

No. 771,519.

PATENTED OCT. 4, 1904.

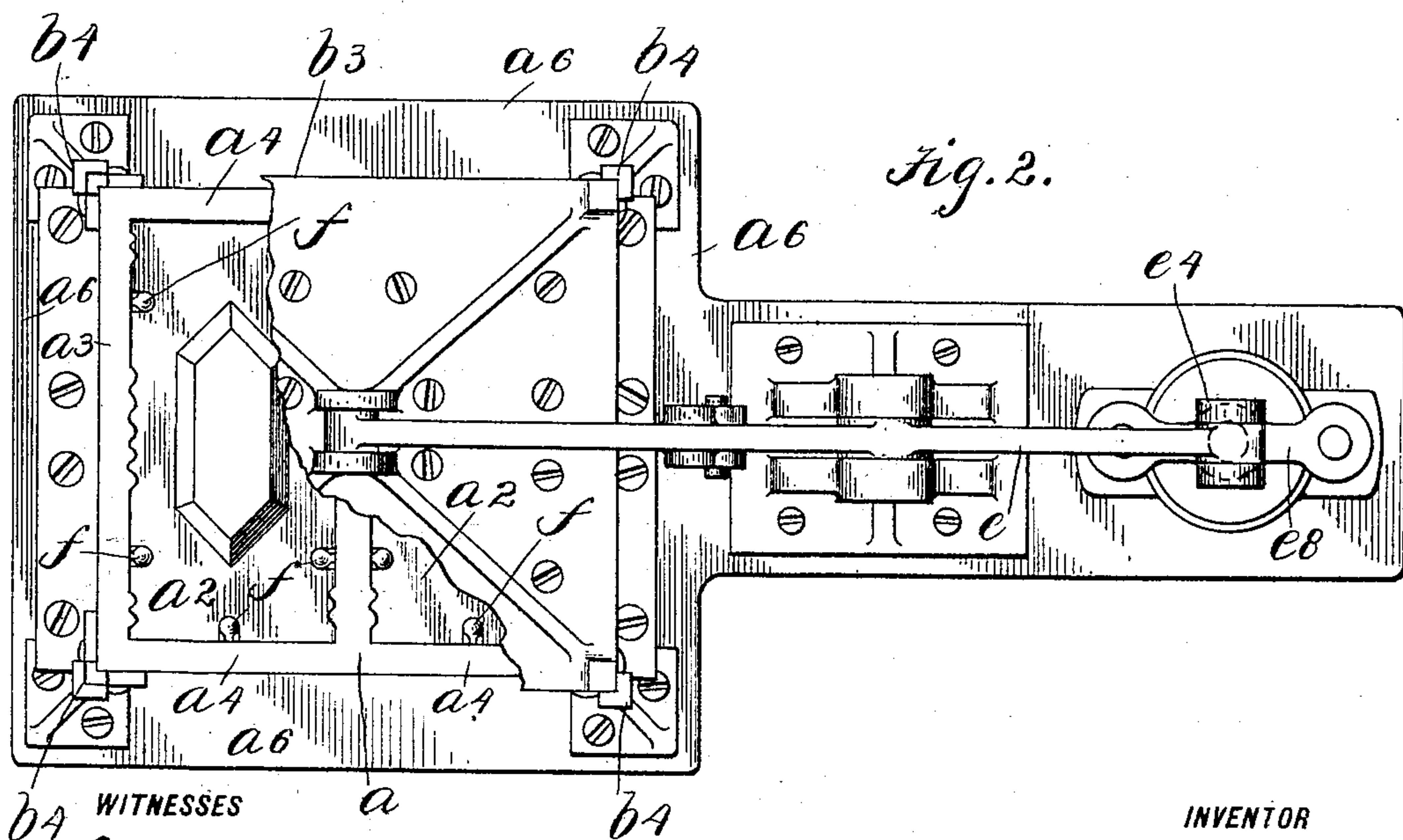
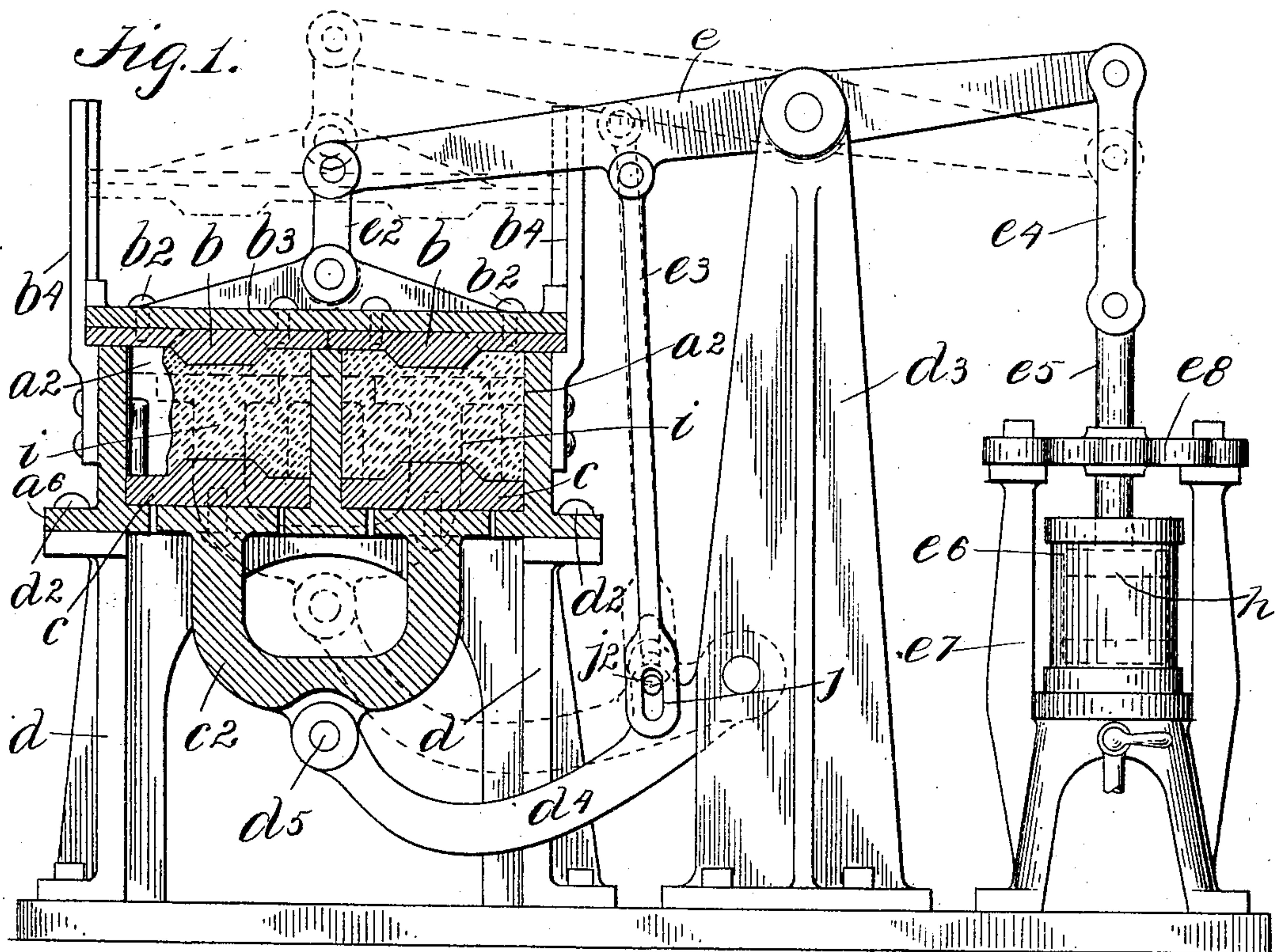
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MOLD FOR MAKING BUILDING BRICKS OR BLOCKS.

APPLICATION FILED NOV. 10, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES
F. A. Stewart
C. J. Klein

INVENTOR
BY *Thomas W. Worrall*
Edgar Tate & Co
ATTORNEYS

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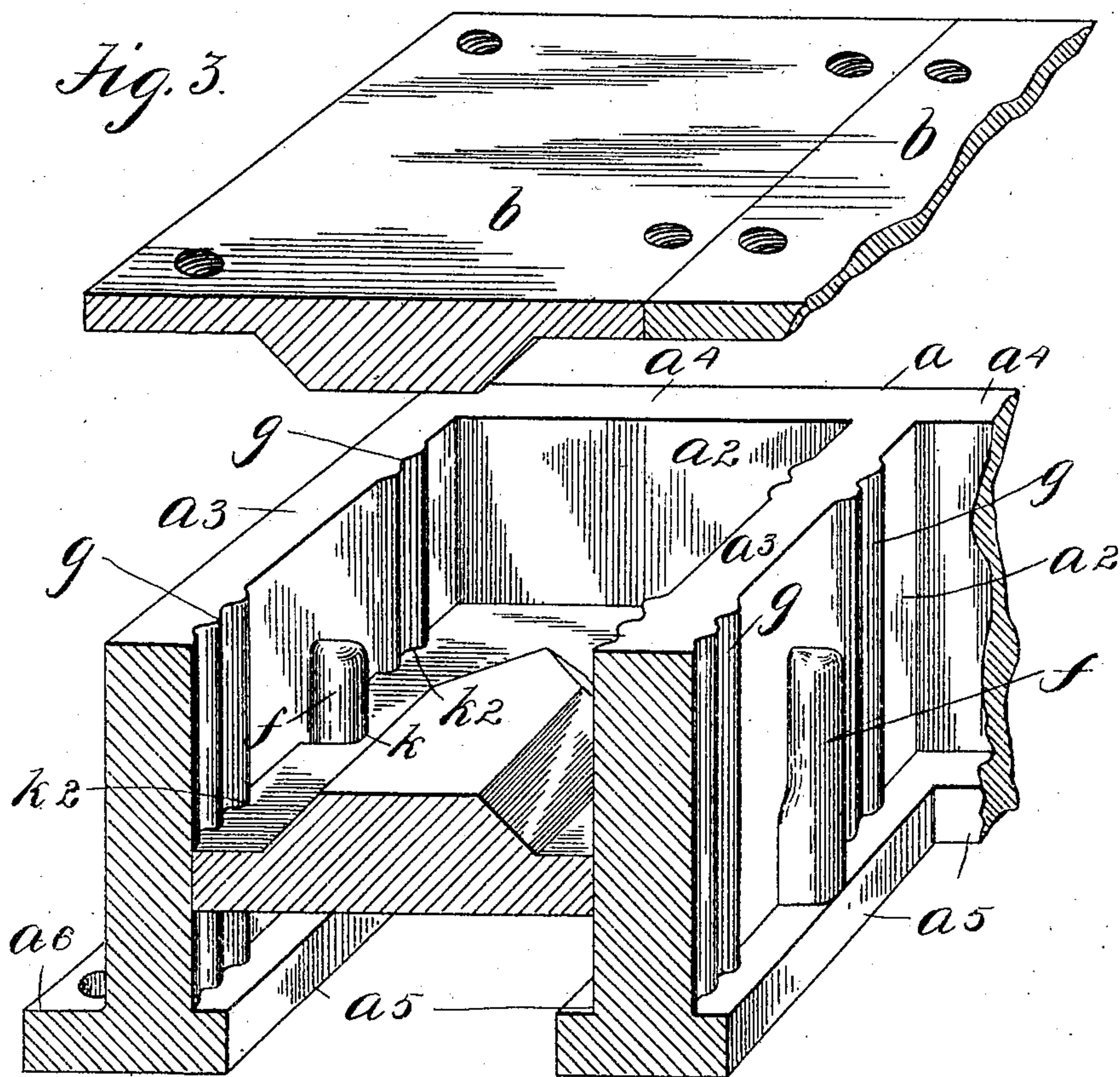
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UNITED STATES PATENT OFFICE.

THOMAS W. WORRALL, OF NEW YORK, N. Y.

MOLD FOR MAKING BUILDING BRICKS OR BLOCKS.

SPECIFICATION forming part of Letters Patent No. 771,519, dated October 4, 1904.

Application filed November 10, 1903. Serial No. 180,514. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. WORRALL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Molds for Making Building Bricks or Blocks, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to molds for making building bricks or blocks designed to be faced either separately or in a wall by facings connected therewith by means of locking-keys formed on the facings and recesses formed in the bricks or blocks and adapted to receive said keys, all as shown and described in an application for Letters Patent prepared and filed by me of equal date herewith and entitled "Building bricks or blocks and facings therefor;" and the invention consists, primarily, in a mold or molds of the class specified constructed as hereinafter described and claimed and, secondarily, in means for operating said molds.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a sectional side view showing a mold or molds for making building bricks or blocks made according to my invention and a machine for operating said molds; Fig. 2 a plan view of the construction shown in Fig. 1 with part thereof broken away, and Fig. 3 a perspective view of a part of the mold or molds shown in Fig. 1 and showing the parts detached and partially in section.

In the practice of my invention I provide a mold comprising in the form of construction shown a box portion a , which in the form of construction shown is provided with two compartments a^2 , and these compartments are formed by side walls a^3 and end walls a^4 . The compartments a^2 are open at the top and bottom and provided at the bottom with inwardly-directed flanges a^5 , and the mold-box a is pro-

vided at the bottom with a surrounding flange 50 or rim a^6 .

The mold-box a is provided with a cover b for each of the compartments a^2 , and these covers are secured, by means of screws b^2 or otherwise, to the bottom of a vertically-movable plunger b^3 , which is mounted between corner-guides b^4 , secured to the corner portions of the mold-box a .

Within the bottom portion of each of the compartments a^2 is placed a vertically-movable follower c , and these followers form movable bottoms for the said compartments, and secured to the bottoms of said followers c is a yoke-shaped device c^2 .

The mold-box a in the form of construction shown is secured to any suitable frame d by means of screws or bolts d^2 , and said frame is provided with an upright member d^3 , which is higher than that part of the frame to which the mold-box is secured and to the bottom portion of which is pivoted a curved arm d^4 , which is pivoted to the yoke c^2 at d^5 . Mounted in the top of the upright portion d^3 of the frame is a lever e , one end of which is loosely connected with the plunger b^3 by means of a link e^2 , and the lever e and arm d^4 are loosely connected by a rod e^3 , which has a sliding connection with the arm d^4 . The outer end of the lever e is loosely connected, by means of a link e^4 , with a vertically-movable piston-rod e^5 , which passes into a cylinder e^6 , supported in a frame e^7 , provided at the top with a cross-head e^8 , through which the piston-rod e passes.

The mold-box (shown in Fig. 3) or the side walls thereof in the separate compartments are provided with vertically-arranged members f , the body portions of which are segmental in cross-section, and the sides thereof adjacent to the side walls of the said compartments are undercut and much narrower than the body portions thereof except at the bottom where said sides are of the same transverse thickness as the body portion of said members, and the object of these members is to form lock-recesses in the sides of the bricks or blocks molded in said compartments, as shown and described in the application hereinbefore referred to, said recesses being adapted to re-

ceive keys formed on facings designed to be applied to such bricks or blocks, all as shown and described in the said application hereinbefore referred to. In the form of construction shown in Fig. 3 the sides of the compartments a^2 are provided with one of the projecting members f , but in Fig. 2 the ends and sides are both provided with these members, the sides being provided with two thereof.

10 The side walls of the compartments a^2 in the mold-box a are also provided with vertically-arranged ribs g , whereby corresponding grooves are formed in the bricks or blocks cast in said molds, the object of said grooves

15 being to provide means to enable cement, plaster, or similar material to adhere to the bricks or blocks.

The rod e^5 is connected with a piston h , movable in the cylinder e^6 and shown only in dotted lines, and this piston may be operated in the manner of other devices of this class to raise and lower the outer end of the lever e or to operate said lever, and in order to accomplish this result steam, air under pressure, or

25 any suitable liquid under pressure may be employed, or said lever e may be operated in any desired manner.

The operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof. When the bottom or follower is in the position shown in full lines in Fig. 1 and the cover is raised as high as it will go without moving the bottom or follower, the concrete or other material from which the bricks or blocks are made may be placed in the compartments a^2 , and in this operation said compartments are filled

30 rounding full. The lever e is then operated so as to depress the plunger b^3 into the position shown in Fig. 1, and this operation compresses the bricks or blocks in the compartments of the mold and the said bricks or blocks assume the shape or form shown and described

35 in the application hereinbefore referred to. The next step of the operation is to raise the plunger b^3 , and after said plunger has been raised through a certain distance the rod e^3 , operating in connection with the arm d^4 , also

40 so as to depress the plunger b^3 into the position shown in Fig. 1, and this operation compresses the bricks or blocks in the compartments of the mold and the said bricks or blocks assume the shape or form shown and described

45 in the application hereinbefore referred to. The next step of the operation is to raise the plunger b^3 , and after said plunger has been raised through a certain distance the rod e^3 , operating in connection with the arm d^4 , also

50 raises the followers c , which are connected with the yoke e^2 and which constitute the bottoms of the mold-compartments, and said followers c are raised to the position shown in dotted lines in Fig. 1 and the bricks or

55 blocks are removed and placed in a kiln to be dried, after which the lever e is again operated to lower the followers c into the position shown in full lines in Fig. 1, and the above-described operation may be repeated as long

60 as desired. It will be observed that this operation of the plunger b^3 and the followers c is made possible by means of the connection of the rod e^3 with the arm d^4 , said rod being provided in its lower end with a slot j and

said arm with a pin j^2 , movable in said slot; 65 but my invention is not limited to the exact mechanism herein shown and described for operating the mold or molds and the various parts thereof, and any suitable means or construction may be employed for this purpose. 70 It will also be observed that the bottoms or followers c of the compartments a^2 are provided with recesses k , in which the members f fit and are adapted to move, and with other recesses k^2 , in which the ribs g fit and 75 are adapted to move.

The molds for making building bricks or blocks described and claimed in this application are intended for making such building bricks or blocks as are shown and described 80 in another application for Letters Patent of the United States filed by me November 11, 1903, Serial No. 180,646.

Having fully described my invention, what I claim as new, and desire to secure by Letters 85 Patent, is—

1. A mold-box provided with a compartment open at the top and bottom, a vertically-movable bottom or follower placed in said compartment, said box being also provided 90 with a vertically-movable cover, a wall of said compartment being provided with a vertically-arranged member which extends from the bottom thereof upwardly only a part of the height thereof and the top side portions 95 of which are undercut, said member being adapted to form a recess in a brick or block cast in the mold-box, and said vertically-movable bottom or follower being provided with a recess in which said vertically-ar- 100 ranged member fits and is adapted to move, substantially as shown and described.

2. A mold-box provided with a compartment open at the top and bottom, a vertically-movable bottom or follower placed in said 105 compartment, said box being also provided with a vertically-movable cover, a wall of said compartment being provided with a vertically-arranged member which extends from the bottom thereof upwardly only a part of 110 the height thereof and the top side portions of which are undercut, said member being adapted to form a recess in a brick or block cast in the mold-box, said vertically-movable bottom or follower being provided with a 115 recess in which said vertically-arranged member fits and is adapted to move, and means for raising and lowering the vertically-movable bottom or follower and for raising and lowering the cover, substantially as shown and 120 described.

3. A mold-box provided with a plurality of compartments the walls of which are provided with vertically-arranged members which do not extend to the top thereof and the top 125 side portions of which are undercut, said members being adapted to form recesses in the sides of bricks or blocks cast in said box,

a vertically-movable bottom or follower placed in said compartments and provided with recesses adapted to receive said members, and a vertically-movable cover for said box, substantially as shown and described.

5 In testimony that I claim the foregoing as my invention I have signed my name, in pres-

ence of the subscribing witnesses, this 9th day of November, 1903.

THOMAS W. WORRALL.

Witnesses:

F. A. STEWART,
C. E. MULREANY.