No. 791,585. PATENTED JUNE 6, 1905.

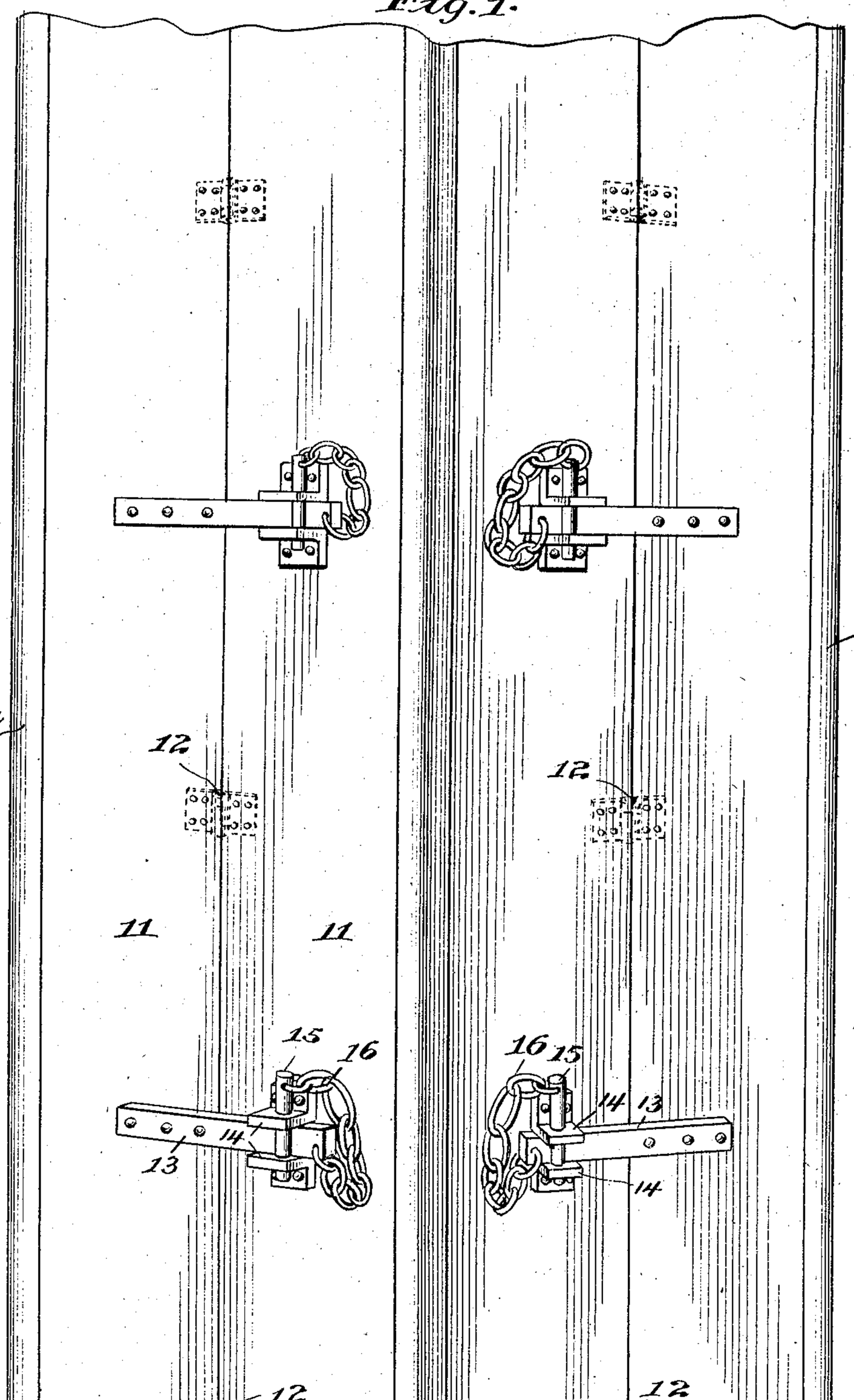
L. SCHULLER.

MOLD FOR CONCRETE COLUMNS OR THE LIKE.

APPLICATION FILED FEB. 27, 1905.

3 SHEETS—SHEET 1.

Fig. 1.




Witnesses,
L. S. Mann,
S. N. Pond.

Inventor,
Lawrence Schuller,
By Offield, Towler Linthicum
Attys.

No. 791,585. PATENTED JUNE 6, 1905.

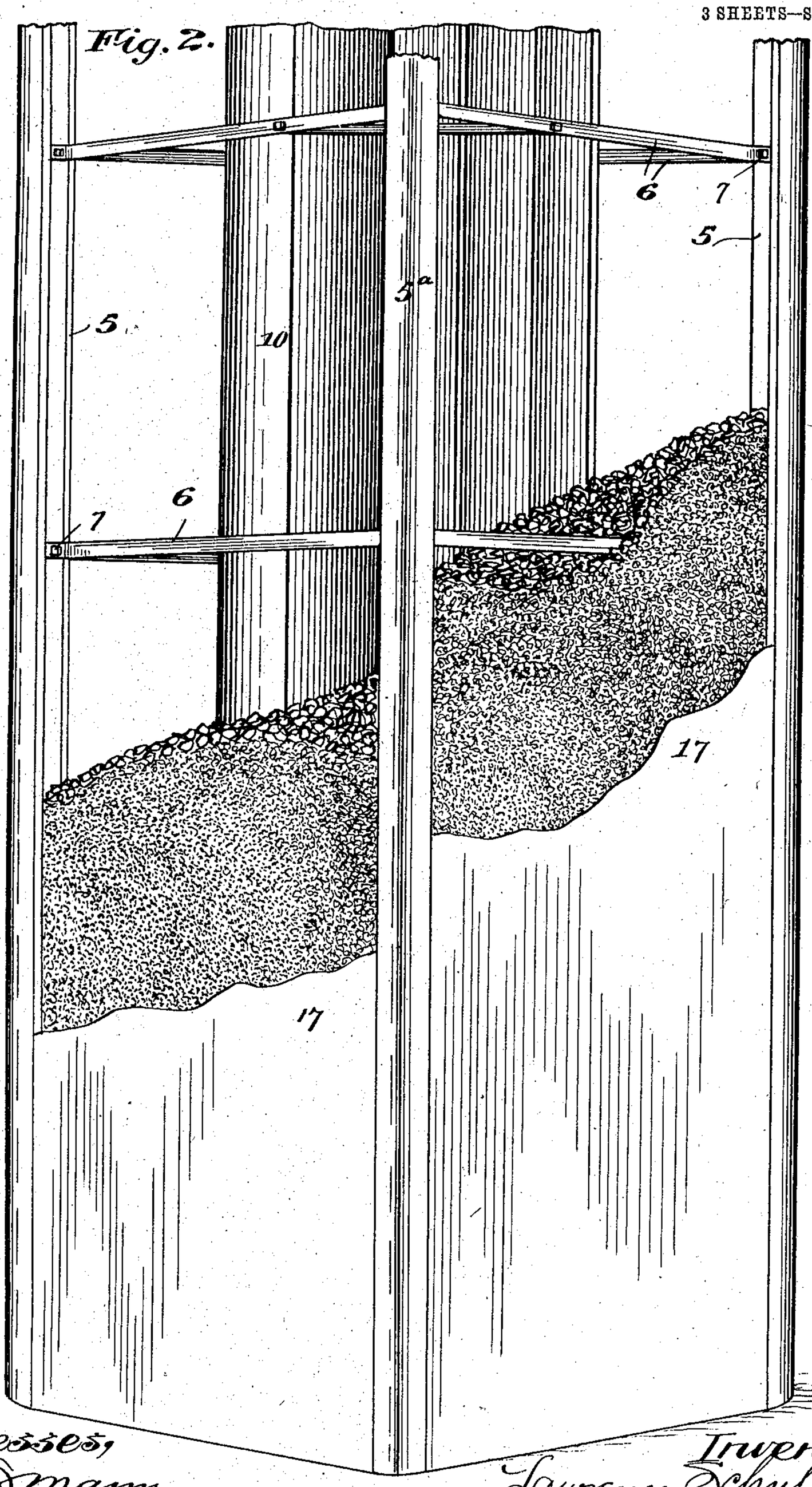
L. SCHULLER.

MOLD FOR CONCRETE COLUMNS OR THE LIKE.

APPLICATION FILED FEB. 27, 1905.

3 SHEETS—SHEET 2.

Fig. 2.




Witnesses,
F. D. Mann,
S. N. Pond.

Inventor,
Lawrence Schuller,
By Offield, Towle & Linthicum
Attys.

No. 791,585. PATENTED JUNE 6, 1905.

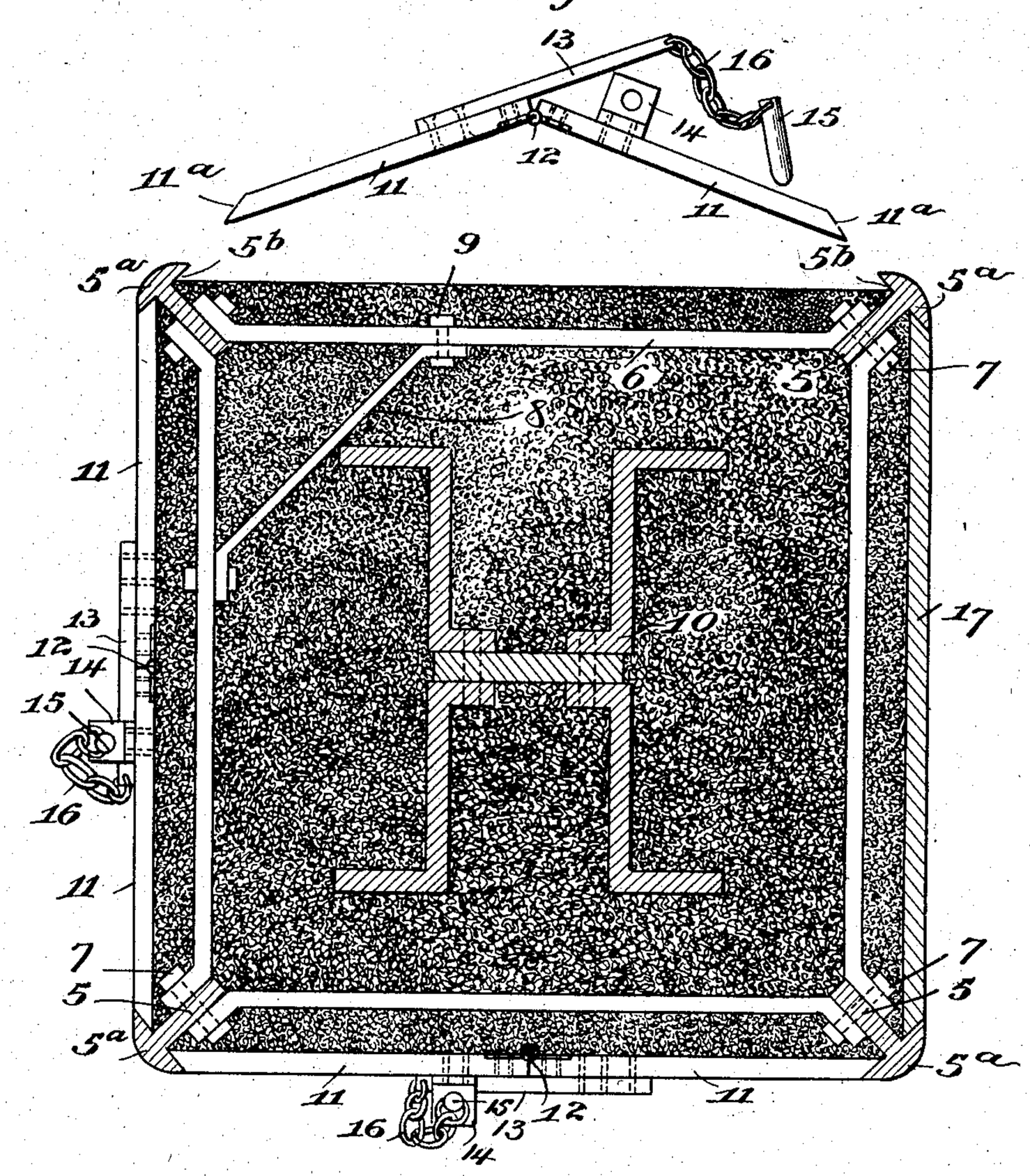
L. SCHULLER.

# MOLD FOR CONCRETE COLUMNS OR THE LIKE.

APPLICATION FILED FEB. 27, 1905.

3 SHEETS—SHEET 3.

Fig. 3.




Witnesses,
F. D. Mann,
S. N. Ford.

Inventor,
Lawrence Schuller,
By Offield, Towle & Linthicum
Atty's.

No. 791,585. Patented June 6, 1905.

# UNITED STATES PATENT OFFICE.

LAWRENCE SCHULLER, OF CHICAGO, ILLINOIS.

## MOLD FOR CONCRETE COLUMNS OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 791,585, dated June 6, 1905.

Application filed February 27, 1905. Serial No. 247,512.

*To all whom it may concern:*

Be it known that I, LAWRENCE SCHULLER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Molds for Concrete Columns or the Like, of which the following is a specification.

My invention relates to apparatus employed in the erection of concrete posts, columns, walls, and similar structures—more specifically stated, being in the nature of a mold for use in the erection of such structures.

The main object of my invention is to provide a simple and inexpensive apparatus which may serve to support and confine the concrete or other plastic material as it is inserted and packed in place during the building of the structure and the principal element of which may be readily removed for reuse in connection with subsequent structures.

My invention pertains, generally speaking, to that class of mold apparatus wherein certain minor parts are embodied in the structure itself and become permanent parts thereof, the principal parts, however, being removable for subsequent use.

Generally stated, my invention comprises a skeleton frame polygonal in cross-section and provided at its angles or corners with uprights which become permanent parts of the finished structure and which present exteriorly-finished surfaces in the nature of corner-beads and also provide on either vertical edge of the latter outwardly-convergent lips, forming thereunder dovetailed grooves adapted to interlockingly engage the edges of the movable side plates, each of said side plates comprising a pair of vertically-extending leaves hinged together at their adjacent margins so as to be capable by the bending and straightening of the leaves at their hinges to be readily inserted into and removed from operative position.

My invention will be fully understood when considered in connection with the accompanying drawings, which illustrate a preferred mechanical embodiment thereof, and in which—

Figure 1 is an elevational perspective view, broken off at its upper end, of my improved apparatus. Fig. 2 is a similar view of a partially-constructed column with the side plates omitted, and Fig. 3 is a cross-sectional view through the structure shown in Fig. 1.

Referring to the drawings, 5 designates each of a series of upright corner-posts, preferably of the substantial T-form herein illustrated, the outer surfaces of the heads being preferably rounded, as shown at $5^a$, to present a neat and finished appearance. The inwardly-extending portions or webs of said posts are securely united by strips or bars 6, secured, as by bolts 7, to and between adjacent webs, said cross-bars being placed at suitable intervals between the top and bottom of the structure, as shown in Fig. 2, to insure the accurate positioning and rigidity of the corner-posts. Said cross-bars may be connected by diagonal braces 8, secured thereto, as by bolts 9, and serving to square the frame. Within and substantially centrally of the frame thus formed may be erected for the greater strength and stability of the column, where required or necessary, additional steel framing, such as shown at 10, this latter feature being common in molded columns of this class and constituting no essential part of my present invention.

The removable side plates of my invention comprise each a pair of vertical leaves 11, which are united at their adjacent edges in such a manner as to be foldable by hinges 12. The outer margins of said leaves are beveled, as shown at $11^a$, to adapt said leaves to have dovetailed engagement with the inner surfaces of the heads of the corner-posts, said beveled margins entering the internal angles $5^b$, formed between the inner surfaces of the heads and the adjacent surfaces of the webs of the corner-posts. When said side plates have been inserted, the leaves 11 thereof are straightened, so as together to present a flat plane surface, as shown at the left and under sides of Fig. 3, and to retain them in such position I may employ any suitable locking means, that herein shown consisting of a bar 13, riveted to the

outer face of one of the leaves and adapted to overlie the outer face of the other, in association with a suitable staple on said other leaf, herein shown as comprising a pair of apertured lugs 14, between which the bar enters when the leaves are straightened, and a keeper pin or bolt 15, attached with necessary freedom of movement to the bar, as by a chain 16, and adapted to enter the apertures of said lugs behind said bar.

In the operation of my invention the skeleton metal frame is first erected, and the side plates are then applied thereto by bending the same at their hinged margins, as indicated at the upper side of Fig. 3, sufficiently to permit the beveled outer edges of the leaves 11 to enter the internal angles $5^b$ of the corner-beads, whereupon by straightening said leaves said plates and corner-beads are brought into snug engagement and retained therein by the bars 13 and keeper-pins 15, as plainly shown in Fig. 1. The wet concrete or other plastic agglomerate is then filled in and allowed to harden and set, after which the side plates may be readily removed by withdrawing the locking-pins 15 and bending the leaves of said plates sufficiently to permit their retraction from the dovetailed grooves of the frame in an obvious manner.

In practice the side plates may either be made the full height of the column to be erected or they may be made of any convenient height less than the full height of the column and be loosened and adjusted upwardly as successively-superimposed portions of the column are hardened, this latter method being common practice in the erection of concrete structures of this nature and constituting no part or feature of the present invention.

It should be stated that the polygonal skeleton frame consisting of the corner-posts 5, tie-bars 6, and braces 8 are not designed as essential strength-giving elements of the structure, although they necessarily become permanent parts of the latter; but their principal function is to serve, in coöperation with the hinged side plates, as elements of the mold, although the outer surfaces of the heads of the corner-posts possess an important incidental feature as corner strips or beads, giving to the column a neat and finished appearance and providing therein corners not liable to become injured or defaced. In practice after the side plates have been removed the space previously occupied thereby is preferably filled in with an external coping of cement or plaster made flush with the outer surface of the corner-beads, as indicated at 17 on the right of Fig. 3.

It is evident that the special formation and construction of the corner-posts and hinged leaves 11 of the side plates herein shown and described is not of the essence of the invention so long as said elements are provided with interengaging parts which coöperate when the side plates are straightened and locked to hold said plates securely in position against the outward pressure of the filled-in material. For practical purposes, however, corner-plates of generally T form coöperating with side plates having beveled outer margins which engage beneath the heads of said T-irons constitute the preferred construction.

I claim—

1. A mold for concrete columns and the like, comprising a skeleton structure including a plurality of interconnected uprights, and a plurality of removable hinged side plates, said uprights and said side plates being provided with interlocking parts brought into coöperation by straightening said hinged plates between adjacent uprights, substantially as described.

2. A mold for concrete columns and the like comprising a skeleton structure including a plurality of interconnected uprights having their outer portions formed with convergent marginal lips, in combination with a plurality of removable hinged side plates, the outer margins whereof are adapted to underlie and interlock with the said lips of the uprights when said plates are straightened to thereby form the side walls of the mold, substantially as described.

3. A mold for concrete columns and the like comprising a skeleton structure polygonal in cross-section and including a plurality of interconnected uprights at the corners thereof, said uprights having their outer portions formed to present external corner-surfaces for the finished column and also convergent marginal lips, in combination with a plurality of removable hinged side plates, the outer margins whereof are adapted to underlie and interlock with said lips of the uprights when said plates are straightened to thereby form the side walls of the mold, substantially as described.

4. A mold for concrete columns and the like comprising a skeleton structure polygonal in cross-section and including a plurality of interconnected T members at the corners thereof, the heads whereof constitute corner-beads of the finished structure, in combination with a plurality of removable hinged side plates, the outer margins whereof are adapted to underlie and interlock with the heads of said T-irons when said plates are straightened, to thereby form the side walls of the mold, substantially as described.

5. A mold for concrete columns and the like comprising a skeleton structure polygonal in cross-section and including a plurality of interconnected T-irons at the corners thereof, the heads whereof constitute corner-beads of

the finished structure, in combination with a plurality of removable side plates, each comprising a pair of leaves hinged together at their adjacent vertical margins and having their outer margins suitably beveled to underlie and interlock with the heads of adjacent T-irons when said plate is straightened therebetween, and means for locking said leaves in straightened position, substantially as described.

LAWRENCE SCHULLER.

Witnesses:
EMANUEL N. POND,
FREDERICK C. GOODWIN.