July 10, 1951 M. OKAZAKI 2,559,656

WINDOW MOUNT FOR CONCRETE STRUCTURES

Filed July 19, 1946

FIG. 1.

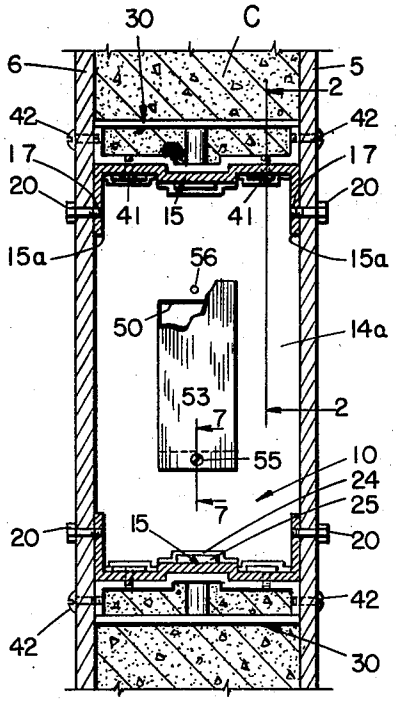


FIG. 2.

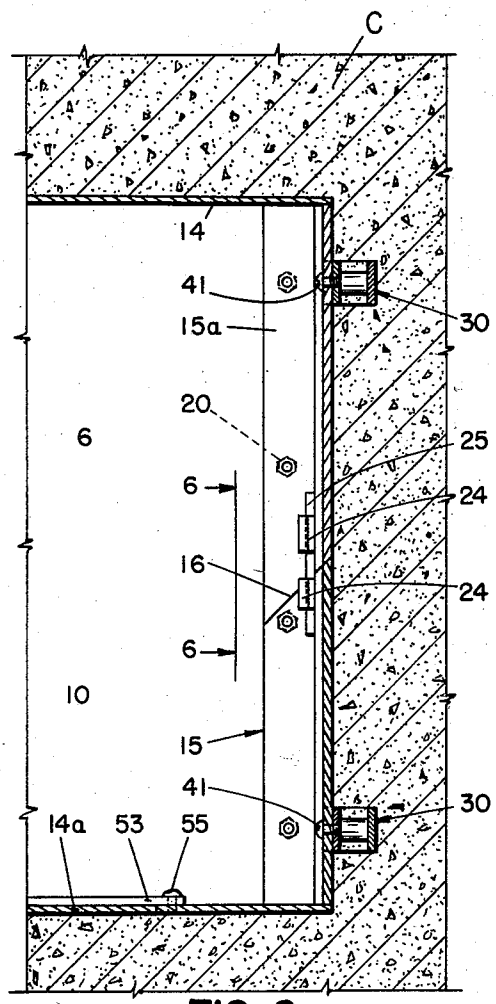


FIG. 3.

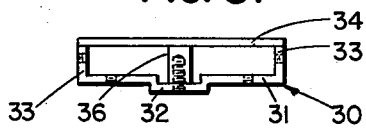


FIG. 4.

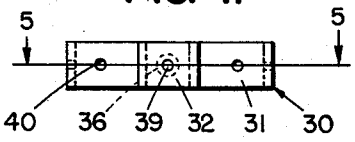


FIG. 5.

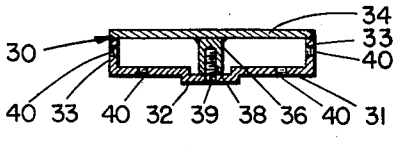


FIG. 6.

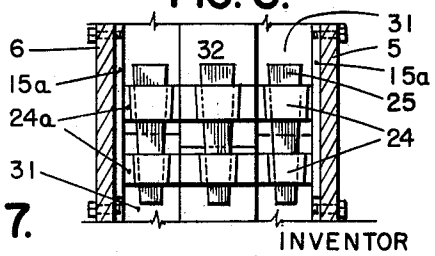
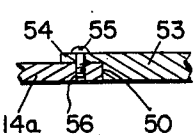


FIG. 7.



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Patented July 10, 1951

2,559,656

UNITED STATES PATENT OFFICE

2,559,656

WINDOW MOUNT FOR CONCRETE STRUCTURES

Miyoji Okazaki, Mesa, Ariz.

Application July 19, 1946, Serial No. 684,860

1 Claim. (Cl. 72—105)

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This invention relates to forms for concrete structures. In its more particular aspects the invention is directed to forms for defining openings in concrete structures.

It is the chief object of the invention to provide a form for defining a window or door opening in a concrete structure, which furnishes efficient hinge mounts for the subsequent mounting of door or window hinges.

Still further more specific objects and corresponding advantages of the invention will become apparent from the following description of a presently preferred embodiment, for which purpose I shall refer to the accompanying drawings, in which:

Fig. 1 is a horizontal section taken through the forms at a window opening;

Fig. 2 is a view taken on line 2—2 of Fig. 1;

Fig. 3 is a top plan view of one of the hinge mounts;

Fig. 4 is a front view of the mount of Fig. 3;

Fig. 5 is a section taken on line 5—5 of Fig. 4;

Fig. 6 is a fragmentary view taken on line 6—6 of Fig. 2; and

Fig. 7 is a fragmentary section taken on line 7—7 of Fig. 1.

In the drawings the numerals 5 and 6 denote a pair of spaced parallel form plates for forming a concrete wall, the poured concrete therebetween being denoted by the reference letter C. The form sheets 5 and 6 form no part of the present invention except as support means for the window form, and no claim is here made to them per se.

To form, for instance, a window opening 10 in the concrete wall I provide side plates 15 and top and bottom plates 14 and 14a, the side plates being comprised of lengths of metal formed into the cross sectional shape best indicated in Fig. 2 and having their abutting end edges oppositely beveled as shown at 16 (Fig. 2). Each of the lengths going to make up a side plate has side flanges 15a provided with screw holes 17 to threadedly receive screws 20 by which the lengths are attached to the form plates 5 and 6. To further secure each pair of adjacent lengths together and in proper alignment I provide on each length, adjacent its beveled edge portion 16, a U-shaped bracket 24 each providing a socket to pass a retaining pin 25. The sockets as well as the retaining pins 25 are wedge-shaped as best shown in Fig. 6, and each bracket has side flanges 24a by which it is attached, as by welding, to its carrying length of form plate.

Each of the hinge mounts, generally denoted

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by the numeral 30, consists of a metal frame having a front or outer wall 31 presenting a U-shaped medial portion 32, end walls 33 and a back wall 34. Medially between the end walls, the front and back walls are additionally reinforced or held in spaced relationship by a cross member 36 which may be welded at its ends to the front and black walls and has a threaded opening 38 registering with an opening 39 in the front wall for the reception of hinge screws not shown. Threaded holes 40 are also provided through the front and end walls to receive attaching screws 41, 42, the threaded holes in the end walls being adapted to receive screw 42 by which the hinge mounts are temporarily secured to the form plates 5 and 6, and the holes in the front wall being adapted to receive attaching screws 41 by which the hinge mounts are temporarily secured to the window form plates.

Top end plate 14 may consist merely of a flat metal plate, although bottom plate 14a consists of a flat plate having a central, rectangular opening 50 (Figs. 1 and 7). A cover plate 53 having relatively thin end portions 54 covers the opening, said ends being secured to plate 14a by screws 55 which pass through openings in plate 53 and thread into openings 56 in plate 14a. Concrete walls are usually poured from the top so that sometimes it does not form properly at the bottoms of window openings and the like. The form construction which I have shown permits of removing the plate 53, after the forms 5 and 6 have been removed, and the pouring of additional concrete mixture through the opening 50.

In assembling the form structure, the hinge mounts are first secured to the appropriate lengths of the window form and then the window form is assembled and secured to one of the form plates 5 or 6, by the screws 20, the hinge mounts being additionally secured to the said form plate 5 or 6 by the screws 42. Then the other form plate 5 or 6 is applied and likewise attached to the window form and to the hinge mounts, after which the wet concrete mix C is poured and allowed to set.

After the concrete has set, the form plates 5 and 6 and the window form 15 are removed, being detached from the hinge mounts 30 so that the latter remain as permanent parts of the building structure and in position to have hinges mounted upon them. The front wall of each hinge mount is, of course, flush with the surface of the window.

Since the hinge mounts 30 are open at their

tops and bottoms, the poured concrete may enter the space between the walls, which concrete becomes an integral part of the wall structure and confines the back wall **34** so that it is impossible for the hinge mount to escape or become loose.

While, in the foregoing, I have resorted to considerable detail of structure and association of parts in describing a particular example of my invention, I wish it to be understood that I have done so merely to make my invention understood and that I do not limit my invention to such details. On the contrary, my invention is only to be limited as appears in the appended claim.

I claim:

A hinge mount for a window opening in a concrete structure comprising a frame having front, back and end walls and being open at its top and bottom to receive concrete, and a medial transverse reinforcing member secured at its respective ends to the front and back walls and presenting a threaded hole in its front end, said front wall having a screw-passing hole registering with the first-named hole.

MIYOJI OKAZAKI.

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