

C. H. HARRIS.
MOLD FOR WALLS.
APPLICATION FILED JAN. 23, 1914.

1,108,073.

Patented Aug. 18, 1914.

2 SHEETS-SHEET 1.

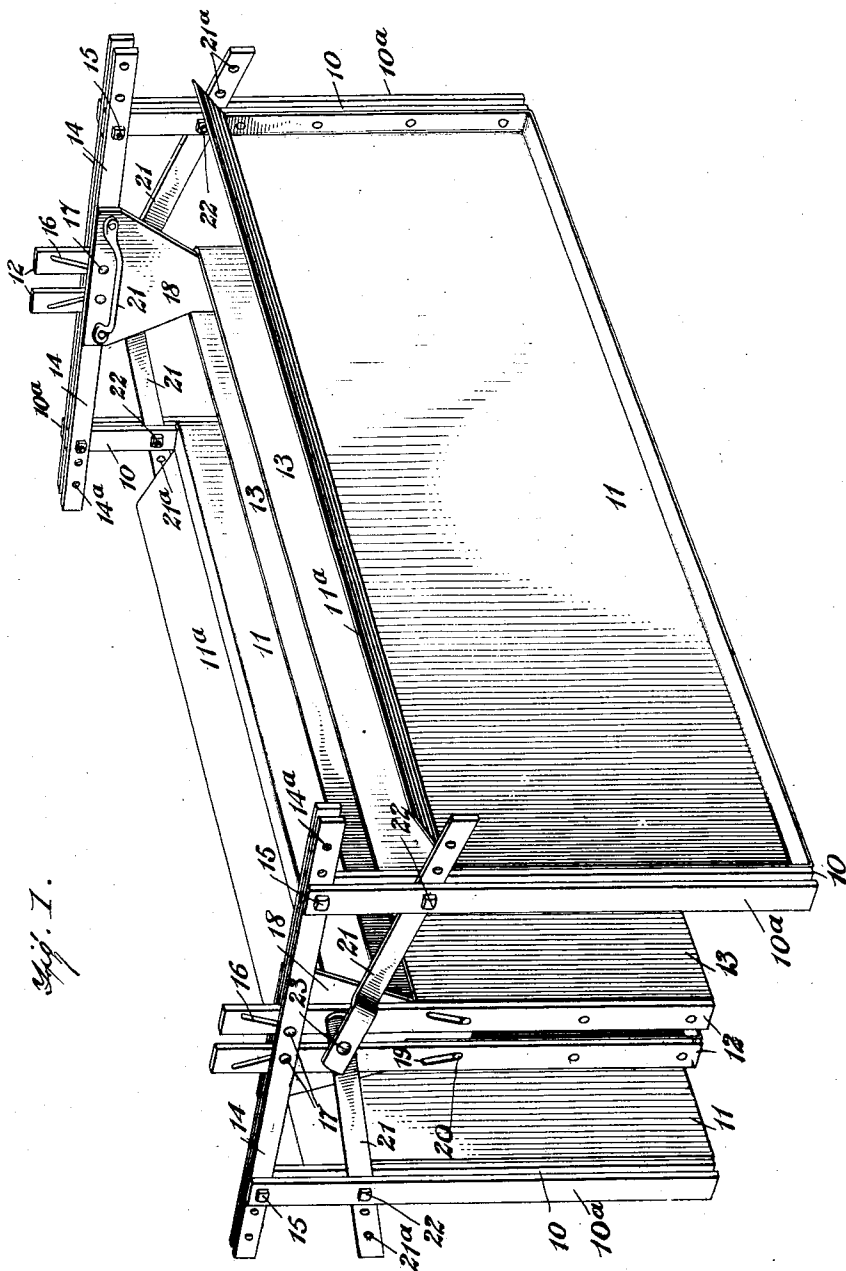


Fig. 1.

WITNESSES

L. H. Schmidt
J. M. Cluliff

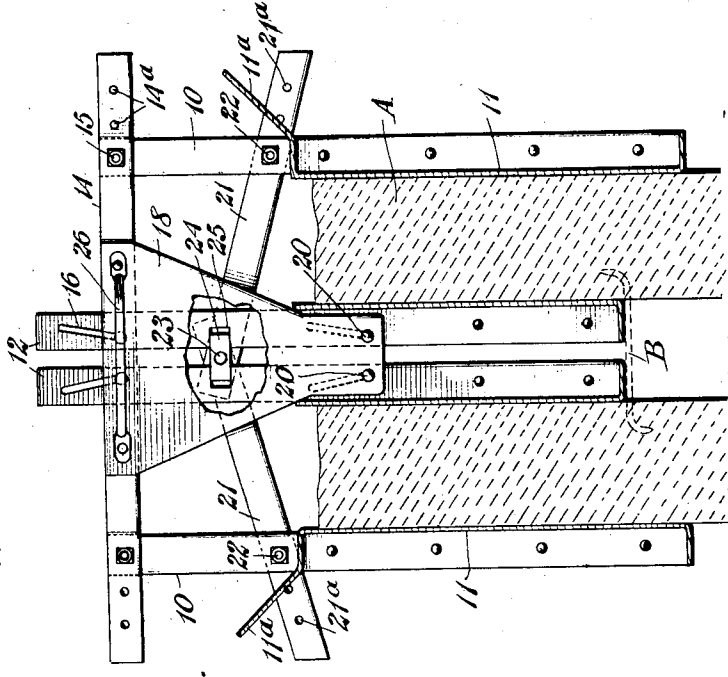
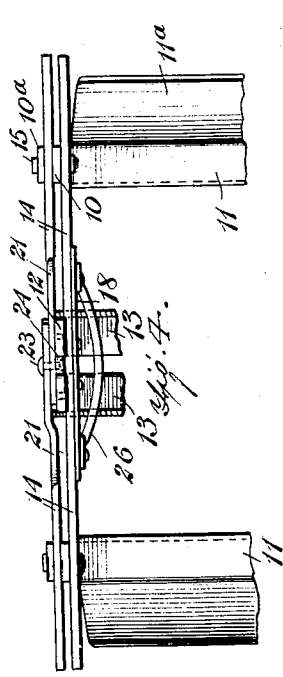
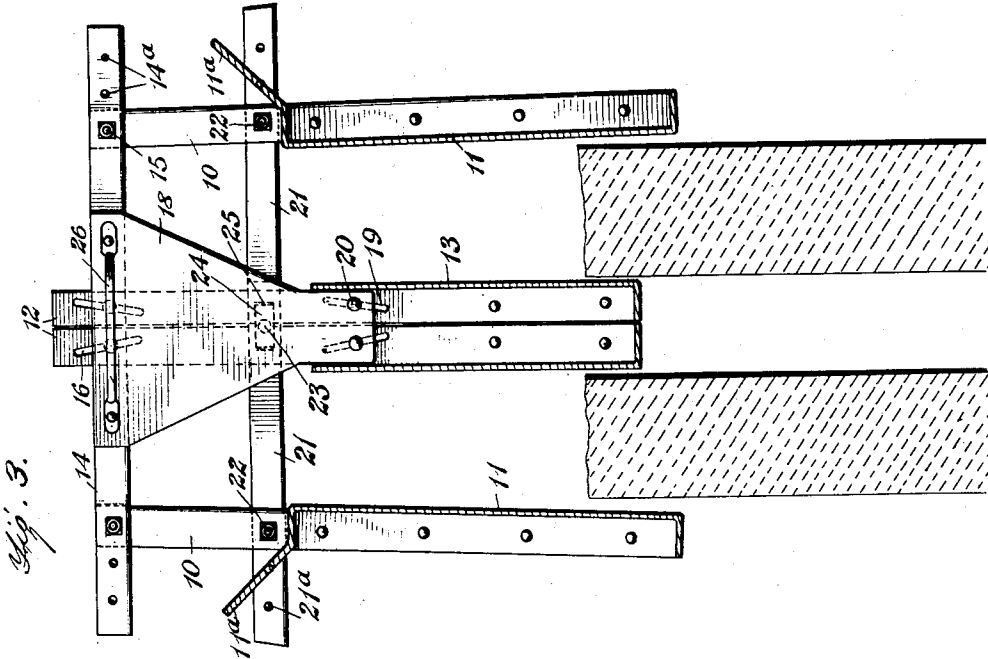
INVENTOR

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1,108,073.

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2 SHEETS—SHEET 2.



WITNESSES
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Fig. 2.

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UNITED STATES PATENT OFFICE.

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MOLD FOR WALLS.

1,108,073.

Specification of Letters Patent.

Patented Aug. 18, 1914.

Application filed January 23, 1914. Serial No. 813,878.

To all whom it may concern:

Be it known that I, CHARLES H. HARRIS, a citizen of the United States, and a resident of Kenosha, in the county of Kenosha and State of Wisconsin, have invented a new and Improved Mold for Walls, of which the following is a full, clear, and exact description.

An object of my invention is to provide a wall mold having members so formed and arranged that upon the mold being placed in position, the members will automatically assume the proper positions to form the desired space for the material to be molded, and upon lifting the mold the members will automatically be given a separating lateral movement.

A further object of my invention is to provide a mold for walls in which molding elements are so mounted that upon the mold being lifted after the wall or wall section is formed, a vertical gravitational movement of inner members of the mold relatively to the outer members will cause a relative separating movement of the outer members.

The invention consists in a mold having the novel construction and arrangement hereinafter particularly described.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of a wall mold constructed in accordance with my invention; Fig. 2 is a transverse vertical section showing the mold in use; Fig. 3 is a view similar to Fig. 2, showing the mold with the parts in the position they assume when the mold is being lifted from the wall, or being placed in position thereon; and Fig. 4 is a fragmentary plan view with parts being broken out.

In constructing a wall mold in accordance with the illustrated example, side members are provided, here shown as consisting of end hangers 10, between which are secured suitable facing members, here shown as consisting of metallic sheets 11. A core is provided to form a hollow wall, said core consisting of end hangers 12 and facing sheets 13, the latter being preferably of metal. The sides and the core sections are suspended from lift frame elements, there being transverse supporting bars 14 at each end of the mold, each cross bar con-

sisting of spaced members between which the upper ends of the end hangers 10 and 12 are received. The hangers 10 are pivotally secured to the cross bars 14 by pivot bolts 15 on which the sides may swing.

The core sections are mounted for vertical movement in the frame elements, and are arranged to collapse toward each other when the mold is lifted. The connection between the upper ends of the hangers 12 of the mold sections and the cross bars 14 is effected by means of slots and pins, there being oppositely inclined slots 16 in the ends 12, and pins 17 extending through said slots and through the cross bars. To give further guided movement to the mold sections plates 18 are fixed to the cross bars 14, and depend therefrom, and a slot and pin connection is effected between each core section and the plates 18, there being oppositely inclined slots 19 in the ends 12 below the slots 16, and pins 20 in fixed relation to the plates 18 extend into the slots 19. Thus parallel movement of the core sections toward and from each other may be produced in the collapsing and expanding of the core.

I provide means to cause an outward swinging of the sides 10, 11 by a relative vertical movement of the core sections. In the illustrated example the said means consists of toggle links 21, which are pivotally secured to the sides by means of bolts 22, the said toggle links being received between the end hangers 10 and strips 10^a corresponding in general form with said hangers and disposed outside of the links 21, the strips 10^a being secured at their upper ends by the pivot bolts 15 for suspending the hangers 10. To effect adjustment between the swinging sides and the ends of the toggle links, the latter are provided with a series of holes 21^a through any of which the pivot bolts 22 may be passed. The toggle links are pivotally connected also with the hangers 12 of the core sections, the connection being effected in the instance shown, by the pin 23 which connects the overlapping ends of the toggle links 21, and passes also through blocks 24 which are seated in opposed recesses 25 formed in the hangers 12 of the core sections. The construction is such that the core sections may have a parallel movement toward and from each other by reason of the blocks 24 and recesses 25, and there is also a pivotal movement of the toggle links on their pins 23. To facili-

tate the lifting of the mold, handles 26 may be provided, these being conveniently secured to the plates 18.

In using my improved mold the workmen will lift the same and drop it in the position where the wall is to be molded, a portion of the wall being indicated by the letter A. So long as the mold is suspended by the handles 26 or otherwise, the core sections 12, 13, will assume the collapsed position in close relation to each other, as indicated in Fig. 3. When the mold is lowered, the core will be arrested by striking against the base on which the wall is to be erected, and later, a downward movement of the core will be arrested by transverse reinforce members, ties, or anchors such as indicated at B. The arrest of the core will relieve the side molds 10, 11 of the weight of the core, and there will be a relative vertical movement of the core and sides, permitting the sides to move toward each other and assume the parallel position indicated in Fig. 2. At the same time the relative upward movement of the core sections will cause the same to be expanded by reason of the described slot and pin connections. The material to be molded may now be deposited in the mold between the respective sides and the side sections of the core. The upper portions of the metallic sheets 11^a of the sides are preferably deflected outwardly to act as guards against the splashing of the concrete or other material. The wall having been molded to a height within the capacity of the mold, and having been permitted to set sufficiently, the mold is lifted, whereupon the vertical movement of the core sections relatively to the frame will result in causing a collapsing movement of the same toward each other, by reason of the slot and pin connection, and at the same time the relative downward movement of the core sections will act on the

toggle links 21, straightening out the same, which will swing the side molds 10, 11, on their pivots 15. It will thus be seen that the lifting of the mold causes the core sections to collapse toward each other, and the side molds to be swung outward clear of the wall.

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

1. A mold, comprising frame elements, sides suspended from the said frame elements and mounted for movement toward and from each other, a core formed of side sections movable toward and from each other, said sections having guided vertical movement on the frame members, and links pivotally connected with the core sections and with the suspended sides.

2. A mold, comprising frame elements, sides pivotally hung on said frame elements, a core formed of gravitationally collapsible side sections having guided movement on the frame elements, and links pivotally connected with the core sections and with the pivoted sides.

3. A mold, comprising frame elements, sides pivotally mounted on said frame elements, a core formed of side sections vertically slidable on the frame elements, members in fixed relation to the frame elements, connections between said fixed members and the core sections, said connections consisting of oppositely inclined slots and pins in said slots, and toggle links pivotally connected with the pivoted side sections and pivotally connected with the core sections.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES HENRY HARRIS.

Witnesses:

WM. RAIMAN,
CHAS. H. PFENNIG.