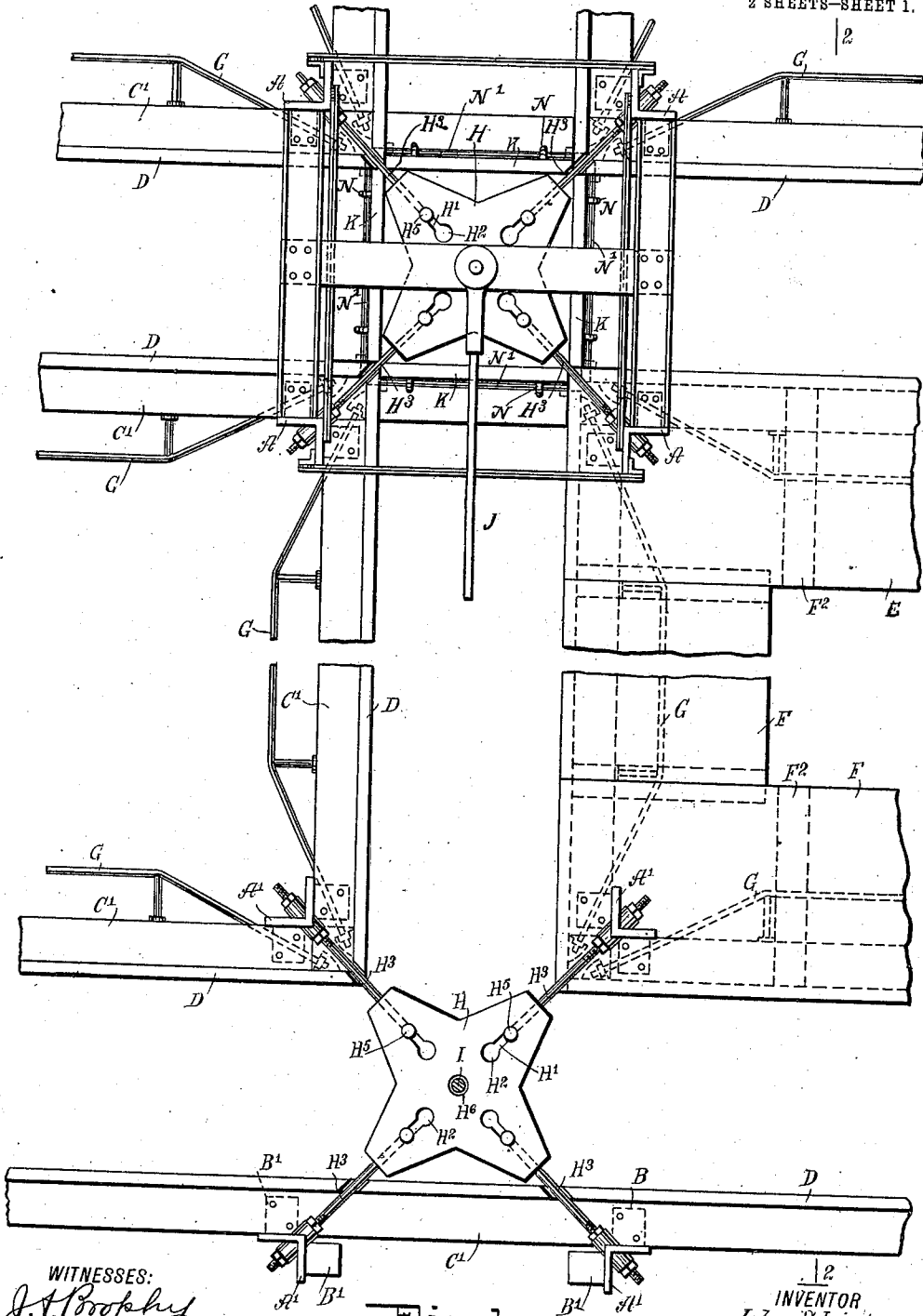


J. S. LINTON.  
MOLD FOR CONCRETE STRUCTURES.  
APPLICATION FILED JUNE 7, 1910.

996,419.

Patented June 27, 1911.

2 SHEETS—SHEET 1.



WITNESSES:  
*J. A. Murphy*  
*Wm. G. Woodard*

Fig. 1

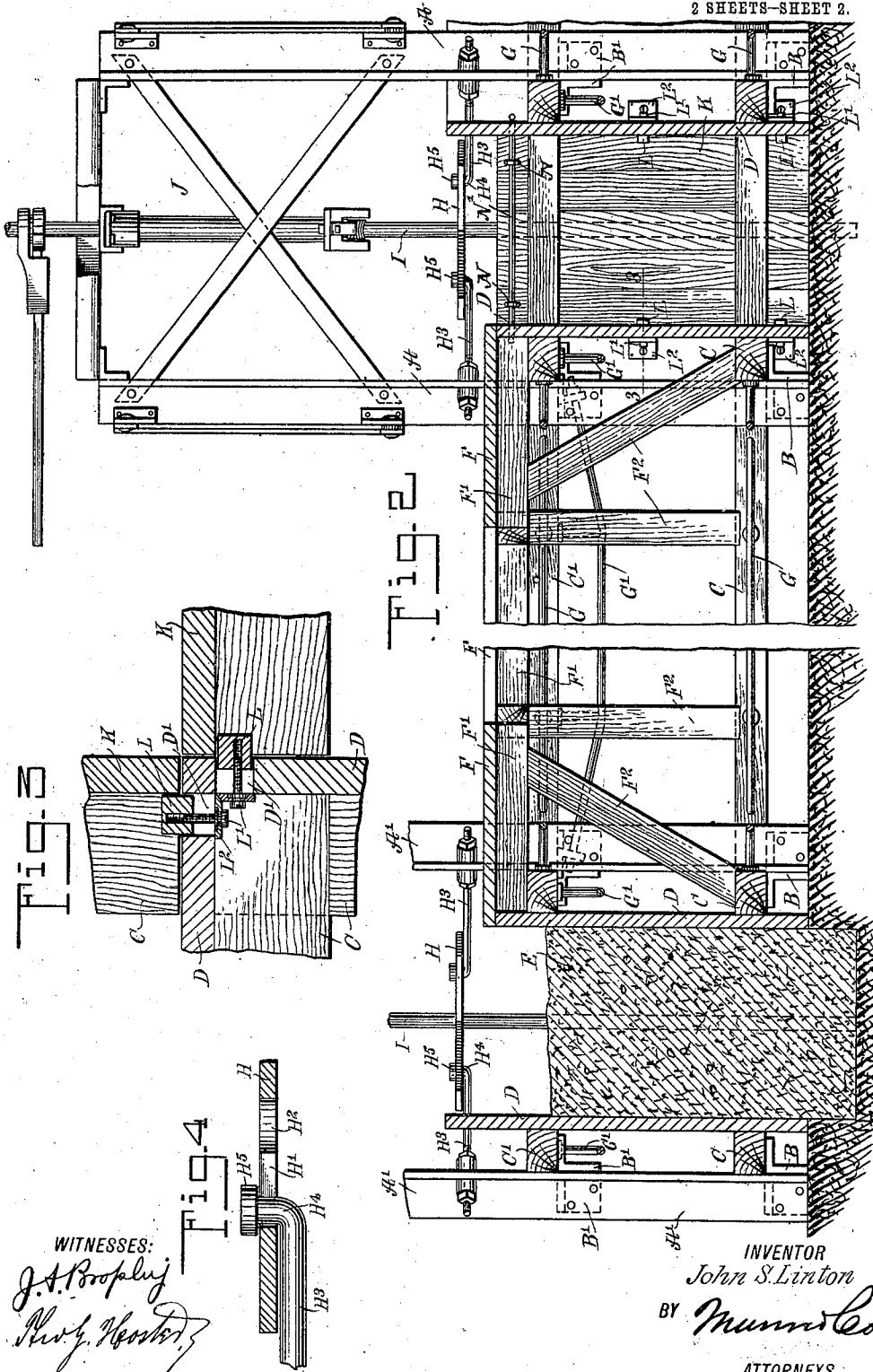
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WITNESSES:  
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# UNITED STATES PATENT OFFICE.

JOHN S. LINTON, OF CHICAGO, ILLINOIS.

MOLD FOR CONCRETE STRUCTURES.

996,419.

Specification of Letters Patent. Patented June 27, 1911.

Application filed June 7, 1910. Serial No. 565,454.

*To all whom it may concern:*

Be it known that I, JOHN S. LINTON, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Mold for Concrete Structures, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved mold or form for making concrete structures, such as walls, columns, beams, etc., and arranged to securely hold the mold parts in position, to allow of raising the mold as the building of the structure progresses, and to temporarily support the concrete material to be used in the formation of the structure. The special means for raising the mold are preferably such as are shown and described in the application for Letters Patent of the United States, No. 953,476, granted to me March 29, 1910.

The mold is provided with sets of uprights having brackets for supporting horizontal beams extending from one set of uprights to the other and to which the mold sides are secured so that the concrete material can be readily filled into the space between the opposite mold sides.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the mold; Fig. 2 is a sectional side elevation of the same on the line 2—2 of Fig. 1; Fig. 3 is an enlarged sectional plan view of part of the mold for forming columns, the section being on the line 3—3 of Fig. 2; and Fig. 4 is an enlarged sectional side elevation of part of one of the braces for connecting the uprights in a set with each other.

The sets of uprights A, A', preferably of angle iron, are set on the ground or other suitable foundation, at points adjacent to the corners or junctions of the walls, or at the columns to be erected in conjunction with the walls, as indicated in Figs. 1 and 2. On each of the uprights in the sets of uprights A and A' are secured lower and upper brackets B, B', on which rest horizontally-extending lower and upper beams C, C', reaching from the upright of one set to a corresponding upright of the next following set, to connect the sets of uprights with each other. To the inner faces of the beams C,

C' are secured mold sides D, between which is placed the concrete material E in plastic state, the outer mold sides being slightly higher than the inner mold sides, to prevent 60  
spilling of the concrete material when filling the same into the space between the opposite mold sides.

In order to temporarily store the concrete material prior to filling it into the mold, use is made of a platform F, arranged on the lower mold sides and attached to transverse beams F', resting with their inner ends on the upper mold beams C', the free ends of the said beams F' being supported by 70  
braces F<sup>2</sup>, resting on the lower beams C. Thus the platform F forms part of the mold and is raised with the latter, as the formation of the wall, column or like structure progresses. 75

In order to strengthen the beams C and C', use is made of side trusses G and bottom trusses G', the latter being preferably used only on the upper beams C'.

The uprights in each set of uprights A and A' are connected with each other by a brace formed of a plate H, provided with elongated apertures or slots H', having enlarged inner ends H<sup>2</sup>, as plainly indicated in Figs. 1 and 4, and bolts H<sup>3</sup> are attached 85  
to the uprights A or A' and are provided at their inner ends with angular offsets H<sup>4</sup> terminating in heads H<sup>5</sup>, which readily pass through the enlarged ends H<sup>2</sup> of the apertures H', to engage the offsets H<sup>4</sup> with the narrow portions of the apertures H'. The braces just described are arranged above the mold sides D, so as to permit of conveniently filling the concrete material between the opposite mold sides at the junctions of the walls or at the columns, without interfering with the said braces. Each of the brace plates H is provided with a central aperture H<sup>6</sup>, for the passage of a vertically-disposed reinforcing rod I set in the ground, and 100  
around which the concrete material is packed when building the wall or column, and the said rod I is engaged by the mold-raising device J, preferably of the construction shown and described in the application for Letters Patent above referred to, so that further detailed description of the said mold-raising device is not deemed necessary. 105

When building a column, use is made of gates K, arranged between the opposite mold sides at the corners of adjacent sides, as plainly indicated in Figs. 1 and 3, so that 110

the concrete material is filled in between the said gates to form a square column. The gates K are held in place against outward movement by the pressure of the concrete material filled in the space inclosed by the said gates, and for this purpose use is made of blocks L, mounted to slide in openings or bearings D' formed in the mold sides D (see Figs. 2 and 3), and in each of the blocks L screws a screw rod L', mounted to turn in a plate L<sup>2</sup>, attached to the outer face of the corresponding mold sides D. Now by the operator turning the screw rod L', the corresponding block L is pushed out or retracted, and when in the pushed out position, as shown in Figs. 2 and 3, it abuts against the outer face of the corresponding gate K, to hold the same in position against the pressure of the filling material for forming the column.

Each of the gates K is provided near its upper end and at the outer face thereof with staples N, for the passage of a rod N', extending through the adjacent mold sides D, so that when the latter are raised the gates K are lifted with the mold sides.

In using the mold, it is set up on the ground and the concrete material is placed on the platform F, and then filled in from the latter into the space between the mold sides D, and when the material has reached to within a distance of the upper ends of the lowermost mold sides D, then the lower portion of the material in the mold has sufficiently set to allow of safely raising the mold, as the concrete has now sufficient strength and is not liable to adhere to the inner faces of the mold. Fresh concrete material is constantly filled into the top of the mold, as the latter is slowly raised, both operations being carried on simultaneously.

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

1. A mold for concrete structures, comprising sets of uprights, brackets attached to the uprights, beams supported on the said brackets and extending from one set of uprights to the next one, mold sides attached to the said beams, and a bracing device for each set of uprights and connecting the uprights in each set with each other above the said mold sides, each bracing device comprising a horizontal plate provided with a central aperture for the passage of a vertically disposed reinforcing rod, and radially arranged elongated apertures having enlarged inner ends, and bolts extending through the said uprights and having upwardly extending ends terminating in heads and engaging the said elongated apertures.

2. A mold for concrete structures, comprising sets of uprights, brackets attached to the uprights, beams supported on the said brackets and extending from one set of

uprights to the next one, mold sides attached to the said beams, trusses for the said beams, and a bracing device for each set of uprights and comprising a horizontally arranged central plate having radial apertures, and bolts connected with the said uprights and detachably engaging the said apertures.

3. A mold for concrete structures, comprising sets of uprights, lower and upper brackets attached to the said uprights, upper and lower beams resting on the said brackets and extending from one set of uprights to the next one, mold sides attached to the said lower and upper beams, platforms supported on the said upper beams, and extending onto the top of the mold sides, the said platforms having braces resting on the lower beams, and a bracing device for each set of uprights and connecting the uprights in each set with each other above the said mold sides, each bracing device comprising a horizontally arranged plate having a central aperture for the passage of a vertically disposed reinforcing rod, the plate being provided with radial apertures, and bolts detachably connected at one end with the said uprights, the other ends of said bolts detachably engaging the said radial apertures.

4. A mold for concrete structures, provided with a set of uprights of angle iron, a plate having a central aperture for the passage of a reinforcing rod, and elongated radial apertures enlarged at their inner ends, and bolts extending through the said uprights and having angular headed ends engaging the said elongated apertures.

5. A mold for concrete structures, comprising sets of uprights, brackets on the said uprights, beams resting on the said brackets and extending from one set of uprights to the other, mold sides attached to the said beams, gates between the mold sides, and blocks slidable in openings in the mold sides to engage the outer faces of the gates, to hold the same in place.

6. A mold for concrete structures, comprising sets of uprights, brackets on the said uprights, beams resting on the said brackets and extending from one set of uprights to the other, gates between the mold sides at the corners thereof, blocks slidable in openings in the mold sides to engage the outer faces of the gates, and means for advancing or retracting the said blocks.

7. A mold for concrete structures, comprising sets of uprights, brackets on the said uprights, beams resting on the said brackets and extending from one set of uprights to the other, mold sides attached to the said beams, gates between the mold sides at the corners thereof, blocks slidable in openings in the mold sides to engage the outer faces of the gates, plates attached to the outer faces of the mold sides, and screw

rods screwing in the said blocks and mounted to turn in said plates to advance or retract the said blocks.

8. A mold for concrete structures, comprising sets of uprights, brackets on the said uprights, beams resting on the said brackets and extending from one set of uprights to the other, mold sides attached to the said beams, gates between the mold sides, blocks slidable in openings in the mold sides to engage the outer faces of the

gates, means for advancing or retracting the said blocks, and connections between the mold sides and the said gates for moving the gates when the mold sides are raised. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN S. LINTON.

Witnesses:

WALTER M. MILLER,  
DENIS J. KENNEY.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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