July 3, 1934. A. E. ROMERO 1,965,319

SYSTEM FOR THE CONSTRUCTION OF WALLS

Filed July 27, 1931

Fig. 1.

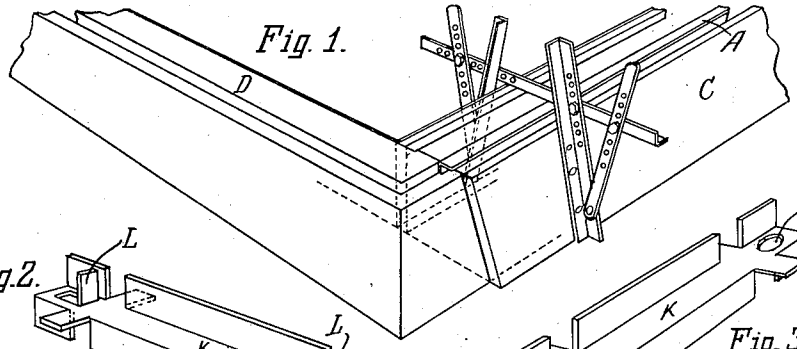


Fig. 2.

Fig. 3.

Fig. 5

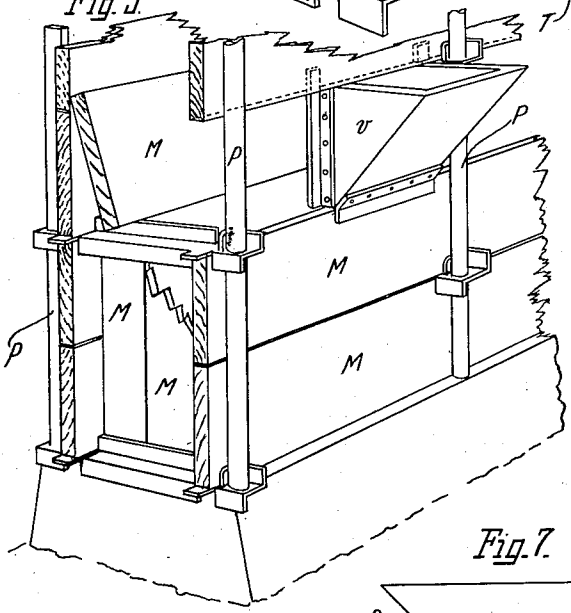


Fig. 4.

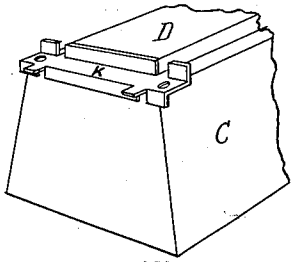


Fig. 6.

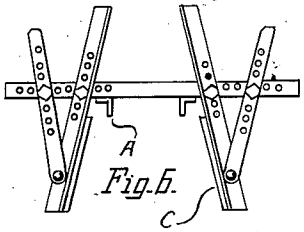


Fig. 7.

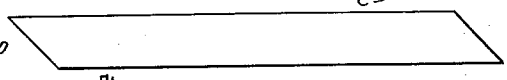
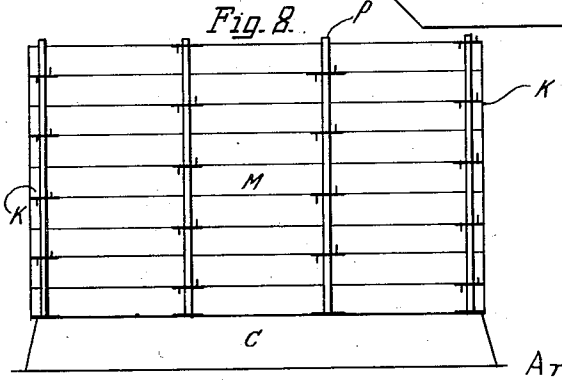


Fig. 8.



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SYSTEM FOR THE CONSTRUCTION OF WALLS

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Application July 27, 1931, Serial No. 553,393
In Mexico August 18, 1930

3 Claims. (Cl. 25—131)

This invention refers to a new and improved system for the construction of walls with the corresponding foundations by the process of moulding.

An object of the invention is to obtain a maximum perfection, rapidity and economy in the construction of walls of cement or similar material without metallic core, as well as their corresponding foundations, by a special system of moulding and with the aid of special implements and of a special disposition of the structure of the moulds.

The characteristic details of the system, within the mechanical parts, are clearly set forth in the following specification and in the accompanying drawing, which serves as an illustration of the system and in which the same parts in the several figures are indicated with the same reference numbers.

Fig. 1 is a view showing a part of a foundation, already finished on the left hand side, and with the moulds ready for making the casting on the right hand side.

Fig. 2 is a view of a special piece K which serves as a tie or joint for the uprights P which support the structure of the mould, and which serves also for fixing the width of the mould or distance between the boards of the same.

Fig. 3 is a view of a modified form of the same piece K but with bores T which may be of any convenient form and without the tongues L shown in Fig. 2.

Fig. 4 shows the manner in which the piece shown in Fig. 2 and Fig. 3 is placed on the foundation.

Fig. 5 represents the general disposition, in perspective view, of the complete moulding structure. In this figure is seen the hopper V for the mortar or mixture. This hopper is separate and movable from the framework.

Fig. 6 is a front view of the special multiple and variable square which is used for placing the boards C which form the casing of the mould for the foundation and which are secured to said square by means of screws.

This square is provided with rectangular irons A which serve for giving form to the upper platform which will be the base D for supporting the wall construction which is going to be moulded. In this figure are also seen, in profile, the boards C nailed to said square.

Fig. 7 shows the form of the boards C.

Fig. 8 is a side view of the general disposition of the framework mounted on the foundation C, with the uprights P, the boards M and the joints K alternated in vertical and horizontal senses.

Once the framework has been mounted in the manner described, the mortar or mixture is poured in to make the wall construction. After this operation, the structure is taken apart by removing all the boards and the uprights leaving the joints K which will be embedded almost completely in the mortar or mixture. The free and visible ends or parts of these joints are thereafter cut, which is very easy as the joints are made of sheet metal or other similar material.

As these joints can be made cheaply, the cost of the construction of the framework will not be higher and no nailing of the boards will be necessary, wherefore said boards may be used for any length of time.

In the construction according to the system of my invention, the base is first constructed by means of the variable squares shown in Fig. 6. With these squares it will be possible to mold the foundation with any kind of inclination. In order to make the platform D seen in Figs. 1 and 4, the angle irons are placed on the inside of the horizontal iron and the distance between these angle irons will be the width of the platform on which the wall of the same width is going to be constructed. When the concrete is poured into the mold of Fig. 6, it will first reach the upper edge of the boards fixed to the inner sides of the vertical arms of the square and will thereafter fill the space between the angle irons and thus form the platform D.

The tie shown in Figs. 2 and 3 is very simple in construction as it is made of one single strip of sheet metal bent and cut out to make the perforations for the uprights, the notches for the boards and the wings. These ties are intended to remain in the construction, and only the parts which project from the outside of the boards are cut off when the concrete has set in order to free the uprights. Thus the tie according to this invention is not one which is used over and over again in a continued wall construction, but is used in any number required and remains, as said, a part of the construction. The angle irons A do not become embedded in the concrete as they are fixed to the horizontal iron and will be lifted up with the square when the concrete has set. However, they may also be attached to the said iron in such a manner that they can be separated from the square before this is lifted up, whereafter they may be taken out lengthwise.

Looking at Fig. 1, the platform D is made by the said angle irons and will be of the width of the wall to be erected on said platform.

Having thus described the invention, what I claim is:

1. An apparatus for the construction of wall foundations of cement or similar material comprising a molding framework and mold walls associated with the framework, said framework comprising a plurality of bracing elements, each of which consists of a pair of spaced upright members, a connecting member adjustably attached intermediate its ends to the upper portion

of each upright member, a strut pivotally attached to each upright member adjacent the bottom thereof, the free end of one of said struts being adjustably attached to one end of the connecting member and the free end of the other strut being adjustably attached to the other end of the connecting member, and spaced parallel angle irons carried by the connecting member for forming a platform on the upper surface of the foundation.

2. In a concrete wall mold form consisting of a pair of spaced side walls formed of a plurality of horizontal boards arranged in tiers with their side edges abutting, spacing and tie bars for bracing, spacing and connecting opposite pairs of superadjacent boards of said mold form, said bar being formed of a flat piece of metal having flanges extending substantially the full length thereof, one of said flanges being bent to extend in one direction from the flat piece of metal and the other flange being bent to extend in the opposite direction from the flat piece of metal, tongue-like portions struck out of each flange adjacent the ends of the bar and being in the same plane as the flat piece of metal to provide notches in the flanges adapted to cooperate with the boards of the wall of the mold to maintain the same in proper spaced-apart relation, tongues struck out of the flat piece of metal immediately adjacent the notches formed in the flanges thereof to provide an opening to receive aligning rods, said tongues being adapted to cooperate with boards received in the notches of the flanges, and a plurality of vertical aligning rods extending through superposed tie bars for aligning the side walls of the mold form.

3. A spacing and tie bar for bracing, spacing and connecting opposite pairs of superadjacent boards forming the walls of concrete wall mold forms, said bar being formed of a flat piece of metal having flanges extending substantially the full length thereof, one of said flanges being bent to extend in one direction from the flat piece of metal and the other flange being bent to extend in the opposite direction from the flat piece of metal, and tongue-like portions struck out of each flange adjacent the ends of the bar and being in the same plane as the flat piece of metal to provide notches in the flanges adapted to cooperate with the boards of the wall of the mold to maintain the same in proper spaced-apart relation, the flat piece of metal being provided with openings adjacent the ends thereof for the reception of vertical aligning rods, said bars being adapted to be placed horizontally in a built-up mold and adapted to cooperate with vertical aligning rods extending through the openings adjacent the ends thereof for retaining mold boards in assembled relation in any desired height, said openings having the material struck out therefrom attached to the innermost sides thereof so as to be in a position to engage mold boards cooperating with notches in the flanges.

ANDRÉS E. ROMERO.