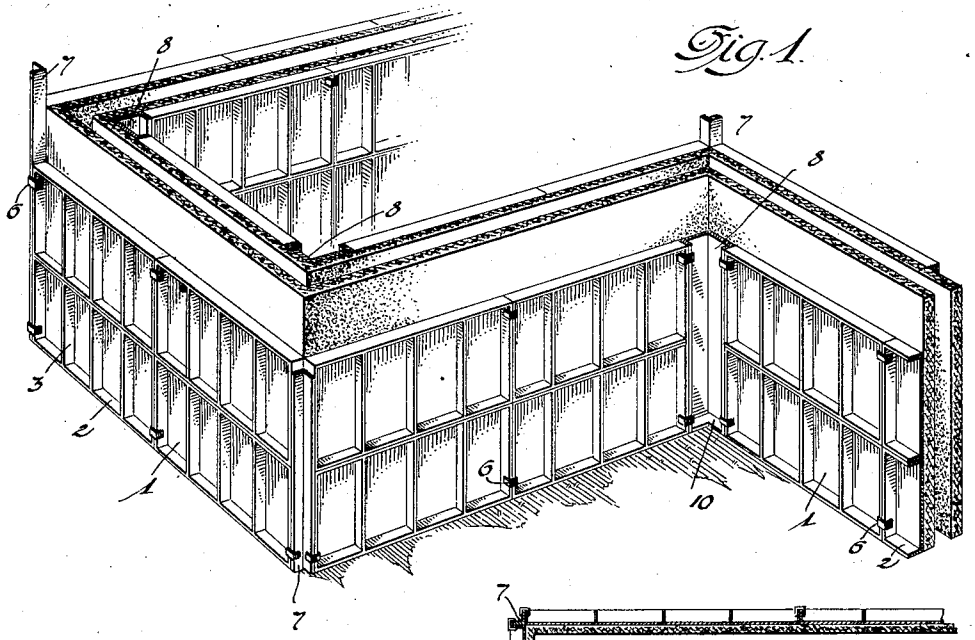
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C. HUTCHINS

WALL MOLD

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Fig. 1.



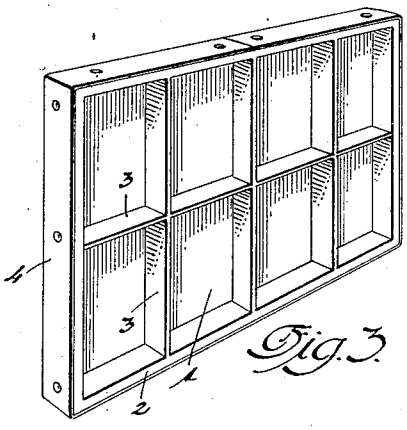


Fig. 3.

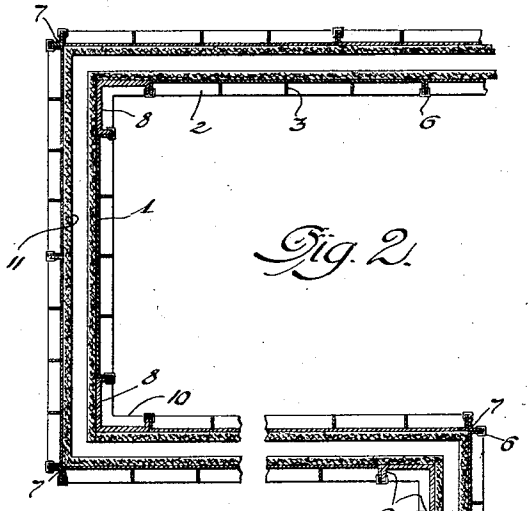


Fig. 2.

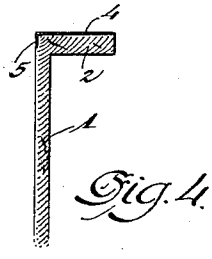


Fig. 4.

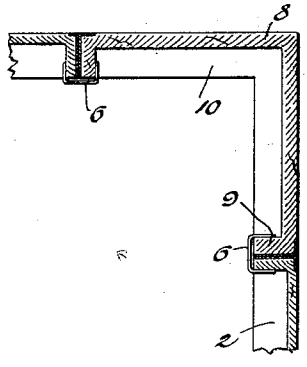


Fig. 5.

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C. HUTCHINS

WALL MOLD

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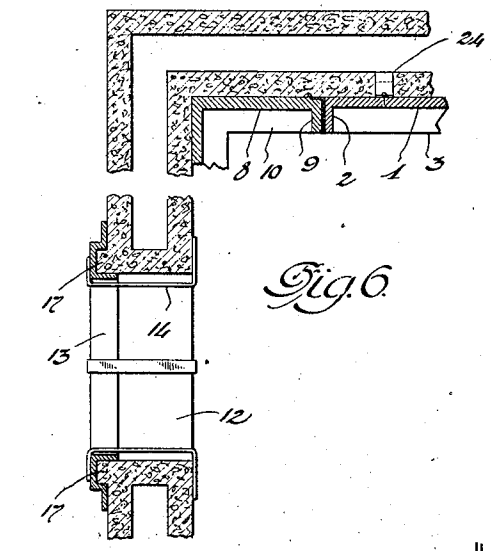


Fig. 6.

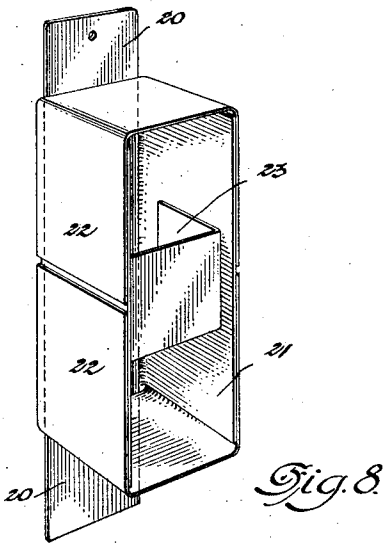


Fig. 8.

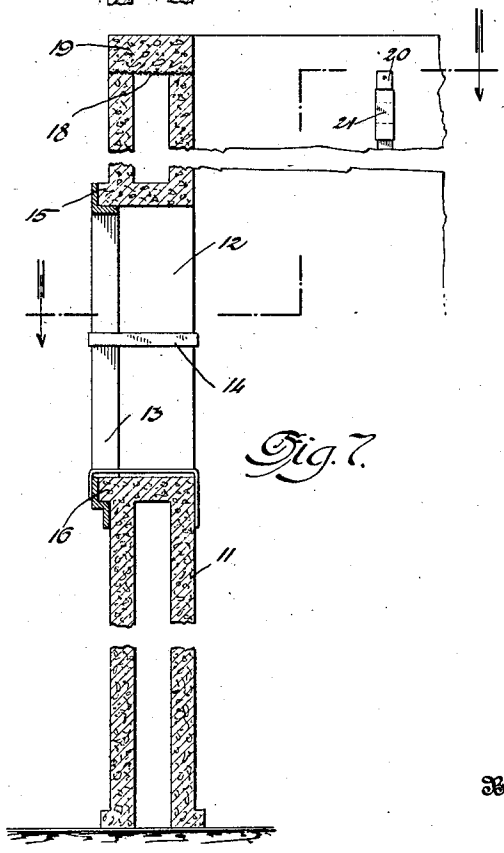


Fig. 7.

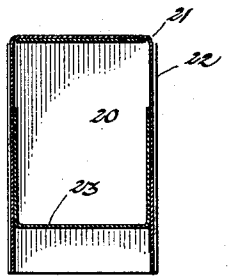


Fig. 9.

Inventor:

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Patented Dec. 13, 1927. 1,652,480

UNITED STATES PATENT OFFICE.

COLIN HUTCHINS, OF LEAMINGTON, ONTARIO, CANADA.

WALL MOLD.

Application filed November 1, 1924. Serial No. 747,206.

This invention relates to wall molds that may be advantageously used for the formation of concrete walls or walls made of any plastic material, the wall molds being designed for forming the outer faces of a wall and cooperating with interior molds or cores in the production of a hollow wall; the interior molds or cores forming the subject matter of a companion application filed under even date.

The primary object of this invention is to provide a series of panel mold members that may be easily and quickly assembled or built up to form a strong and rigid structure into which concrete or other plastic material may be poured or otherwise deposited, tamped or otherwise packed, and safely held until the concrete or plastic wall has set or cured at which time the panel mold members may be readily removed and again used. Associated with these panel mold members are corner or angular members which permit of the mold members being used in the formation of angular walls.

Another object of this invention is to provide novel collapsible joists or girder cores for producing hoists or girder recesses in a molded wall and into which recesses the ends of the joists or girders may be placed after a wall is completed.

A further object of this invention is to provide a form that may be mounted in wall openings for the formation of lintels, sills, rails or other door and window frame members. As a matter of fact the opening forms may be used in the production of any kind of ornamentation to an opening.

The above are a few of the objects that may be obtained by my building forms, and reference will now be had to the drawings, wherein

Figure 1 is a perspective view of angular hollow concrete walls formed in part by my exterior panel mold members;

Fig. 2 is a horizontal sectional view of the same;

Fig. 3 is a perspective view of a panel mold member;

Fig. 4 is a vertical cross sectional view of a portion of the same;

Fig. 5 is a horizontal sectional view of a corner or angle coupling member to which panel mold members may be connected;

Fig. 6 is a horizontal sectional view of a portion of a hollow wall showing opening forms in connection with a wall;

Fig. 7 is a vertical sectional view of the same showing a joist core;

Fig. 8 is a perspective view of a detached collapsible joist core, and

Fig. 9 is a horizontal sectional view of the same.

To put my invention into practice, I use a multiplicity of panel mold members in the formation of a hollow concrete wall of extensive dimensions and each panel mold member is preferably of such size that it can be conveniently handled by workmen and any part of the mold members rapidly assembled for a wall of desired dimensions. Each mold member comprises a mold board 1 provided with a frame 2 having webs 3 suitably connected to the mold board and to the frame so that there is a rigid panel-like mold member. The member is preferably made of wood and to strengthen and reinforce the same the frame 2 is provided with a metallic binder strip 4 having a flange 5 embedded in the mold board 1 and flush with the face of said board. The metallic binder strip 4 may be secured to the frame 2 by any suitable fastening means and with the frame made of wood it is protected to a great extent when being handled incident to the formation of a wall mold structure.

The panel mold members are adapted to be placed edge to edge or one upon another and with said mold members in abutting relation channel shaped clips 6 may be fitted over the abutting edges of the mold members to hold the mold members in alinement and assembled during the formation of a wall.

When an angular or irregular wall is to be formed which necessitates placing the panel mold members at an angle relative to one another, I use outer coupling members 7 and inner coupling members 8, the outer coupling members being in the form of angle bars placed in the angle formed by the ends of two mold members and connected thereto by the clips 6, as best shown in Figs. 1 and 2. These same figures show the inner coupling members as being in the form of angle bars provided with flanges 9 that facilitate installing the clips 6 in connecting mold members to the coupling members. These inner coupling members may have bottom flanges or feet 10 and the inner or outer coupling members may be placed in superposed relation should the height of a wall necessitate more than one inner or outer coupling member at a corner.

With the panel mold members placed in parallel relation a suitably pressed concrete or other plastic material may be poured between the mold members to form a concrete wall 11 and by using inner mold members or collapsible cores the wall 11 may be made hollow.

The panel mold members or other forms may be used to provide a concrete wall with an opening 12, as a window or door opening and in order that the opening 12 may be provided with a lintel, sill, side rails or other interior or exterior ornamentation, a frame or form 13 may be mounted in the opening 12 and retained therein by side and end channel clips 14 which engage the inner side of the wall 11 and the outer side of the frame or form 13. The frame or form 13 has its upper and lower ends shaped to receive concrete for the formation of a lintel 15 and a sill 16, while the sides of the frame or form 13 are shaped to receive concrete for the formation of rails 17. The sill 16 may be formed first, then concrete poured into the sides of the frame or form to produce the rails 17 and then the lintel 15 formed.

Should the concrete wall 11 be of hollow construction the top of said wall may be closed by using the usual tar paper and a metallic screen 18 for supporting a concrete cap or closure 19 on the wall.

To provide clearance for the ends of joists, girders, beams or other floor or roof sustaining members, I employ collapsible cores which may be temporarily secured to faces of the panel mold members. Each core comprises a back plate 20, a long channel member 21, end channel members 22, and an intermediate channel member 23. The back plate 20 extends through the long channel member 21 and the end channel members 22 are placed on the ends of the long channel member 21 to retain the plate 20 against the back of the long channel member 21, and the channel member 23 is fixed in the long channel member 21 as a spacer against the walls of the channel member 21 opposite the ends of the channel members 22. The back plate 20 is adapted to be secured to a mold member to hold the collapsible core in position for the formation of a recess or opening 24 in the inner face of the concrete wall. After the wall has been formed the back plate 20 may be withdrawn and the collapsible core removed. If the concrete wall is of hollow construction, the removal of the core is facilitated by reaching into the wall and pushing outwardly on the core, or in some instances it may be preferable to remove the core by shifting it inwardly and then upwardly out of the hollow concrete wall.

In view of the drawings, it is thought that the manner of assembling the mold members for the formation of a wall will be apparent without further description, and while in the drawings there are illustrated preferred embodiments of my invention, it is to be understood that the structural elements are susceptible to such variations and modifications as fall within the scope of the appended claims.

What I claim is:—

1. The combination of mold members arranged in angularly disposed planes and having marginal flanges, angular coupling members having flanges abutting the flanges of the mold members, and clips connecting contiguous flanges of coupling members and molds.

2. The combination of a wall mold member, a back plate secured to said wall mold member, and a collapsible core supported from said back plate and adapted to form a recess in a wall formed at said mold member.

3. The combination called for in claim 2, wherein said collapsible core includes channel members arranged to form an oblong recess.

4. The combination called for in claim 2, wherein said back plate has lateral members resulting in a channel formation and said core includes channel members embracing said lateral members.

In testimony whereof I affix my signature.

COLIN HUTCHINS.