June 11, 1940. G. STEINMETZ 2,204,195

CONCRETE MOLD

Filed March 11, 1937

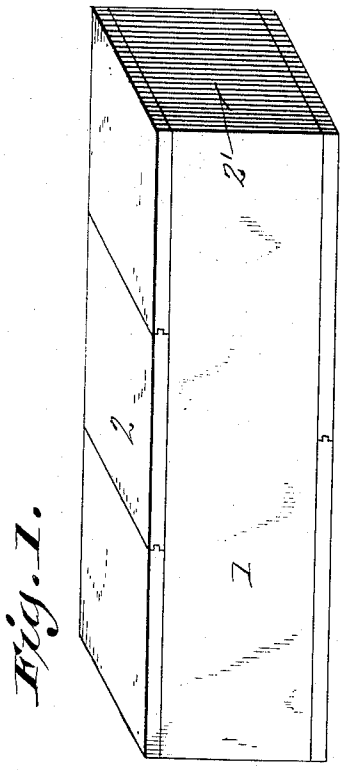


Fig. 1.

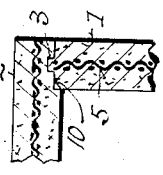


Fig. 3.

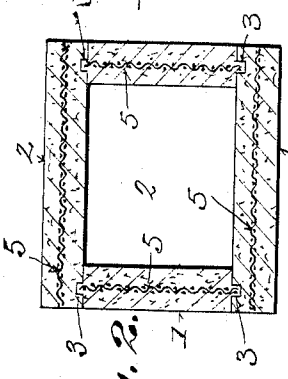


Fig. 2.

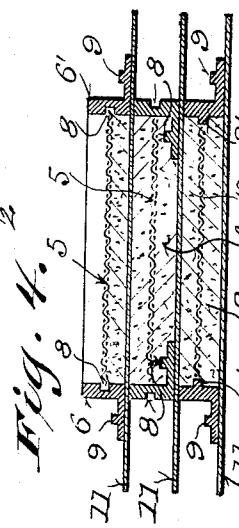


Fig. 4.

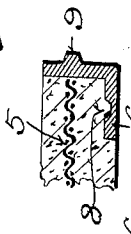


Fig. 5.



Fig. 7.

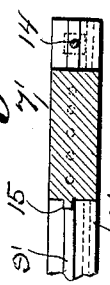


Fig. 8.

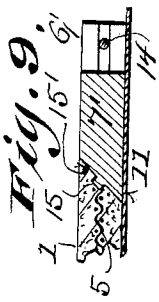


Fig. 9.

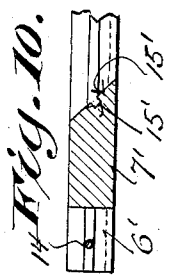


Fig. 10.

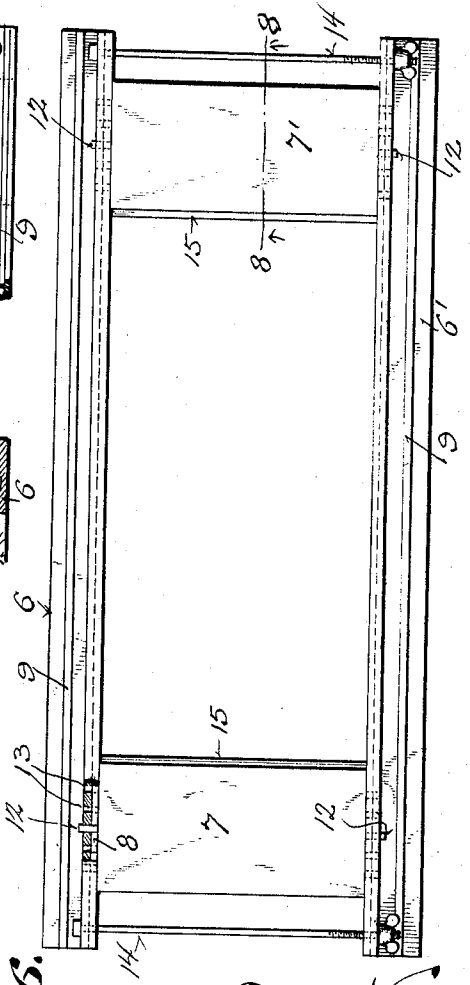


Fig. 6.

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# UNITED STATES PATENT OFFICE

2,204,195

## CONCRETE MOLD

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Application March 11, 1937, Serial No. 130,336

1 Claim. (Cl. 25—121)

My invention refers to concrete vaults for encasing burial caskets, and also the method of manufacturing the same primarily embodying molding a plurality of slabs nested one upon the other, each slab unit being centrally reinforced by wire mesh.

Specific objects of my invention are:

To provide separable, concrete, reinforced slabs adapted to be assembled into a box-like casing having interlocked and sealed seams impervious to moisture;

To provide skeleton frame molds for forming said slabs into predetermined dimensions;

To provide means for adjusting the frame whereby the dimensions may be varied;

To provide means associated with the frame members for forming tongue and grooved edges.

With the above and other minor objects in view, the invention consists in certain peculiarities of construction and combination of parts, as will be hereinafter fully set forth with reference to the accompanying drawing and subsequently claimed.

In the drawing:

Figure 1 represents a perspective view of a vault or casing embodying the features of my invention.

Figure 2 is a cross sectional view of the same.

Figure 3 is a fragmentary corner section of a modified form of tongue and grooved joint between the slabs.

Figure 4 is a cross sectional elevation of a group of mold frames stacked one upon the other, illustrating the molds containing complete slabs with the top mold in the process of construction.

Figure 5 is an enlarged fragmentary, sectional elevation of a mold rail illustrating another form of tongue and grooved elements associated with the rail, said rail being L-shaped, as shown, and having fitted therein a fragment of a completed panel portion.

Figure 6 is a plan view of a skeleton mold frame embodying the features of my invention, with parts broken away to more clearly illustrate structural features.

Figure 7 is a fragmentary edge view of a portion of one of the rail frames.

Figure 8 is a cross sectional elevation of the mold frame, the section being indicated by line 8—8 of Figure 6.

Figures 9 and 10 illustrate cross sections and end sections of the frame showing modified forms of the joint or tongue and grooved corners, the same being of mitre principle.

Referring by numerals to the drawing, 1—1 represent side panels, 2—2 top and bottom panels, and 2' the end panel, the same being fitted and interlocked by tongue and grooved joints 3—3. These slabs or panels, as shown, are provided with centrally positioned wire screen reinforcing sheets 5—5, whereby said panels are insured against breakage, while at the same time, owing to this reinforcement, the panels may be of minimum thickness to effect economy in material, and also to produce a plurality of panels of minimum weight.

As shown in Figure 1 of the drawing, the longitudinal panels may for convenience be formed in sections, with the usual tongue and groove connections therebetween.

Referring more particularly to the method of manufacturing the panels, as best shown in Figures 4 and 6 of the drawing, said panels are molded in shallow frames embodying rectangular, longitudinal, L-shaped rails 6—6', which rails are spaced apart and connected by end strips 7—7', the inner faces of the rails and strips forming the side and end edges of the panel. As best shown in Figures 4 and 6, the top rails 6—6' of the group are formed with longitudinal grooves 8 and corresponding tongues 9 extending from the bottom web of the rails, said bottom web in this instance being shown extended outwardly. The next frame section in Figure 4 is assembled with a bottom web of the rails extended inwardly, but with the grooves 8 being presented at their outside surfaces. Hence, the panel A, formed in connection with this frame, has the usual reinforced wire screen 5, and the corners of said panel are offset slightly at 10, due to the thickness of the rail web. Said offset seat 10, as indicated in Figure 3, forms a double interlocking joint at the corners, which may more effectually insure a water-tight connection between the parts.

The bottom panel of the group, as indicated in Figure 4 of the drawing, is formed with end grooves developed by inwardly projecting ribs 9' of the channel iron. In this instance, the bottom web of the channel iron is extended outwardly, and said web also carries molding ribs 9. The lower panel B thus formed, it will be noted, has the offset 10 eliminated from its bottom wall, and is similar to certain of the panels shown in the cross section of Figure 2.

In building up a group of these panels, it will be noted that the first frame, when properly adjusted, is supported upon a sheet metal bottom plate 11, and after the panel is molded, the upper surface is smoothed off by a suitable leveling tool.

Another panel 11 is then deposited upon the upper surface for the reception of a second mold frame, as shown, and the concrete is then poured to form the next panel, it being understood that after half the thickness of the concrete is poured, the metallic screen sheet is embedded in the top surface thereof, and following this operation of embedding the screen cloth the concrete is poured upon the same to the height of the channel iron, or to the required thickness of the panel. It follows that another metallic sheet 11 is deposited over the completely molded panel, and the operation is again repeated.

As shown in Figure 4, the top mold of the group is illustrated as being partly filled with concrete, with the reinforcing metallic screen 5 embedded into place. The next operation would be to pour concrete upon the screen, whereby this panel is completed, and so on a number of panels can be molded one upon the other by this method. During such molding operation the green or moist panels may have ample time to harden or cure in the process of manufacture. Furthermore, by this method, the panels may be molded cheaply, and when pyramided to the proper desired number, the said panels will remain until properly cured, at which time the molding elements are knocked down and removed therefrom.

Attention is directed to Figure 6 with the mold elements shown therein constituting the rails and strips which may be adjusted back and forth for varying the dimensions of the panel, the strips being held in place by pins 12, which are adapted to enter any one of the series of openings 13 formed in the vertical walls of the metallic rails. After the rails and strips are adjusted, the parts may be firmly secured and clamped together by transversely disposed tie rods 14, which tie rods are provided with standard threads and thumb nut connections, whereby they are tightly drawn together, confining the rails and strips.

While I have shown and described the transverse frame strips as solid members with grooves or tongues therein for molding the ends of the panels, obviously angle iron rails may be substituted therefor.

In Figures 8 and 9 of the drawing, the end strip 7 is formed with projecting tongues 15, while Figure 10 illustrates an oblique edge 15' for forming a mitre joint corner connection, the said edge 15', as shown in Figure 10, being provided with a channel recess 15'', which is adapted to cooperate with the corresponding rib or tongue on the matched panel member.

It will also be noted that owing to the fact the slabs or panels are made separately, they can be shipped flat in knock-down form, whereby economy in space is effected, and these slabs at the point of delivery can be conveniently assembled.

From the foregoing description it will be noted that a simple and economical apparatus for molding, and method of accomplishing the same, is produced, and it will also be noted that the abutting edges of the rectangular box panels may be smoothly matched in some instances, thereby eliminating the tongue and groove connections. In either case, however, the joints shall be sealed with a fluid solution of cement.

I claim:

A concrete mold comprising, an open frame including longitudinally extending, spaced parallel side rails, and transversely extending end strips disposed between the rails and adjustable toward and away from one another, said rails being provided with a plurality of spaced openings adjacent the opposite ends thereof, pins carried by the end strips adapted to be inserted in any selected openings of the rails, and tie rods connecting the side rails together beyond the end strips for holding the end strips in adjusted position against movement.

GEORGE STEINMETZ.