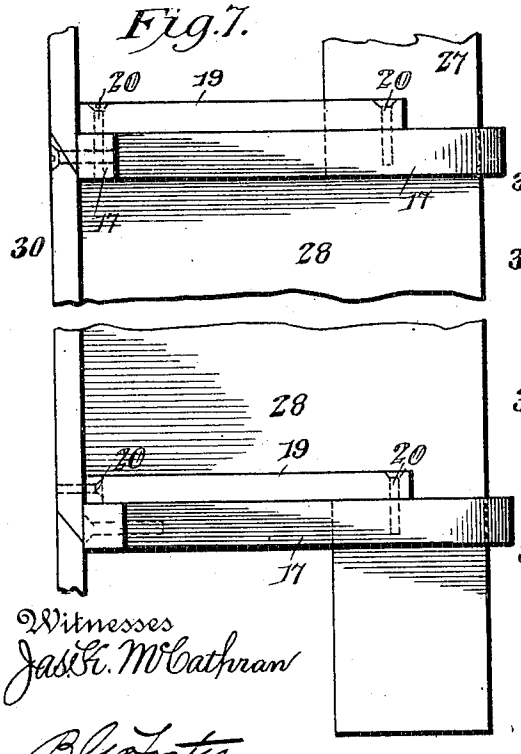
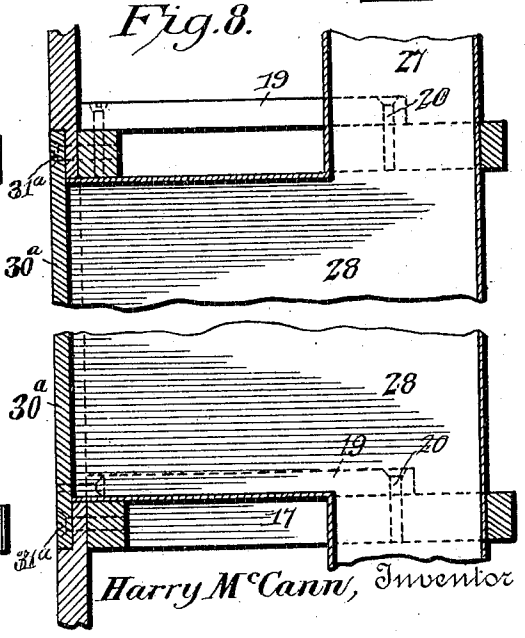


Fig. 8.



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4 SHEETS—SHEET 3.

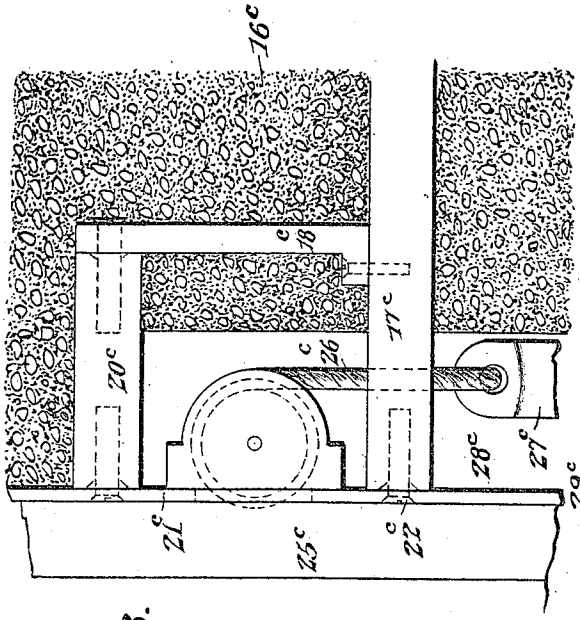


Fig. 13.

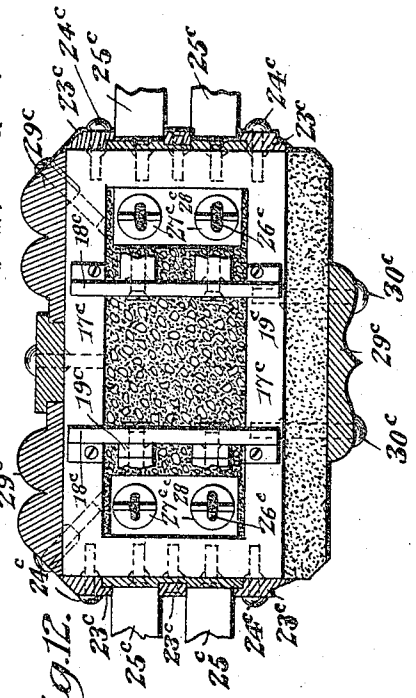


Fig. 12.

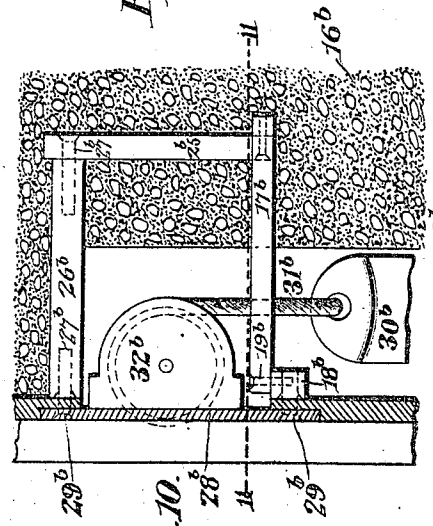


Fig. 10.

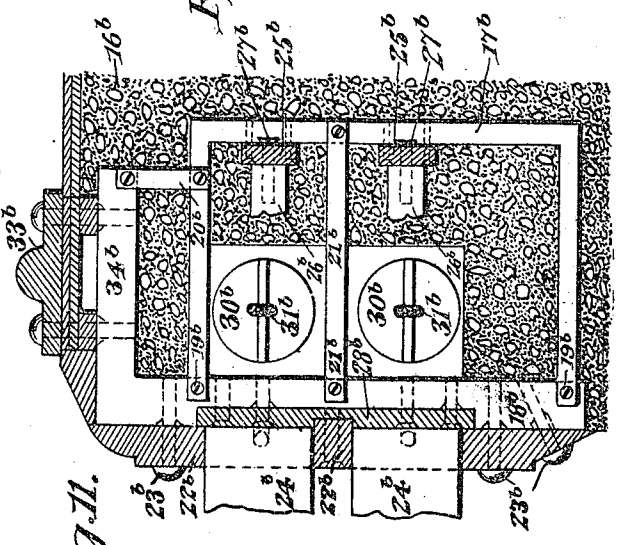


Fig. 11.

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APPLICATION FILED JULY 26, 1905.

4 SHEETS—SHEET 4.

Fig. 15.

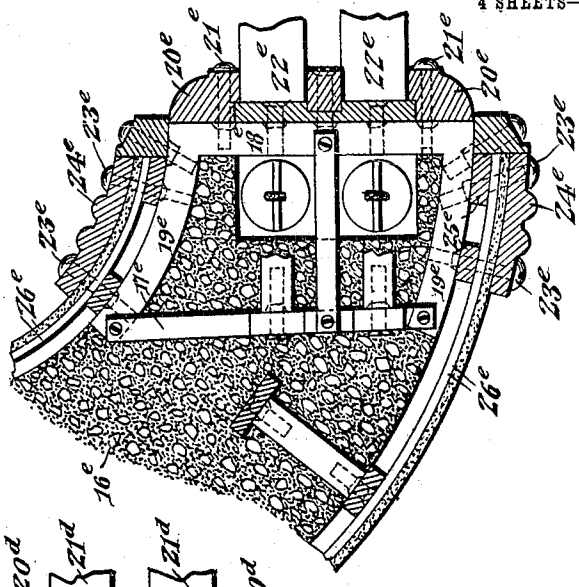
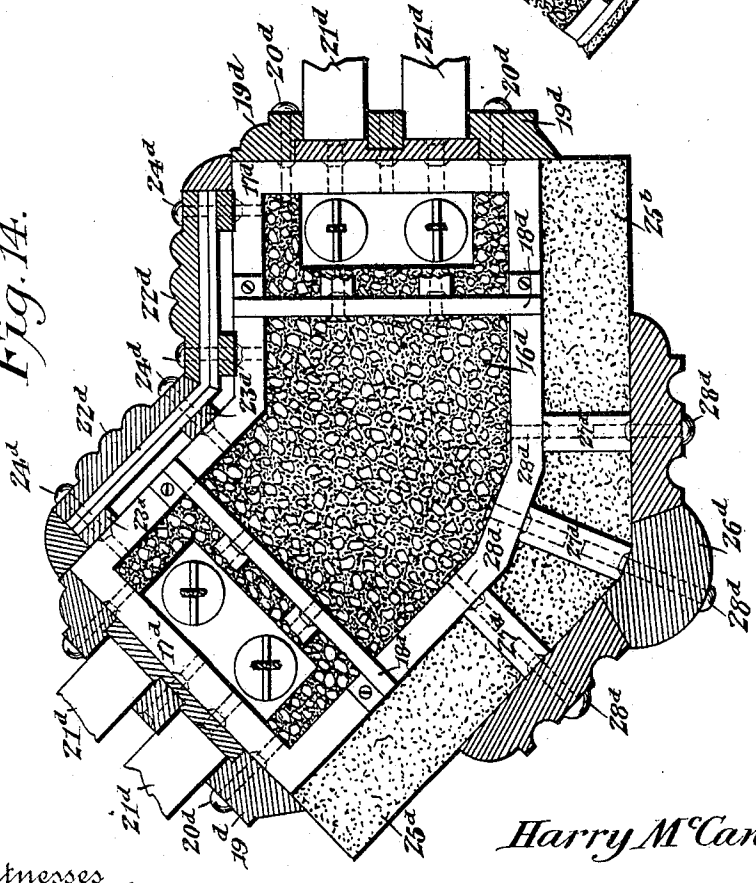


Fig. 14.



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UNITED STATES PATENT OFFICE.

HARRY McCANN, OF HAMILTON, ONTARIO, CANADA.

MEANS FOR MOUNTING WINDOW-SASHES AND TRIMMINGS THEREFOR IN CONCRETE WALLS.

No. 837,418. Specification of Letters Patent. Patented Dec. 4, 1906.

Application filed July 26, 1905. Serial No. 271,362.

To all whom it may concern:

Be it known that I, HARRY McCANN, a subject of the King of Great Britain, residing at Hamilton, in the Province of Ontario and Dominion of Canada, have invented a new and useful Means for Mounting Window-Sashes in and Trimmings Therefor Upon Concrete Walls, of which the following is a specification.

The present invention relates to buildings having concrete or other composite fireproof walls, and more particularly to means for mounting window-sashes therein, together with the necessary fittings and ornamental trimmings.

One of the principal objects is to provide simple means of a novel nature whereby window-sashes may be mounted in a concrete wall without the necessity of employing complete frames of the usual character, the guides, weight-boxings, and the like being firmly anchored to and in the body of the wall.

A further object is to provide, in connection with the above, means whereby the usual fittings, ornamental trimmings, and the like may be firmly fastened in proper position to the wall about the window-openings.

In the accompanying drawings, Figure 1 is a vertical sectional view through a portion of a concrete wall and part of a window, illustrating one embodiment of the invention for mounting the sashes. Fig. 2 is a cross-sectional view on the line 2 2 of Fig. 1. Fig. 3 is a cross-sectional view on the line 3 3 of Fig. 1. Fig. 4 is a side elevation of the upper portion of the mounting. Fig. 5 is a detail cross-sectional view on the line 5 5 of Fig. 4. Fig. 6 is a detail sectional view on the line 6 6 of Fig. 5. Fig. 7 is a view in elevation of a portion of the lower end of the mounting. Fig. 8 is a vertical sectional view of a slight modification of the structure illustrated in Fig. 7. Fig. 9 is a detail perspective view of one of the pulley-supporting bars. Fig. 10 is a vertical sectional view through the upper portion of a slight modification of the invention. Fig. 11 is a cross-sectional view therethrough on the line 11 11 of Fig. 10. Fig. 12 is a cross-sectional view through a mullioned window-pier, illustrating a double form of the structure shown in Figs. 10 and 11. Fig. 13 is a vertical sectional view, on an enlarged scale, through a portion of the same. Fig. 14 is a cross-sectional view through an angular pier for bay-windows and the like, showing a double structure; and Fig. 15 is a cross-sectional view through a structure employed in a curved wall.

Similar reference-numerals designate corresponding parts in all the figures of the drawings.

Referring first to the embodiment illustrated in the first nine figures, the concrete wall is designated by the reference-numeral 16, and embedded therein at suitable intervals adjacent to the window-opening are anchor members in the form of ring-frames 17. Spaced facing members consisting of right-angular strips 18 are also embedded in the concrete with their outer faces substantially flush with the face of the wall, as shown in Figs. 2 and 3, and said strips are connected to the adjacent anchor-frames by means of links 19, the fasteners being preferably in the form of screws 20. Each of the facing-strips is provided with a plurality of threaded sockets 21, adapted to receive the fastening-screws, which sockets may be of any number and disposed in various relations to suit the different requirements of use. Secured to the facing-strips are guides for the usual sashes 22, said guides consisting of base-plates 23 and guide-beads 24, the same being fastened to the strips by screws 25. The angular arms 26 of these strips are intended for the attachment of the ordinary inside trimmings, as will be apparent. Passing through the various anchor-frames 17 is a weight boxing or guide 27, the upper portion of which is tubular in form, the lower portion being enlarged, as shown at 28, and having an open side through which the weights 29 can be inserted or removed. A closure 30 for the open side is provided with beveled ends, which are suitably secured to the adjacent facing-strips. The uppermost anchor-frame and facing-strip is provided with means for supporting the sash and pulleys, and in the present embodiment of the invention these supporting means consist of sets of spaced bars 31, provided at their rear end portions with sockets 32, that receive the upper ring-frame, and at their front ends with lugs 33, that overlap the facing-strip. Through the lugs 33 are passed fastening-screws 34, that maintain the bars in position. Spaced pulleys 35 are journaled to and between the bars of each set, one of these pulleys being located in line with one of the sash-guides, the other

being disposed in the upper end of the weight-boxing. Hoods 36 cover the bars and pulleys and constitute housings for the sash-cord 37, passing over the pulleys and connected to the sashes and weights.

By the structure as disclosed it will be apparent that an efficient sash-mounting is provided which can be properly embedded in a concrete wall during the erection thereof and which will do away with the necessity of a complete metallic or wooden frame for the window, the various fittings and trimmings being secured to the facing-strips, which in turn are completely anchored by the frames, which maintain and reinforce the weight-boxings.

The structure illustrated in Fig. 8 is a slight modification of the lower portion of the closure for the lower portion of the boxing. This closure is shown at 30^a, and instead of having its ends beveled, as in the first-described structure, said ends are angular and are fastened in place by screws 31^a. The remainder of the structure is the same as that already described, and therefore the same reference-numerals have been placed thereon. A further description of this slight change is believed to be unnecessary.

The structure illustrated in Figs. 10 and 11 is in the nature of a modification of the anchor-frame and pulley-mounting. The concrete wall is shown at 16^b, and embedded therein is an anchor member or frame comprising an angular strip 17^b, the terminals of which are secured to a facing member or strip 18^b by screws or other fasteners 19^b. A brace 20^b fastens one end of the strip to an intermediate portion of the anchor-frame, and another brace 21^b also connects the frame and strip. The usual sash-guides 22^b are secured to the facing-strip by means of screws 23^b, portions of the sashes being shown at 24^b. The anchor-frame in this structure includes uprights 25^b, to the upper ends of which are connected horizontal arms 26^b, and to the outer ends of the arms 26^b are fastened by screws 27^b the pulley-boxings 28^b, the lower ends of said boxings being fastened, as shown at 29^b, to the facing-strip 18^b. The sash-weight 30^b in this structure operates, preferably, in a recess formed in the concrete directly in rear of the sash-guides and is connected to the sash by the usual cord 31^b, operating directly over the pulley 32^b in the pulley-boxing 28^b. Inside trimmings for this sash are shown generally at 33^b and are connected to the angular arm 34^b of the facing-strip.

A double structure quite similar to that illustrated in Figs. 10 and 11 is shown in Figs. 12 and 13, wherein a mullioned pier of concrete 16^c is disclosed, containing an angular frame 17^c, acting in the nature of a facing-strip, with partitions 18^c secured thereto and connected by cross-pieces 19^c, constituting, in effect, anchor-frames. These cross-pieces have secured to their upper ends outstanding horizontal arms 20^c, to which are secured the upper ends of the pulley-boxings 21^c, the lower ends being fastened, as shown at 22^c, to the opposite side portions of the strips 17^c. Sash-guides 23^c are attached to said strips by fasteners 24^c, forming runways for the sashes 25^c, which sashes are attached to cords 26^c, that in turn are fastened to weights 27^c. The weights 27^c operate in guide-recesses 28^c, formed in the opposite sides of the pier. Trimmings 29^c, of suitable configuration, can be fastened to the opposite sides of the pier by screws 30^c, engaging the side portion of the facing-strips 17^c.

In angular piers for bay-windows and the like the structure disclosed in Fig. 14 can be advantageously employed. The concrete pier in this embodiment is shown generally at 16^d and has embedded therein a facing-strip 17^d, conforming to the angular disposition of the pier-faces. Anchor-frames 18^d, similar to the anchor-frames illustrated in Figs. 13 and 14, are connected to the strips 17^d. Sash-guides 19^d, secured by fasteners 20^d to the opposite end portions of the strip 17^d, form runways for the sashes 21^d. Trimmings 22^d and furring-strips 23^d are secured to the inner side of the facing-strip by suitable fasteners 24^d, the outer side of said strip being covered by a suitable wall-facing 25^d with embellishments 26^d applied thereto and connected to the strip 17^d through the medium of studs 27^d and screws 28^d.

In the case of a curved wall, which, for instance, is plastered on the inner and outer sides, the embodiment of the invention illustrated in Fig. 15 is used. In this case the wall is shown at 16^e and has embedded therein a suitable anchor-frame 17^e, to which is connected a facing-strip 18^e, having terminal offset arms 19^e, conforming to the curvature of the wall. Sash-guides 20^e, connected to the strip 18^e by fasteners 21^e, form ways for the sashes 22^e, while curved arms 19^e are provided with sockets to receive fasteners 23^e for securing the trimmings 24^e, as well as furring-strips 25^e. The lathing and plaster are shown generally at 26^e.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In a structure of the class described, the combination with an anchor member for em-

bedment in a concrete or similar wall, of a facing member having portions spaced therefrom, connections between the anchor and facing members, and means for securing window-guides to the outer side of the facing member.

2. In a structure of the class described, the combination with an anchor member for embedment in a concrete or similar wall, of a sash-cord-pulley mounting secured to the member, and a pulley journaled in the mounting.

3. In a structure of the class described, the combination with an anchor member for embedment in a concrete or similar wall, said member having means for securing sash-fittings to the outer portions thereof, of a weight-guide associated with the inner portions of the anchor member.

4. In a structure of the class described, the combination with an anchor member for embedment in a concrete or similar wall, of a sash-cord-pulley mounting carried by the member, means for securing sash-fittings to the member, and a weight-guide associated with said members.

5. In a structure of the class described, the combination with an anchor-frame for embedment in a wall, of a facing-strip secured thereto and having fastener-receiving sockets in its outer side, and a weight-guide boxing connected to the inner portion of the anchor-frame.

6. In a structure of the class described, the combination with an anchor-frame for embedment in a wall, of an angular facing member secured to the outer portions thereof and having means in its outer side for the attachment of sash-guides and trimmings.

7. In a structure of the class described, the combination with an anchor-frame for embedment in a wall, of a facing-strip secured thereto and having means for the attachment of sash guides and trimmings, a sash-cord-pulley mounting carried by the frame, and a weight-guide boxing associated with the frame.

8. In a structure of the class described, the combination with an anchor-frame, of a facing-strip having fastener-receiving sockets, connections between the frame and strip, sash-cord-pulley mountings connecting the frame and strip, and a weight-guide connected to the frame.

9. In a structure of the class described, the combination with a concrete wall, of an anchor-frame located therein, a facing-strip embedded in the concrete wall and having an exposed face provided with fastener-receiving means, connections between the facing-strip and anchor-frame, sash-guides secured to the facing-strip, and cord-pulleys mounted thereon.

10. In a structure of the class described, the combination with a ring anchor-frame, of a weight-guide boxing located in said frame, a facing-strip, connections between the facing-strip and frame, and a cord-pulley mounted on the structure.

11. In a structure of the class described, the combination with a ring-frame, of an angular facing-strip having fastener-receiving sockets, links connecting the frame and strip, a weight-boxing associated with the frame, and sash-cord guides mounted on the frame and facing-strip.

12. In a structure of the class described, the combination with a frame, of a facing member having means for the attachment of sash-fittings, a pulley-support connecting the frame and member, and a sash-cord-pulley mounted upon the support.

13. In a structure of the class described, the combination with an anchor-frame, of a facing member having means for the attachment of sash-fittings thereto, a pulley-support connecting the frame and member, and spaced sash-cord pulleys mounted on the support.

14. In a structure of the class described, the combination with an anchor-frame, of a facing member having means for the attachment of sash-fittings thereto, a pulley-supporting bar connecting the frame and member, and secured thereto, and a sash-cord pulley mounted on the bar.

15. In a structure of the class described, the combination with an anchor-frame, of a facing-strip having fastener-receiving sockets whereby sash-guides may be secured thereto, spaced pulley-supporting bars connecting the frame and facing-strip, a weight-boxing associated with the frame, and sash-cord pulleys journaled to and between the ends of the bars.

16. In a structure of the class described, the combination with an anchor member, of a facing member associated therewith, a weight-boxing associated with the members, and a closure for the boxing detachably associated with the facing member.

17. In a structure of the class described, the combination with an anchor member, of a facing member associated therewith, a weight-boxing associated with the members and including a tubular guide having an enlarged lower portion, said enlarged portion being provided with an opening that is located contiguous to the facing member, and a closure for the opening detachably connected to the facing member.

18. In a structure of the class described, the combination with a tubular weight-boxing, of a plurality of spaced anchor-frames associated therewith, facing-strips connected to the anchor-frames, and means for connecting the sash-guides to the facing-strips.

19. In a structure of the class described, the combination with a concrete wall, of a plurality of anchor-frames embedded there-

in, a weight-boxing also embedded in the wall and extending through the frames, a plurality of facing-strips embedded in the wall and having their outer sides substantially flush with the face thereof, connections between the strips and frames, pulleys journaled on the upper frame, sash-guides secured to the facing-strips, sashes operating in the guides, cords operating over the pulleys, and weights secured to the cords and movably located in the boxing.

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

HARRY McCANN.

Witnesses:
GORDON S. WRIGHT,
LINDLEY HARPER.