

No. 895,614.

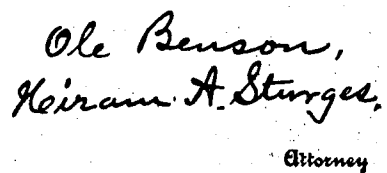
PATENTED AUG. 11, 1908.

O. BENSON.

BLOCK MOLDING MACHINE.

APPLICATION FILED DEC. 23, 1907.

3 SHEETS—SHEET 1..



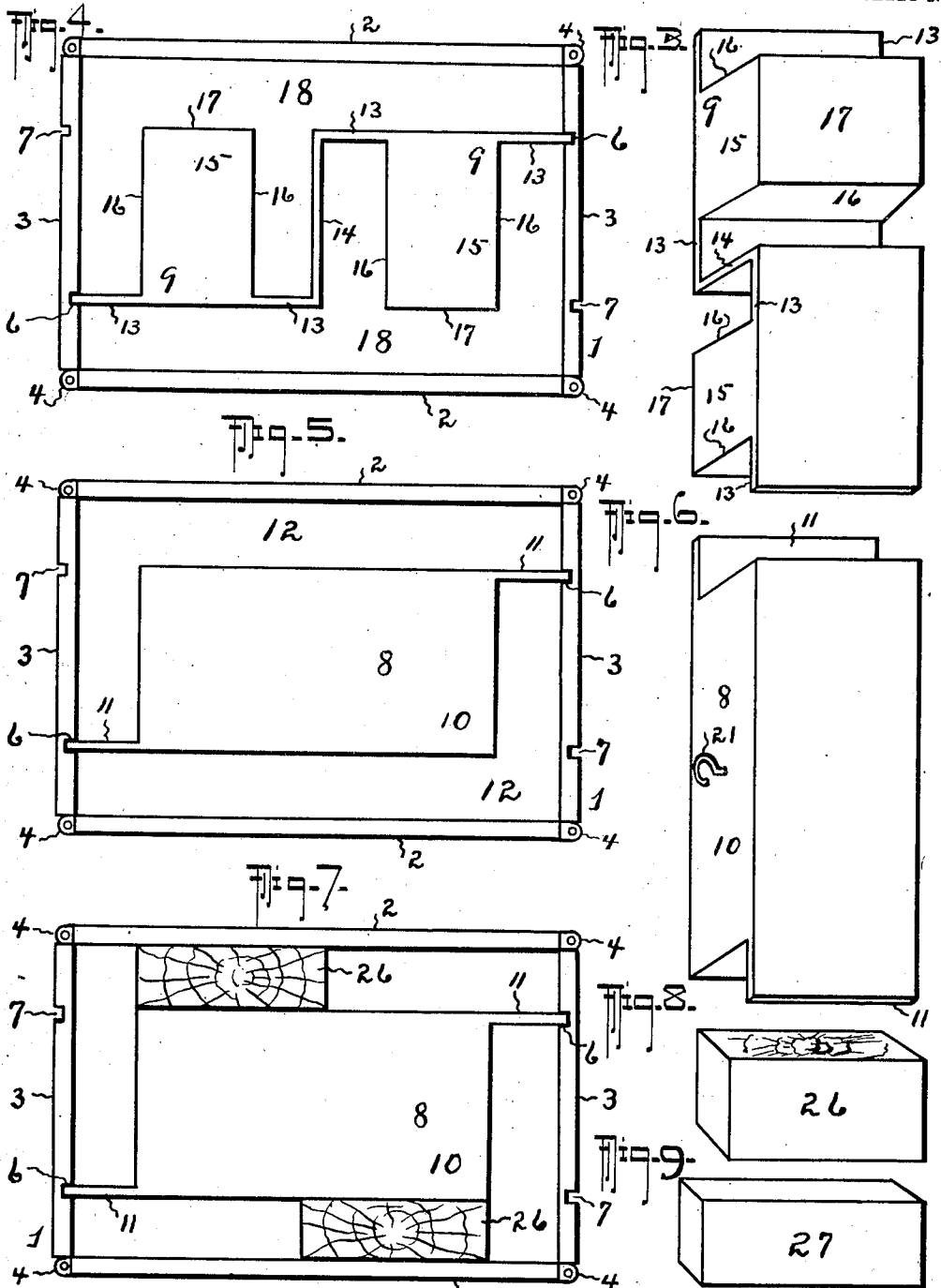
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3 SHEETS—SHEET 2.



Witnesses

Arthur Sturges,
Thomas Ritchie

By

Inventor,
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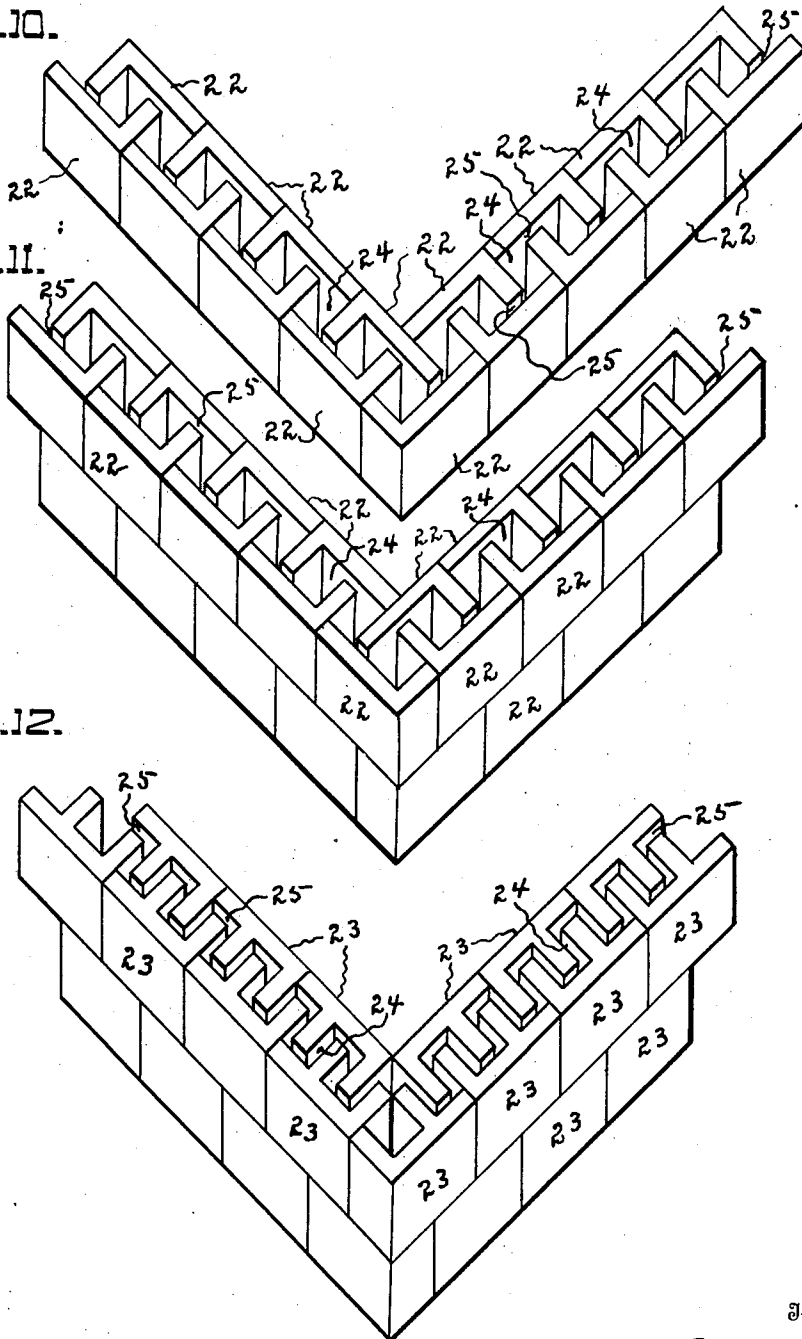
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3 SHEETS—SHEET 3.

Fig. 10.

Fig. 11.

Fig. 12.



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UNITED STATES PATENT OFFICE.

OLE BENSON, OF SOUTH OMAHA, NEBRASKA, ASSIGNOR OF ONE-HALF TO EMIL BUSCHER,
OF SOUTH OMAHA, NEBRASKA.

BLOCK-MOLDING MACHINE.

No. 895,614.

Specification of Letters Patent.

Patented Aug. 11, 1908.

Application filed December 23, 1907. Serial No. 407,757.

To all whom it may concern:

Be it known that I, OLE BENSON, a citizen of the United States, residing at South Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Block-Molding Machines, of which the following is a specification.

This invention relates to means for molding building blocks, and has for its principal object the provision of a machine of this class which will be composed of few parts, and may be constructed at slight expense, comparatively speaking, but which will be convenient for use and reliable in operation.

Another object is the provision of a mold-receptacle so constructed that both sides thereof may be utilized for exterior designs.

The invention also has reference to the forms of blocks constructed and manner of forming the wall.

The invention consists of the novel construction and arrangement of parts as described herein, pointed out by the claims and illustrated in the drawings, wherein,—

Figure 1 is a plan view of the molding-receptacle. Fig. 2 is a perspective view of the mold-receptacle and core seated therein. Fig. 3 is a perspective view of one of the cores employed. Fig. 4 is a plan view of the assembled parts shown by Figs. 1 and 3. Fig. 5 is a plan view of the mold-receptacle with modified form of core seated therein. Fig. 6 is a perspective view of the modified form of core shown in Fig. 5. Fig. 7 is a plan view, showing use of a filler block in connection with the core and receptacle. Figs. 8 and 9 are perspective views, respectively, of the filler block, and of a completely formed cement block or plain block, useful in connection with the building of the wall. Figs. 10, 11 and 12 are perspective views of walls formed by using the blocks shown.

Referring now to the drawing for a more particular description, numeral 1 indicates a molding-receptacle formed by use of two similarly shaped side pieces 2 and the similarly formed end pieces 3, each of these parts being formed as a rectangular plate with hinge members 4 at its ends, so that they will register and may be held together as by use of the removable pintles 5, and when assembled may form a rectangular inclosure to define a molding-receptacle with an open top and open bottom.

I provide the vertical groove 6 in one of the sides of and near the terminal of each end-piece 3, and in the opposite side thereof I form the vertical groove 7 at a distance from the opposite end of each end-piece as that of groove 6.

The opening, in each flange which receives the pintle, of each end-piece and side-piece, 2 and 3, is formed equally distanced from the body-portions of said sides and ends, and, for this reason, each side and end may be reversed, whenever desired, to form a molding receptacle which will present a correspondingly different surface; and this is useful since different ornamental designs are desirable and it is the custom, ordinarily, in the construction of these machines to furnish extra leaves or plates which bear various designs, thereby adding to the expense of constructing the machine. It will be noted, that by use of the present molding-receptacle a building block may be formed panel-shaped as shown at *b b* or a serpentine form may be provided as shown at *c c*, by reversing these parts. It will be noted that this function depends upon the use of the particular form of hinges pointed out, and also depends upon the employment of grooves 6 or 7 for holding the core. I employ what I call a double-L core, since by its use, in connection with the molding-receptacle, two L-shaped building blocks may be formed; this core is indicated at 8, and I employ what, for convenience, I call a double-F core, shown at 9, and so called, since by its use, in connection with the molding-receptacle, two F-shaped building blocks may be formed. Core 8 is formed as an elongated block 10, rectangular in cross section, with thin projecting plates or portions 11 extending longitudinally beyond its sides, the structure having a length so that the terminals of the extended portions 11 may have a seating within grooves 6 or 7, and when seated will form L-shaped chambers 12 intermediate the walls of the structure and the adjacent walls of sides 2 and a part of the ends 3 of the molding-receptacle.

Core 9 is formed by means of two rectangular plates 13 of equal lengths, disposed perpendicularly, parallel and adjacent and having their inner ends united by the partition wall 14 disposed at right angles to plates 13, walls or plates 13 being provided, midway of their ends, with angular form-blocks 15 secured thereon, said form-blocks having

side walls 16 disposed parallel with each other and parallel with partition wall 14, and each having end-walls 17 disposed in alignment with the outer surface of the opposite rectangular plate to that upon which it is secured; core 9 has a length so that the free ends of walls 13 will engage grooves 6 or 7 at the time it is placed in the molding receptacle, and when disposed therein, F-shaped chambers 18 are formed between core 9 and the adjacent inner walls of molding-receptacle 1.

Having described the principal parts, operation for forming either of the building blocks by use of the parts as described, will be readily understood. By removing any one of the pintles, the combined sides and ends of the molding receptacle may be reversed, and thereby the sides, together with a part of the surfaces of the ends may be employed for forming a variety of ornamental designs upon the outer surface of the building-blocks, the transverse grooves formed in each side of end-pieces 3, contributing to this function. I employ any suitable supporting frame 19 upon which is placed a pallet 20, as shown in Fig. 2, several of these pallets being in use while operating the machine, and after the molding receptacle has been placed upon the pallet, one of cores 8 or 9 is placed therein and the chambers are filled with plastic material used for the building blocks; this material may be tamped in any suitable manner to settle the material in these chambers, after which the core is removed from between the building blocks and from the pallet by raising it therefrom, as by manually lifting upon hooks or handles 21; after the core has been raised or removed, one of pintles 5 is removed, and the molding-receptacle is then taken from the pallet; the pallet, with the building blocks is then removed from frame 19, and other building blocks may then be formed, by repeating the operation.

The use of the devices described in connection with core 8, to form building blocks, results in the production of blocks 22 having, substantially, the shape of the block-letter L; and by using core 9 to form the walls shown in Figs. 10 and 11, a building block 23 substantially in the form of a block-letter F is formed, and blocks 22 and 23 are reliable for forming a substantial building wall. It will be noted the forms produced are especially useful for bonding, the transverse arm of one layer resting upon the transverse arm of another layer when the joints are "broken"; also the forms as produced are convenient for forming air-chambers 24 between the courses; and by use of the blocks, as described, a space 25 may be provided in the wall between the terminal of each trans-

verse arm of an L-shaped or F-shaped block and the adjacent body of a block in the same layer or course, thereby providing a means for circulation of air between the blocks, to prevent moisture from entering a building, as might be the case if the blocks were laid to produce a solid wall or otherwise placed in contact with each other.

It will be noted that, by use of the construction shown, an extra machine, molding receptacle or extra leaf is not needed for the formation of corner blocks; the blocks produced and as shown are used for corners and for the body of the wall.

It is desirable that the inner surface of the wall of a building should be plain and without design or ornamentation, to facilitate plastering thereon, and the present invention is useful for producing such blocks, as is obvious, since smooth surfaces for one of the sides of end-pieces 3 and side-pieces 2 may be provided.

The molding receptacle is useful for the formation of short-length blocks, often found useful in building a wall, for the provision of area ways and window openings; by using filler-blocks 26, which may be of any suitable lengths, blocks 27, having correspondingly short lengths, may be conveniently formed, as shown in connection with Figs. 7, 8 and 9.

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

1. In a device of the character described, the combination with a pair of rectangular, reversible side walls of a pair of rectangular, reversible end walls, hinge members carried by said walls, removable pintles adapted to engage said hinge members to connect said walls together, and a removable core, there being vertical grooves formed in both the inner and outer faces of the end walls the ends of said cores entering said grooves.

2. In a device of the character described, the combination with a pair of rectangular, reversible side walls of a pair of rectangular, reversible end walls, hinge members carried by said walls, removable pintles adapted to engage said hinge members to connect said walls together, and a removable core there being vertical grooves formed in both the inner and outer faces of the end walls and ends of said cores entering said grooves, one of said grooves being located upon one side of the center of said end walls and the other of said grooves being located upon the opposite side of the center of said end wall.

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

OLE BENSON.

Witnesses:

GEORGE W. COVELL,
HIRAM A. STURGES.