A. L. DEXTER.
PROCESS OF MAKING CONCRETE BUILDING WALLS.
APPLICATION FILED MAY 14, 1906.
To all whom it may concern:

Be it known that I, AVELYN I. DEXTER, a citizen of the United States, residing at Birmingham, county of Jefferson, and State of Alabama, have invented new and useful Improvements in Processes of Making Concrete Building-Walls, of which the following is a specification.

My invention relates to improvements in integrally-formed concrete walls; and it pertains more especially to the process herein described of forming the ornamental work which projects past the exterior surface of the main body of the wall—such, for example, as are used in the construction of cornices—and to represent the base and capstone of windows, doors, &c.

The construction of my invention is explained by reference to the accompanying drawings, in which—

Figure 1 represents a front view of my improved apparatus used in the construction of the wall in connection with a portion of the wall, and Fig. 2 represents a vertical section drawn on line x x of Fig. 1.

Like parts are identified by the same reference-letters in both views.

A represents the body of the wall in the process of construction, and B one of the ornamental pieces affixed to the exterior surface of the wall. The apparatus which I employ in constructing the wall comprises the front molding-board G, rear molding-board D, transverse strengthening-pieces E and F, horizontal connecting-rods G and H, ornamental molding-box I, box-retaining bars J and K, ornamental molding-box L, all of which parts are adaptively connected together, as better shown in Fig. 2.

When constructing a wall formed of different grades of concrete, I preferentially employ a screen comprising a plurality of diagonally-arranged fingers M, which are connected together at their upper ends by the board N, when said screen is retained in place upon the edge of the front board C by the angular brackets O, which brackets extend down past the upper edge of said board C and bear against its vertical surface, whereby said screen is retained in position. In constructing the first course of the integrally-formed wall all part of the apparatus shown below the rods G is dispensed with. When the molding-box, comprising that part of the apparatus above and including the rod G, is in place and the box partially filled with concrete, I first insert the metallic fastening-piece P, which is preferably formed of a flexible piece of wire or other similar material, and is embedded at one end in the concrete, as shown within the molding-box in Fig. 2. I then insert a longitudinally-arranged molding-board R. When this is done, the molding-box is filled with concrete and permitted to set and harden, the rod G is withdrawn from the molding-box, the box is raised a distance corresponding with the distance between said rods F and G, said rod G is again inserted, and said parts are readjusted preparatory to forming the next succeeding course of concrete. The molding-board R is then withdrawn from the surface of the wall, when the upper ends of the ornamental fastening-pieces P are inclined upwardly and forwardly, as indicated in the lower courses of Fig. 2, within the space S, formed by the molding-board, which has been removed.

This being done, I then insert the molding-box I in front of the aperture S, when it is retained in place by the vertical bars J, the respective ends of said bars J being held in place by the rods K. Said molding-box is then filled with concrete or other suitable material in a plastic condition and permitted to harden and form the ornamental figures desired, as indicated at B. It will of course be understood that the box I is provided with an ornamental molding-surface adapted to produce any ornamental finish desired.

When the concrete or other suitable material has become set and hardened in the molding-box I, the rods K and the vertical bars J are withdrawn, when the molding-box I is removed, thus leaving the ornamental piece B in place, as indicated in the lower section of said Figs. 1 and 2. This being done, the entire molding apparatus is raised a distance corresponding with the section of the wall thus completed, when the rods K are inserted in the same apertures in which the rods G have been withdrawn. Said parts are again adjusted and refilled with concrete or other suitable material and the process described again and continuously repeated until the wall is finished. It will of course be understood that the concrete or other material of which said ornamental pieces are formed will set and harden around the metallic retaining-wires P, whereby the same is securely held in place.

While I have shown and described the molding-box I as retained in place by a...
rality of transversely-arranged rods $K$ and vertical bars $J$, I do not wish to limit myself to the use only of said rods and bars for such purpose, as it is obvious that the molding-box may be secured to the wall in a great variety of other ways. For example, when the ornamental pieces are, as usual, located above or below a window or doorway the clamping mechanism may be located in such window-opening or doorway, when the retaining-rods $K$ may be dispensed with.

While the ornamental pieces $B$ may, if desired, be formed as the wall is being constructed, it is obvious, if desired, that the entire wall may first be made, with the apertures $S$, before the ornamental pieces $B$ are made, when the ornamental pieces $B$ may be formed after the entire building is completed.

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

1. The process herein described of forming ornamental work upon the front surface of integrally-formed concrete walls, consisting, first, in depositing concrete in an adjustable molding-box around a suitable molding-board adapted to form a recess in the front surface of the wall-section; second, permitting the concrete thus deposited to set and harden around the molding-board within said molding-box; third, raising and readjusting the molding-box and removing the molding-board; fourth, inserting an ornamental molding-box in front of the recess formed by said molding-board; fifth, filling said molding-box with concrete or other suitable material; and sixth, in again removing, raising, readjusting and refilling said molding apparatus as each successive course is formed, until the wall is completed substantially as set forth.

2. The process herein described of forming ornamental work upon the front surface of integrally-formed concrete walls, consisting first, in depositing concrete in an adjustable molding-box around a suitable molding-board and metallic fastening-piece, which molding-board is adapted to form a recess in the front surface of the wall; second, permitting the concrete thus deposited to set and harden around the molding-board within said molding-box; third, raising and readjusting the molding-box and removing the board and bending said metal fastening-piece forwardly in position to engage and retain the ornamental work in place in the recesses formed by said molding-board; fourth, securing an ornamental molding-box in front of the recess formed by said molding-board; fifth, filling said ornamental molding-box with concrete or other suitable material; and sixth, in again removing, raising, readjusting and refilling said molding apparatus in the order described as each successive course is formed, until the wall is completed, substantially as set forth.

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

AVELYN I. DEXTER.

Witnesses:

G. P. LEYTER,
C. D. BEASLEY.