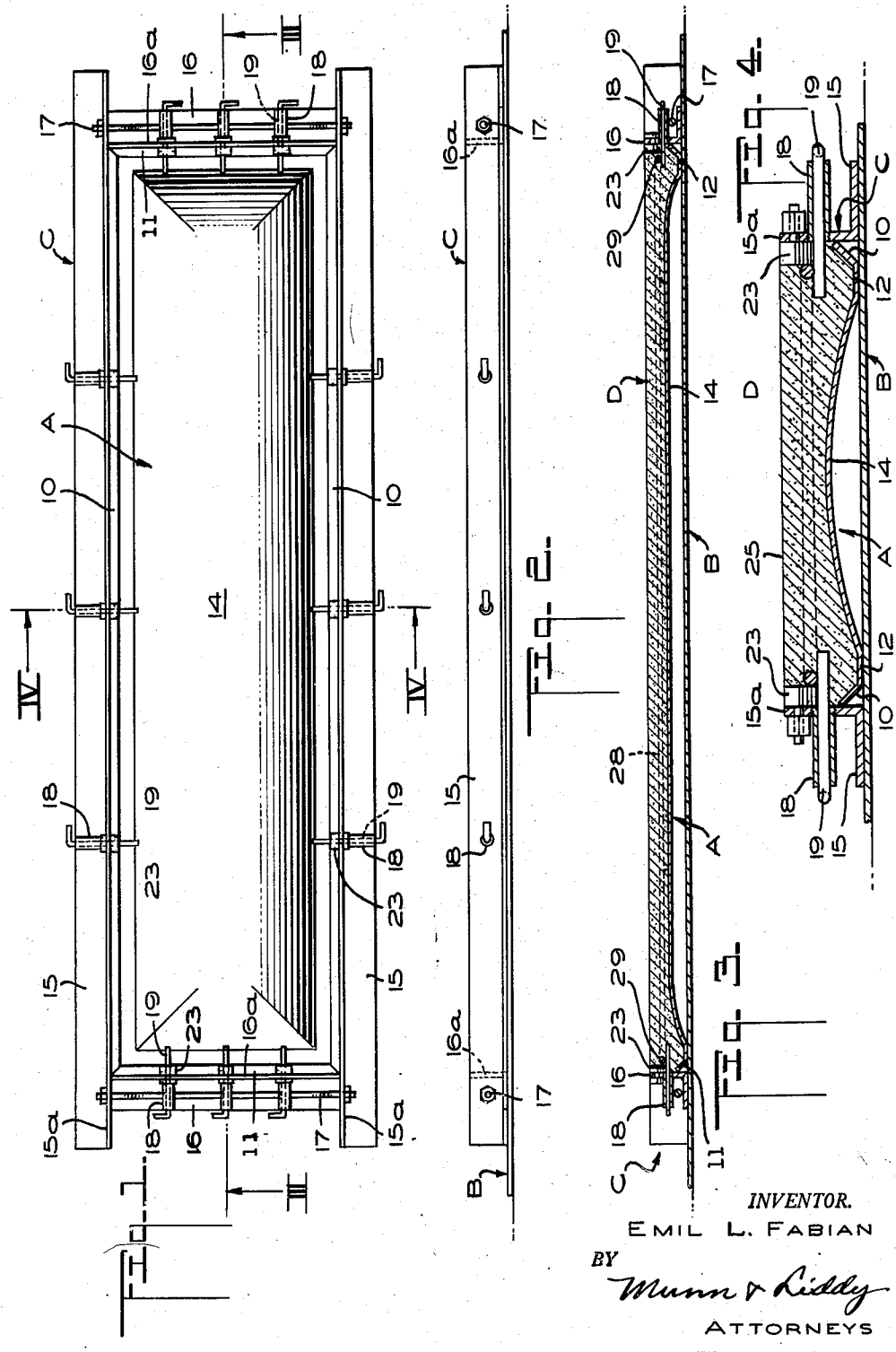
March 16, 1954 E. L. FABIAN 2,671,941

FORM FOR CASTING CONCRETE BUILDING BLOCKS

Filed March 3, 1952 3 Sheets-Sheet 1



INVENTOR.
EMIL L. FABIAN
BY
Munn & Liddy
ATTORNEYS

March 16, 1954 E. L. FABIAN 2,671,941

FORM FOR CASTING CONCRETE BUILDING BLOCKS

Filed March 3, 1952 3 Sheets-Sheet 2

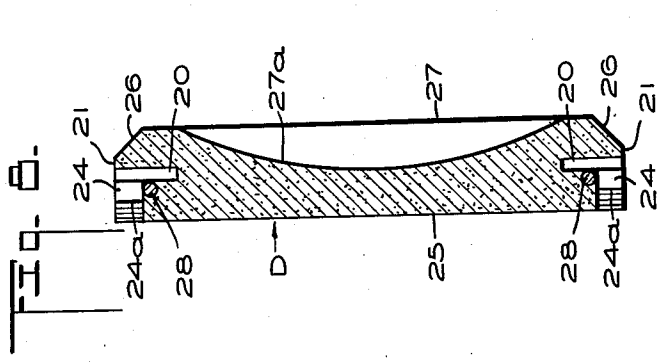


FIG. 2.

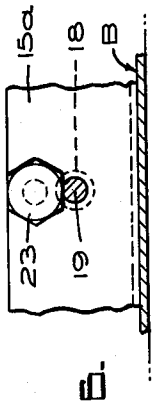


FIG. 6.

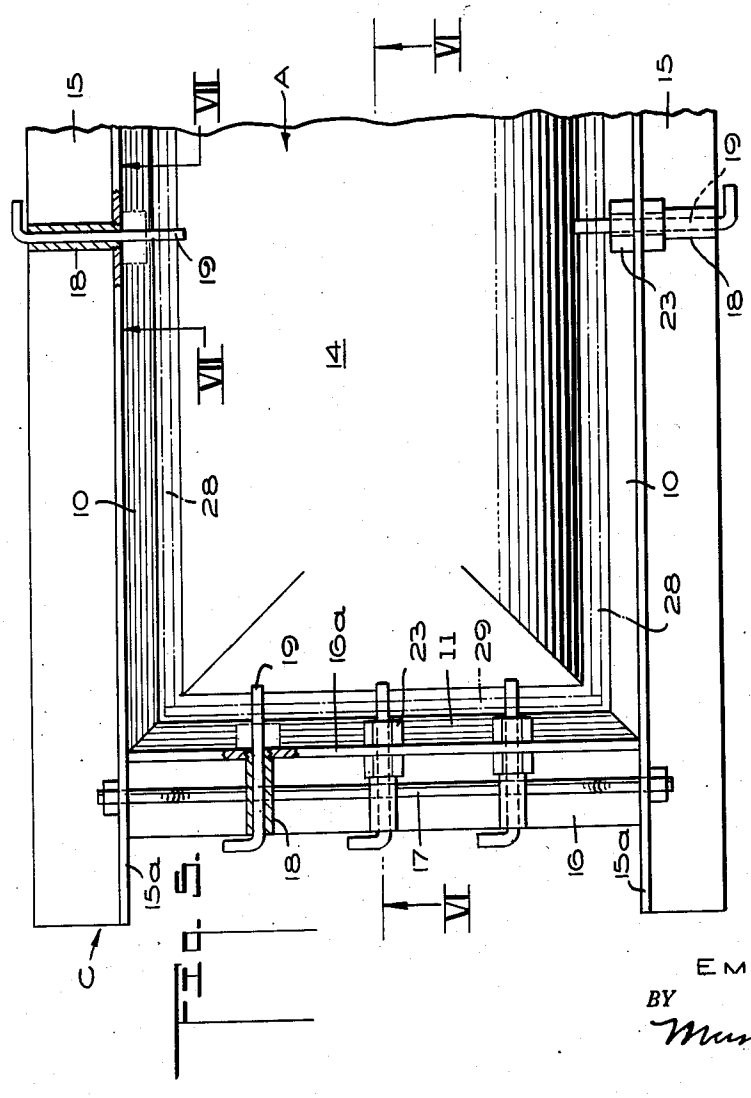


FIG. 5.

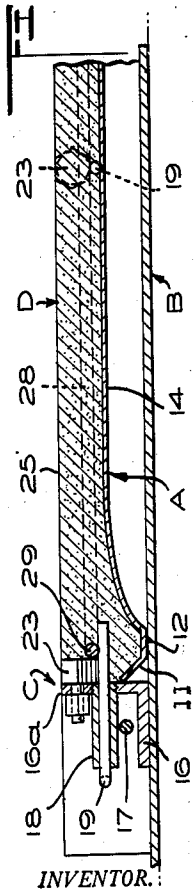


FIG. 4.

INVENTOR.
EMIL L. FABIAN
BY
Munn & Liddy
ATTORNEYS

March 16, 1954 E. L. FABIAN 2,671,941

FORM FOR CASTING CONCRETE BUILDING BLOCKS

Filed March 3, 1952 3 Sheets-Sheet 3

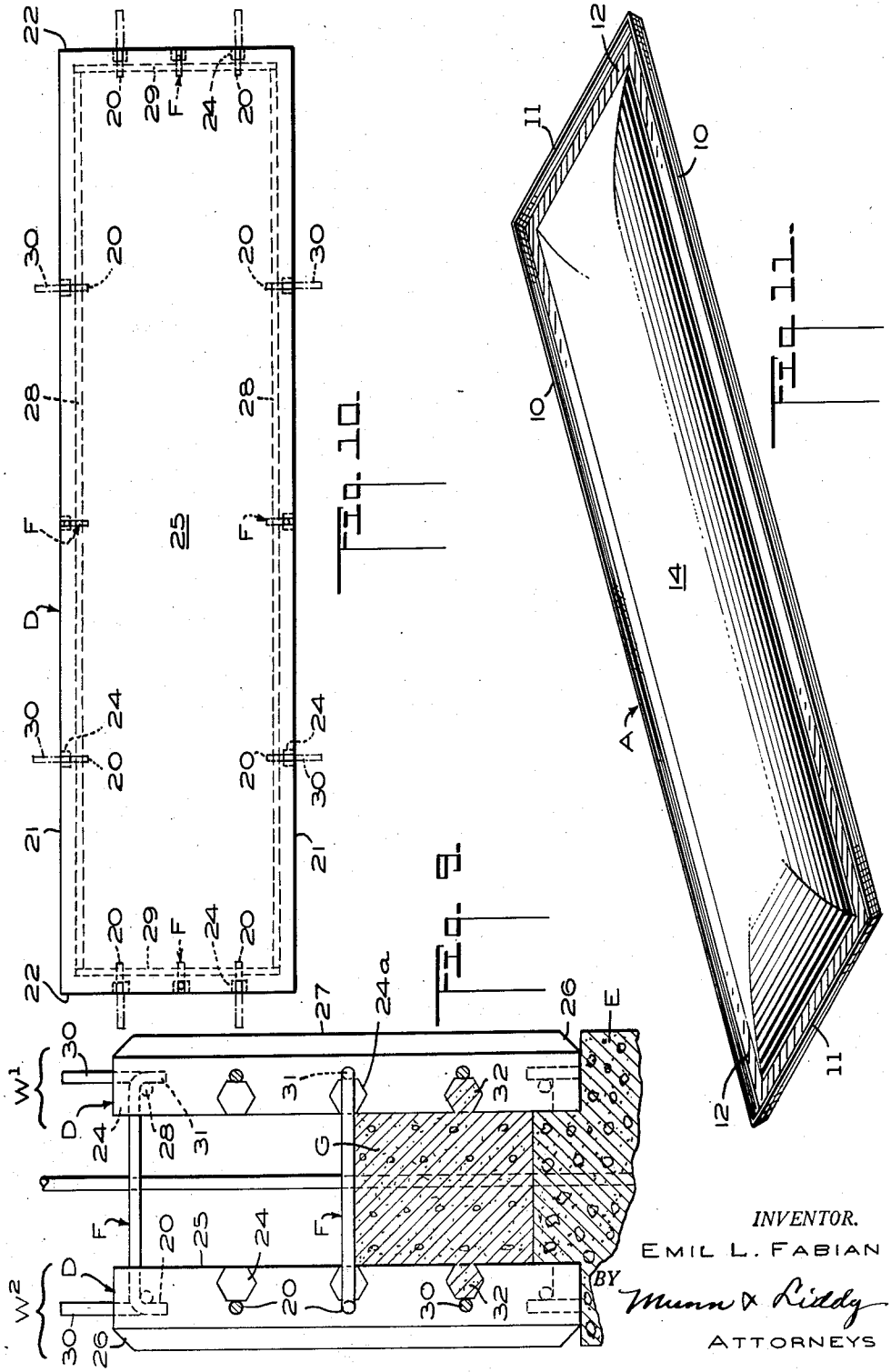


FIG. 10.

FIG. 11.

FIG. 9.

INVENTOR.
EMIL L. FABIAN
BY Munn & Liddy
ATTORNEYS

Patented Mar. 16, 1954 2,671,941

UNITED STATES PATENT OFFICE

2,671,941

FORM FOR CASTING CONCRETE BUILDING BLOCKS

Emil L. Fabian, Los Angeles, Calif.

Application March 3, 1952, Serial No. 274,599

3 Claims. (Cl. 25—121)

1

The present invention relates to improvements in a form for casting concrete building blocks, which are intended to be used in erecting a wall construction, as shown in my copending application, Serial No. 272,345 filed in the United States Patent Office on February 19, 1952.

It is particularly proposed in this invention to provide a form that is designed to leave dowel-receiving bores along the marginal edges of a cast block. At the same time, recesses are made in the block for receiving cross-tie rods, the latter being employed for interconnecting spaced-apart wall units. Each bore has a companion recess communicating therewith so that it may be used for receiving a dowel, or a cross-tie rod, depending upon the requirement at a particular location.

As a further object, it is proposed to provide an external molding wall, which is composed of detachable side and end members, and adapted to abut the sides and ends, respectively, of a substantially rectangular-shaped pan. Thus the latter serves to position the detachable members when assembling the parts prior to casting a block. Moreover, the pan constitutes a support for a partially-dried block after the external molding wall has been removed.

Other objects and advantages will appear as the specification continues. The novel features will be pointed out in the claims hereunto appended.

Drawings

For a better understanding of my invention, reference should be had to the accompanying drawings, forming part of this application, in which:

Figure 1 is a top plan view of the assembled form, ready to have a block cast therein;

Figure 2 is a side elevational view thereof;

Figures 3 and 4 are longitudinal and transverse sectional views taken along the lines III—III and IV—IV, respectively, of Figure 1, and disclosing a block cast in the form;

Figure 5 is an enlarged fragmentary view of the lefthand portion of Figure 1, parts being shown in section;

Figures 6 and 7 are longitudinal sectional views taken along the planes VI—VI and VII—VII, respectively, of Figure 5;

Figure 8 is a transverse sectional view taken through a completed block;

Figure 9 is a vertical sectional view showing a partially-completed wall fashioned from my blocks;

Figure 10 is an elevational view looking at the inner face of one of the building blocks; and

Figure 11 is an isometric view of the pan by itself.

2

While I have shown only the preferred embodiment of my invention, it should be understood that various changes, or modifications, may be made within the scope of the annexed claims without departing from the spirit thereof.

Detailed description

Referring to the drawings in detail, I have shown a pan designated generally at A, which is adapted to rest on a support surface B. This pan is substantially rectangular-shaped in outline, defining opposing side and end flanges 10 and 11, respectively. These flanges extend upwardly and outwardly relative to the marginal bottom 12 of the pan. The remainder 14 of the pan bottom is arched upwardly, both longitudinally and transversely.

As clearly shown in Figures 1 to 6, inclusive, an external molding wall C of rectangular outline is adapted to be arranged around the pan A so as to provide a concrete-receiving space in which a building block D may be cast. This molding wall includes detachable side and end members 15 and 16, respectively, which are adapted to abut the flanges 10 and 11, respectively, of the pan.

It will be noted that these detachable members are provided by angle bars, which rest directly on the underlying supporting surface B. Elongated transverse bolts 17 are secured to the vertical flanges 15*a* of the side members 15 so as to retain the latter up against the end members 16. Obviously, upon withdrawing the bolts, the members 15—15 and 16—16 may be detached from the pan A to allow the latter and the cast block D to be removed.

A plurality of tubular sleeves 18 are threadedly secured to the vertical flanges 15*a* and 16*a* of the detachable members 15 and 16, respectively. These sleeves are arranged at predetermined intervals along the lengths of these members, and have their bores extending horizontally (see Figures 4, 5 and 6). Core pins 19, which have been shown as being L-shaped, are telescoped through the tubular sleeves so as to extend horizontally into the concrete-receiving space of the form provided by the pan A and the external molding wall C.

When cementitious material, such as cement, is poured into the form, the core pins 19 provide bores 20 extending inwardly into each cast building block made when the material hardens. Referring to Figures 8, 9 and 10, it will be seen that these bores are disposed at preselected intervals along the entire marginal edges of the block, that is, along the sides 21 and ends 22 of each block.

Moreover, a core element 23 has been provided adjacent to and immediately above each of the core pins 19. The purpose of these elements is to fashion recesses 24 in the marginal edges 21—22 of the cast block. Each recess 24 merges into and communicates with its companion bore 20. These core elements have been disclosed herein as being provided by hexagonal heads of bolts, which are secured to the flanges 15*a*—15*a* and 16*a*—16*a* of the detachable members. This irregular shape of the core elements will provide undercuts 24*a* in the recesses 24 for the purpose hereinafter described.

In Figures 6 and 7, I have disclosed the core elements as being coextensive with the distances from the core pins to the upper edges of the detachable members 15—15 and 16—16, thereby providing recesses extending from the bores 20 to the uppermost or inner face 25 of each cast block. However, the bores extend inwardly into the block below the bottoms of the recesses (see Figure 8). The recesses 24 are formed at the juncture of the inner face 25 of the block and the edges from which the bores 20 extend, with each recess merging into and communicating with one of the bores.

For the purpose of enhancing the appearance of the building blocks, the flanges 10 and 11 of the pan A may slope to produce bevelled edges 26 surrounding the outer faces 27. Of course, the arched portion 14 of the pan will produce a concaved portion 27*a* on the outer faces of the blocks to thereby lighten the latter, while adding decoration thereto.

It has been found that sand and gravel will provide a satisfactory mix for the building blocks. By omitting rock, the cost may be reduced considerably. Longitudinal and transverse reinforcing bars 28 and 29, respectively, may be supported on the core pins 19, as suggested in Figure 5, so as to become embedded in the interior of each block adjacent to the points of merger of the bores 20 and the recesses 24. These bars produce a strong and durable block.

Next, I shall refer to Figure 9, wherein the lower course of a wall has been laid on a foundation E. Dowels 30 are inserted into preselected bores 20 between adjacent blocks in each course; and, also, between the blocks of adjacent courses. Thus, the dowels hold the blocks in place. Spaced-apart wall units W1 and W2 are erected on the foundation, and channel-shaped cross-tie rods F are provided for extending transversely between these wall units to retain them in proper spaced relation with one another.

These cross-tie rods have legs 31, which are telescoped into certain unoccupied bores 20 at the ends and along the upper edges of the blocks. As shown in Figure 9, these rods extend through those recesses 24 which merge into the bores 20 into which the legs 31 are introduced. It will be apparent that the bores and recesses have been arranged to receive either a dowel 30 or a cross-tie rod F.

As the erection of the wall proceeds, concrete G is poured into the trench provided between the wall units W1 and W2. A portion of this concrete will flow into the recesses 24 to provide interlocks 32 between the blocks and the interposed concrete. Any unoccupied space of the bores 20 will be filled with this concrete. The undercuts 24*a* of the recesses will increase the interlocking between the concrete G and the building blocks.

After a building block D has been cast in my

form, it is allowed to set for a predetermined length of time. Thereafter, the side members 15—15 and end members 16—16 are detached, and may be used in connection with another pan for pouring another block. However, the block then resting on the particular pan on which it was cast should be permitted to remain thereon until the cementitious material has thoroughly set.

I claim:

1. In a form for casting concrete building blocks: a pan adapted to rest on a supporting surface; this pan having a substantially rectangular marginal border, defining opposite sides and opposing ends; detachable side and end members abutting the sides and ends, respectively, of the pan to provide a substantially rectangular external molding wall surrounding the pan, which extends above the latter to define a concrete-receiving space; core pins carried by the detachable members to project inwardly into the concrete-receiving space from inner marginal surfaces of these members; and core elements carried by the detachable members adjacent to and in contacting relation with the core pins.

2. In a form for casting concrete building blocks; a pan adapted to rest on a supporting surface; this pan having a substantially rectangular marginal border, defining opposite sides and opposing ends; detachable side and end members abutting the sides and ends, respectively, of the pan to provide a substantially rectangular external molding wall surrounding the pan, which extends above the latter to define a concrete-receiving space; core pins carried by the detachable members to project inwardly into the concrete-receiving space from inner marginal surfaces of these members; and core elements carried by the detachable member adjacent to and in contacting relation with the core pins; the core elements having irregular shaped heads projecting into said concrete-receiving space.

3. In a form for casting concrete building blocks; a pan adapted to rest on a supporting surface; this pan having a substantially rectangular marginal border, defining opposite sides and opposing ends; detachable side and end members abutting the sides and ends, respectively, of the pan to provide a substantially rectangular external molding wall surrounding the pan, which extends above the latter to define a concrete-receiving space; core pins carried by the detachable members to project inwardly into the concrete-receiving space from inner marginal surfaces of these members; and core elements carried by the detachable members adjacent to and in contacting relation with the core pins; the core elements being coextensive with the distances from the core pins to the upper edges of the detachable members.

EMIL L. FABIAN.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
296,825	Dupuy	Apr. 15, 1884
1,604,034	Gillam et al.	Oct. 19, 1926
2,037,545	Sexton	Apr. 14, 1936
2,181,959	Arborio	Dec. 5, 1939
2,416,559	Wilson	Feb. 25, 1947
2,583,626	Buell	Jan. 29, 1952