T. LIGHTBODY.

MOLD FOR CONCRETE WALLS.

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1,123,769.

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Fig. 1.

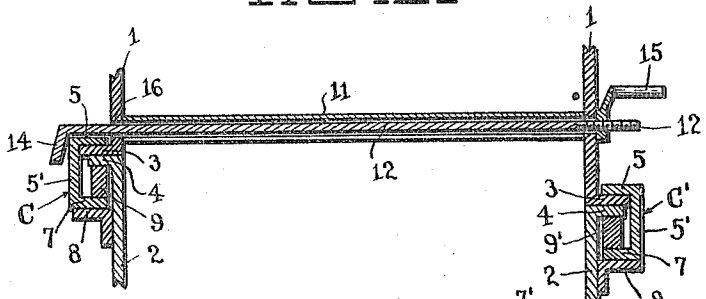


Fig. 2.

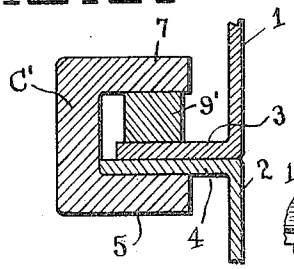


Fig. 3.

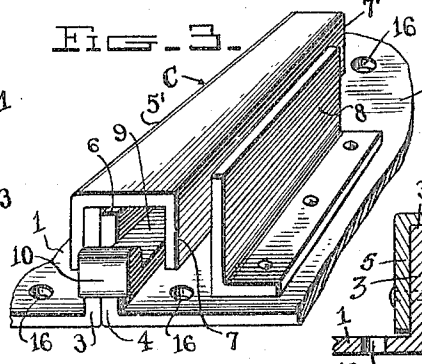


Fig. 4.

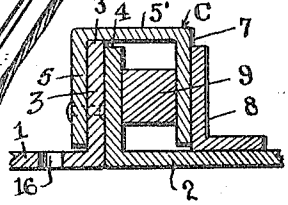
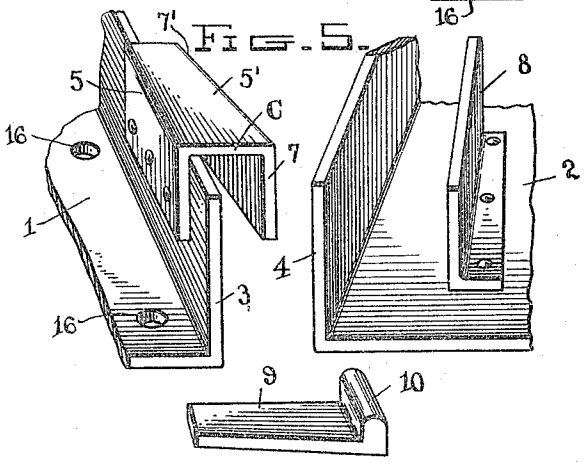


Fig. 5.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C

UNITED STATES PATENT OFFICE.

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MOLD FOR CONCRETE WALLS.

1,123,769. Specification of Letters Patent. Patented Jan. 5, 1915.

Application filed March 23, 1914. Serial No. 826,513.

To all whom it may concern:

Be it known that I, THOMAS LIGHTBODY, a citizen of the United States of America, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Molds for Concrete Walls, of which the following is a specification.

My invention relates to improvements in molds for concrete wall construction in which metal plates are temporarily locked into sets of containing walls to form cavities into which concrete is poured, and are removed after the concrete has hardened; and the objects of my improvements are, first, to provide easily manipulated means for holding the sets or series of plates in approximate position until all are correctly adjusted; and, second, to provide simple, inexpensive and indestructible means for knocking down and disassembling said plates when said concrete has hardened.

I attain those objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view of my improvement applied to mold plates broken away; Fig. 2, is a sectional view of my temporary holding mechanism; Fig. 3, is a perspective of my improved plate lock assembled; Fig. 4 is a section of the same; and Fig. 5 is a perspective view showing the members of said lock disassembled.

Similar characters refer to similar parts throughout the several views.

Having determined on the shape of the concrete walls to be constructed, plates are made correspondingly, either flat or curved: for straight sided walls they will be flat, of course, and for illustration I have so shown them.

1 represents one of a series of mold forming plates of which I turn up the outer edges 3 at right angles. On this series of plates I weld, rivet or otherwise rigidly fasten the inner side of one leaf 5 of a metal channel C, clearly shown in Figs. 4 and 5, as being riveted, so that the under side of its top 5′ rests on the top of the edge 3, and its other leaf 7, 7′ overhangs said edge 3 a short distance therefrom. I form the channel C with a slight taper so that one end, 7′, is nearer the edge 3 than is the other end 7, and the leaves 5 and 7, 7′ are not quite parallel, as shown in Figs. 3 and 5.

2 represents a plate mated to plate, 1, and having a correspondingly turned up edge 4.

On plate 2 I find it convenient to attach an angled brace 8 extending approximately the height of the edges 3 and 4, and in a plane parallel with the leaf 7, 7′, but my invention can be used without it.

9 represents a wedge, tapered to correspond with the angle between the leaves 5 and 7 and having an over turned head 10.

Having determined the width of the walls to be constructed, tubes 11 are cut of lengths equal to said width; rods 12 are provided having heads 14, which may be of any shape, but which I prefer to make as bent over or angled ends, as illustrated; the other ends of said rods being threaded for the reception of threaded heads preferably bent to form cranks 15.

Holes 16 are drilled through plates 1 and 2 at various convenient places for the insertion of the rods 12.

In practice a pair of plates, 1 and 2, are set up with their edges 3 and 4 contacting; one or more loose channels C′, as shown in Fig. 2, and not riveted or permanently attached to the plates, are placed over the edges 3 and 4, and are held there, temporarily, by the insertion of one or more wedges 9′, Fig. 2.

Two or more rods, 12, are then passed through holes 16, and their ends, 14, may be lapped over the edges 3 and 4, or over channels C, as shown in Fig. 1, or, they may bear against the faces of plates 1 or 2, as may be most convenient.

Tubes, 11, of proper lengths, are sleeved over the rods 12. Said rods and tubes serve to hold the plates in position but are not included as a part of my present invention.

Corresponding pairs or sets of plates 1 and 2 are then united in a similar way and, the threaded ends of rods 12 having been passed through corresponding holes 16, the plates at opposite ends of the tubes 11 are drawn tightly up to position by turning the threaded cranks 15.

The side walls being properly positioned wedges 9 are driven tightly to place, firmly locking the plates together. Driving in the wedges 9 serves to loosen the temporary wedges 9′ and channels C′, which may then be easily slipped off and pocketed.

When a series of plates have been positioned loosely I find it convenient to place a

bar of angle iron along the tops thereof and temporarily clamp one edge of it to the upstanding edges of the wall plates by using several of the loose channels C′ and wedges 9′ shown in Fig. 2, to hold them until the next layer is positioned on top of them in the process of setting up the molds for the walls of a house, for instance, said bar being removed by taking off the loose channels as above described when the upper layer has been fastened to the lower one. I do not illustrate such a bar of angle iron, as it is well known, is not novel and is no part of this invention, although the channels and wedges by which it is temporarily held are claimed and are fully illustrated. After the concrete has been poured into the mold and has hardened, the crank 15 can be unscrewed and removed, or, a turn of the head 14 loosens the rod 12, which can then be released from the crank 15 and withdrawn, leaving the tube 11 buried in the concrete. The wedges 9 are then easily removed by blows on the heads 10, and the plates 1 and 2 are easily separated and removed.

The brace 8 prevents the spreading of the leaf 7, 7′ when the wedge 9 is driven in and, as it has no other function, can be omitted by making the leaf 7, 7′ of heavy metal, which is my ordinary method, but some times smaller molds and thinner metal edges are necessary for building small compartments or partitions and then the brace 8 is used advantageously.

Those skilled in the art will see that my improvements simplify the process of concrete wall building, reduce its cost to a minimum and provide labor saving and practically indestructible elements for the purpose.

I claim:—

In combination, a plurality of plates having edge flanges, a tapering U-shaped member adapted to longitudinally bridge said flanges, an abutment on one of said plates adjacent the flange thereof, and a wedge for insertion between one of said flanges and said member to lock the flanges to each other.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS LIGHTBODY.

Witnesses:
WM. W. ZIMMERMAN,
AARON ESTERLY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."