

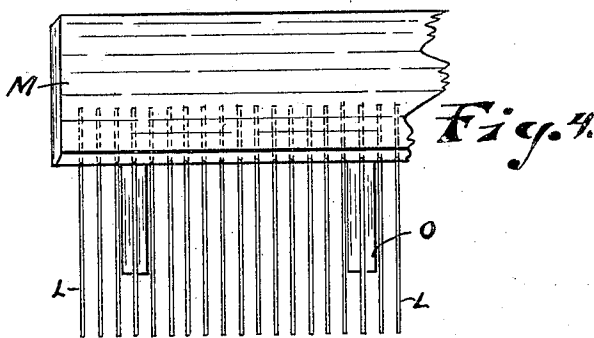
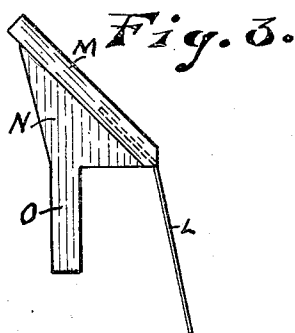
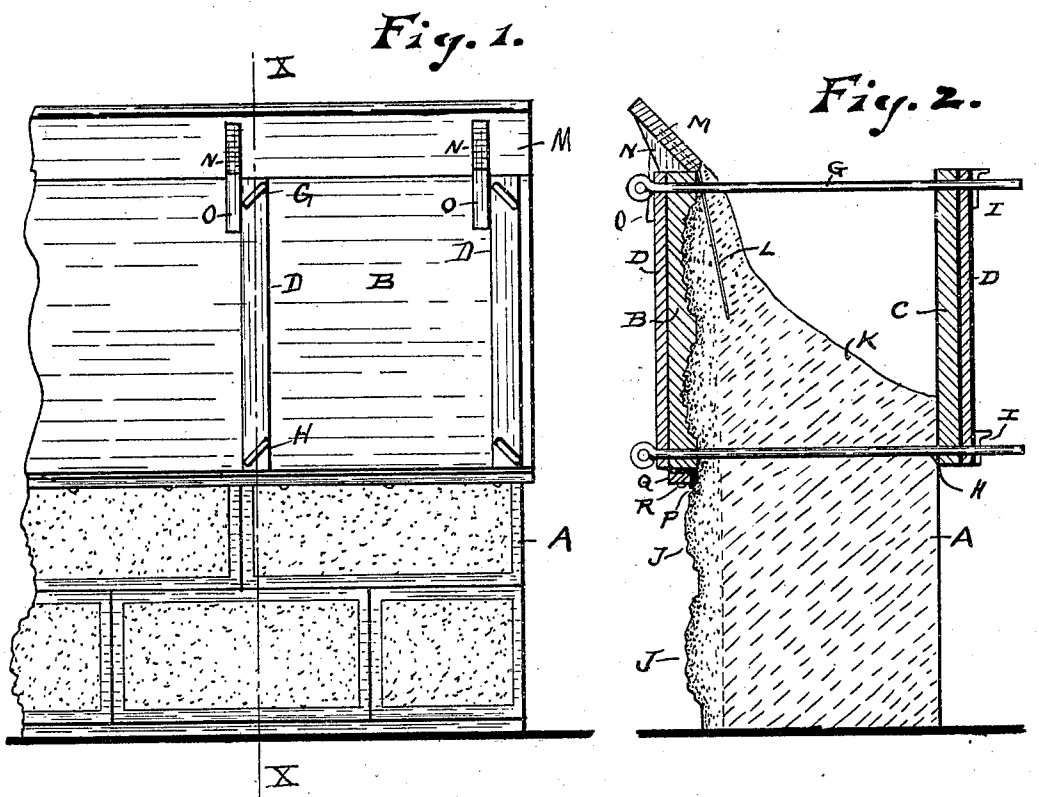
No. 836,368.

PATENTED NOV. 20, 1906.

A. I. DEXTER.

PROCESS OF MAKING CONCRETE BUILDING WALLS.

APPLICATION FILED APR. 25, 1906.



WITNESSES:

W. R. Erwin
M. M. Schulz

INVENTOR

Ardyn I. Dexter
BY
Ernie & Wheden
ATTORNEYS.

UNITED STATES PATENT OFFICE.

AVELYN I. DEXTER, OF BIRMINGHAM, ALABAMA.

PROCESS OF MAKING CONCRETE BUILDING-WALLS.

No. 836,368.

Specification of Letters Patent.

Patented Nov. 20, 1906.

Application filed April 25, 1906. Serial No. 313,561.

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 the Process of Making Concrete Building-Walls, of which the following is a specification.

My invention relates to improvements in processes of forming that class of concrete building-walls which is illustrated and described in Letters Patent of the United States, No. 748,352, and which was issued to me December 29, 1903, by which the entire wall from the foundation to the roof of the building, including window and door sills, caps, cornices, and all ornamental designs, are formed integrally, so as to closely resemble separate courses of masonry formed of separate blocks of stone or other material, and my present invention pertains more especially to the process of separating the finer from the coarser grades of concrete automatically as the concrete is deposited in the mold, the finer grades of concrete being deposited at the front or exposed surface of the wall, while the coarser grades of concrete are carried rearwardly and distributed between the front and rear surfaces of the wall, whereby the exposed surfaces of the wall, which represent the courses of masonry, and the ornamental parts are formed of the finer quality of concrete, and the wall when completed will have a richer and more finished appearance.

My invention is further explained by reference to the accompanying drawings, in which—

Figure 1 represents a front view of the apparatus used in carrying on my process in connection with a portion of the finished wall. Fig. 2 represents a transverse section of the apparatus in connection with a portion of the finished wall, drawn on line *x x* of Fig. 1. Fig. 3 represents an end view, and Fig. 4 a front view, of the apparatus used in separating the finer from the coarser grades of concrete in carrying on my process.

Like parts are represented by the same reference - letters throughout the several views.

A represents a portion of the finished wall.

In carrying on my process a molding-box of a convenient length and corresponding in width and height to the thickness of the wall and the height of the courses is employed,

which box comprises, among other things, a front molding-board B, rear board C, vertically - arranged stays D, transversely - arranged connecting-rods G and H, and fastening-keys I, all of which parts are constructed and arranged substantially as shown and described in my said Letters Patent.

My present invention pertains more especially, as heretofore suggested, to the process by which the finer grades of concrete, which form the ornamental front surfaces J of the wall, are separated from the coarser portions K, which coarser portions of the wall are composed of a larger percentage of sand, crushed stone, gravel, &c. This desired object is accomplished by the use of a distributing-screen comprising a plurality of distributing-fingers L, finger-connecting board M, and board-supporting brackets N. The mold-supporting box being in place and adjusted to correspond with the width of the wall to be built, the screen is supported upon the front molding-board B, as indicated in Figs. 1 and 2, it being thus retained in place by the joint action of the vertical arms O, which bear against the exterior surfaces of the molding-board B, and the distributing-fingers L, which extend downwardly at an angle to the molding-board within the box. The distributing-screen being in place, the concrete is deposited thereon, when it flows of its own gravity across the upper surface of said board M and along the distributing-fingers, when the finer grade of concrete and cement passes between said fingers and is deposited of its own gravity against the surface of the molding-board B, while the coarser grades of concrete, gravel, crushed stone, &c., are caused to pass downwardly and rearwardly over the lower ends of said fingers and are distributed thereby across the space between the front and rear boards of the molding-box. The concrete is thus deposited in the molding-box until the box is filled. The distributing-screen is then withdrawn from the molding-box, when the keys I are removed from the transverse rods G and H. The front molding-board is then pulled forwardly out of contact with the front surfaces of the wall, the lower rod H is removed, and the molding-box is raised a distance corresponding with the distance between said rods G and H. When said rod H is again inserted in place, the molding-boards are brought into the proper relative position to each other, and the keys I again inserted,

when the molding-box is again filled and the process described is again and continuously repeated in like manner until the wall is completed.

5 To prevent the finer portions of concrete and cement which are thus deposited against the front molding-board to form the ornamental surface of the wall from escaping from the molding-box between the lower
10 edge of the molding-board and the finished wall against which it is clamped, I preferably provide an elastic cushion P, which is formed of felt, rubber, or other yielding substance and secured to the lower edge of the
15 front molding-board and between it and the finished wall by the longitudinal clamping-strip Q and strip-retaining screws or nails R or in any other convenient manner, when the cushion serves as a packing and forms a
20 tight joint between the opposing parts named, whereby the finished wall is prevented from becoming discolored or soiled by the concrete or cement, which would otherwise escape from the molding-box.

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

1. The process herein described, of making an integrally-formed concrete wall of different grades of concrete, having the finer grades at its front surface and the coarser grades uniformly distributed between its front and rear surfaces, consisting first, in passing mixed grades of concrete through a
30 separating and distributing screen into a molding-box having suitable molding-surfaces; second, in simultaneously separating

the finer from the coarser grades of cement, and depositing the finer at the front surface and uniformly distributing the coarser grades between the front and rear surfaces of the wall, substantially as set forth. 40

2. The herein-described process of making integrally-formed concrete walls, resembling courses of masonry and other ornamental
45 parts formed of separate blocks of stone or concrete, of different grades of concrete, having the finer grade at its front surface and the coarser grade distributed between the front and rear surfaces, consisting first, in passing
50 the mixed concrete through a downwardly and rearwardly inclined distributing-screen into a molding-box, and simultaneously separating the finer from the coarser grades of concrete; second, precipitating the finer
55 grades of concrete against the front molding-board and distributing the coarser grades between the front and rear boards by the action of said inclined distributing-screen, until the molding-box is filled, and a given course is
60 completed; third, in permitting the concrete deposited and distributed to set and harden; fourth, in separating, raising, and readjusting the front and rear boards of the molding-box for the next succeeding course and thus
65 repeating the steps in the process described until the wall is finished, substantially as set forth.

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

AVELYN I. DEXTER.

Witnesses:

J. L. BEASLEY,
E. V. GREGORY.