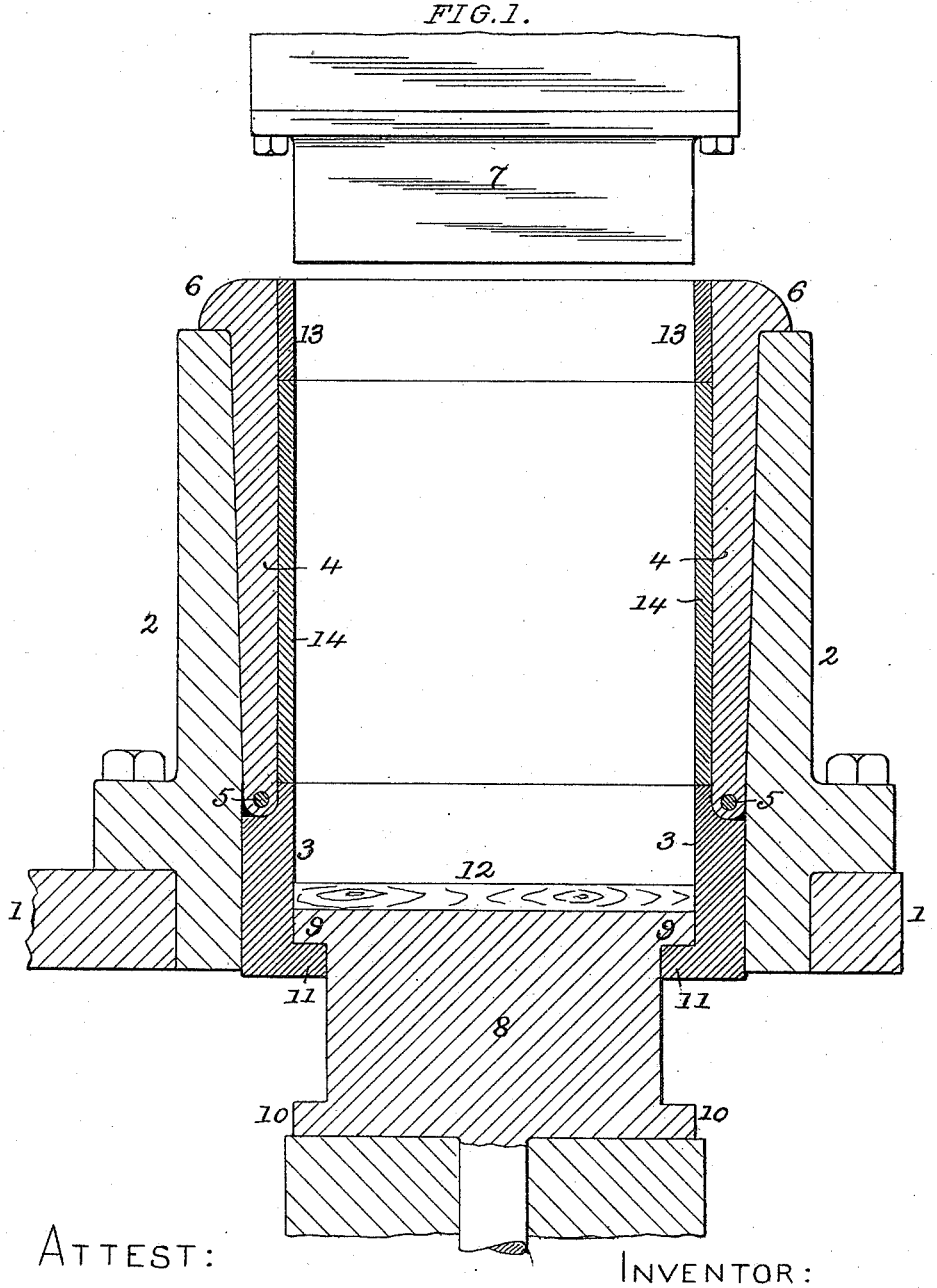
(No Model.) 3 Sheets—Sheet 1.

G. M. GRAHAM.

SECTIONAL MOLD FOR BUILDING OR PAVING BLOCKS.

No. 493,767. Patented Mar. 21, 1893.

FIG. 1.



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(No Model.) 3 Sheets—Sheet 2.

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FIG. 2.

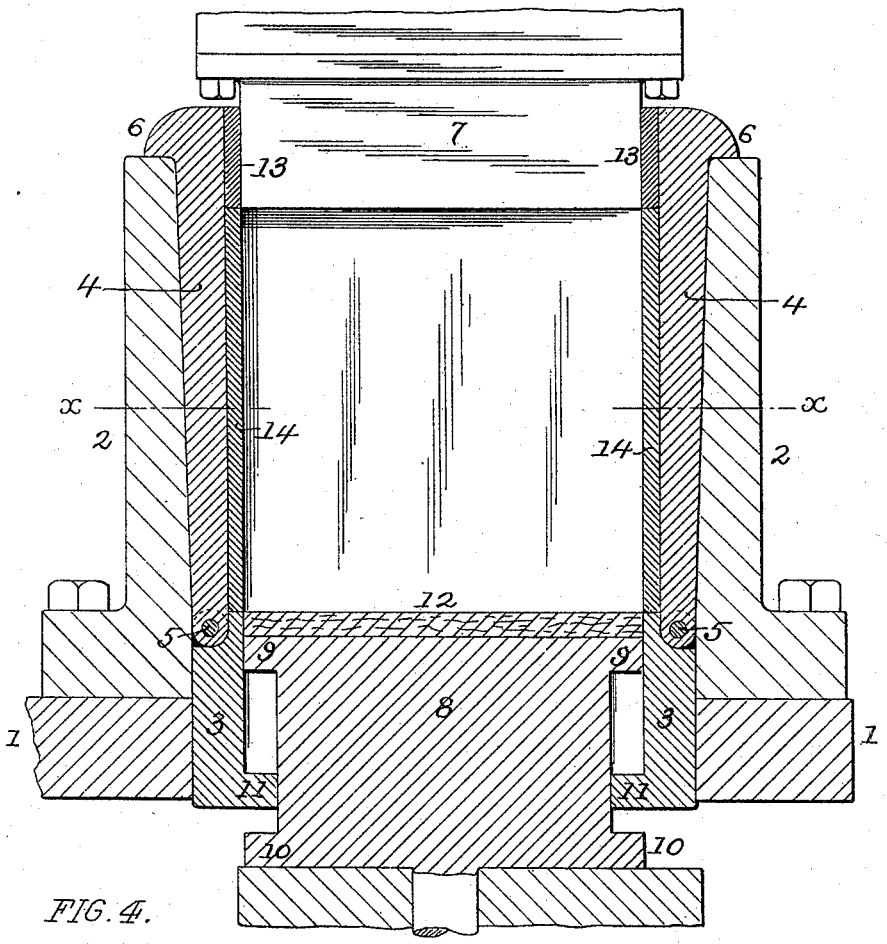
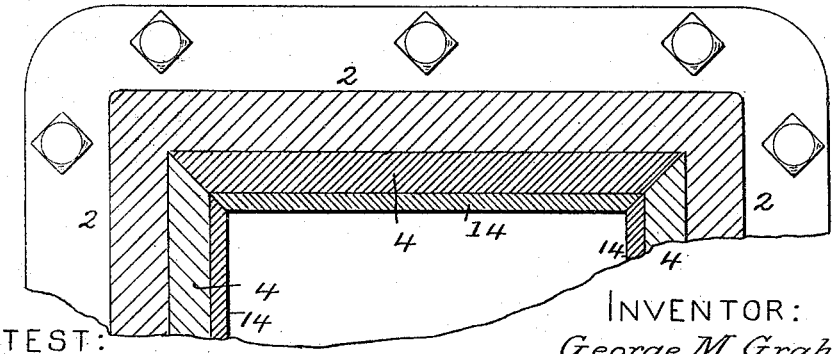


FIG. 4.



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(No Model.) 3 Sheets—Sheet 3.

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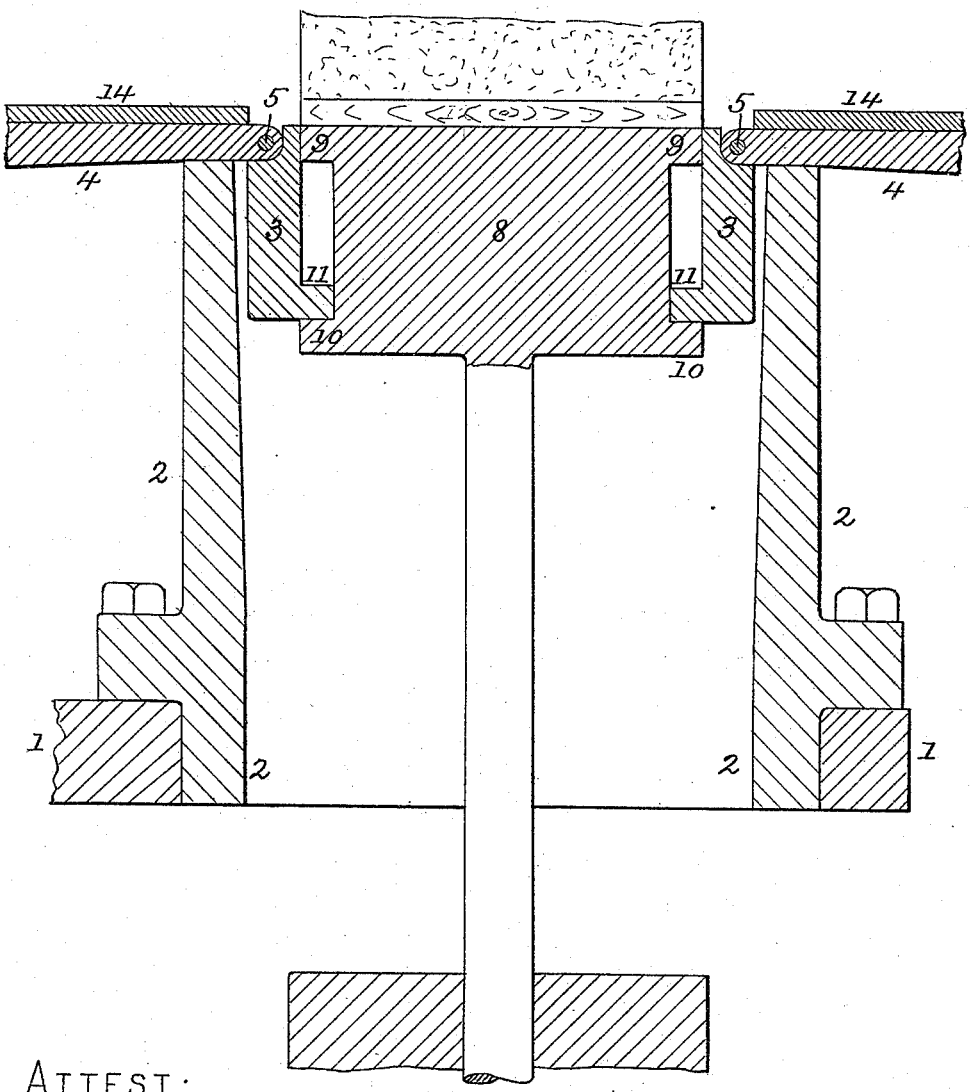
SECTIONAL MOLD FOR BUILDING OR PAVING BLOCKS.

No. 493,767. Patented Mar. 21, 1893.

FIG. 3.



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UNITED STATES PATENT OFFICE.

GEORGE M. GRAHAM, OF CHICAGO, ILLINOIS.

SECTIONAL MOLD FOR BUILDING OR PAVING BLOCKS.

SPECIFICATION forming part of Letters Patent No. 493,767, dated March 21, 1893.

Application filed May 11, 1891. Renewed September 23, 1892. Serial No. 446,724. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. GRAHAM, 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 Sectional Molds for Building or Paving Blocks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that type of sectional molds for concrete or like plastic materials, that are adapted to unfold after the molding or compressing operation, to admit of the ready removal of the molded article, the object of the present improvement being to afford a simple, durable and convenient sectional mold formation for use in the manufacture of building or paving blocks, more especially the form of block, illustrated in my Letters Patent No. 401,492, issued April 16, 1889, and in which are embodied the features of a simple and accurate holding of the mold sections or walls in proper position during the compressing operation, an automatic folding apart of said mold sections or walls, after the compressing operation, to admit of the ready and convenient removal of the finished block, and an automatic folding together of the same, after the finished block is removed, and prior to the refilling of the mold, for a subsequent compressing operation. I attain such objects by the construction and arrangement of parts illustrated in the accompanying drawings, in which:

Figure 1, is a vertical sectional elevation, illustrating my improved sectional mold formation, and its connections; in a position prior to a compressing operation; Fig. 2, a similar view of the parts in position after the final compression of the block; Fig. 3, a similar view, illustrating the same in an unfolded condition to admit of the removal of the finished or compressed block; and, Fig. 4, a horizontal section at line *x*—*x*.

Similar numerals of reference indicate like parts in the different views.

My present improvement is more especially adapted for use in connection with that type of presses in which a series of molds are carried upon a rotary table, that is intermittently operated to bring the molds, successively under the charger or filler, then to the compressing plungers, and finally to the discharging table or point for the finished block. I do not however limit my present invention to such special application, and it may be used with but little if any modification, in connection with a press having a reciprocating or other form of movable mold without departing from the spirit of my present invention.

Referring to the drawings 1, represents a rotary mold table, and 2, the mold housing forming a part thereof or separately secured thereto, and having an upwardly flaring cavity to receive the tapering outer surface of the sectional mold proper, which in the construction shown in the drawings consists of a lower rectangular frame portion 3, to which the four independent side pieces or walls 4 of the mold, are hinged at their lower ends by suitable hinges or joints 5, so as to swing outwardly, as shown. The tapering formation above described is formed upon the outer surface of these mold wall sections, 4, so that they will tend to wedge within the flaring cavity of the one piece mold housing 2, so as to assume and retain against pressure, the required form of mold cavity.

At their upper ends the mold wall sections 4, are provided with flanges or rims 6, that limit their descent in the mold housing 2.

7 is the upper mold plunger and 8 the lower mold plunger to which reciprocating motion to compress the charge of material in the mold cavity, is imparted by any usual and suitable mechanism. The lower mold plunger 8, in the present invention, is made capable of a limited independent movement with relation to the mold proper by means of its top and bottom flanges 9 and 10, and the inturned flanges 11, on the lower mold frame 3, as shown, such independent motion being equal to the amount of travel of the lower plunger in effecting a compression of the lower part of the charge within the mold, and such amount of travel will take place wholly within the mold frame 3, as shown. Other well known equivalent means may be substituted for the above described flanges to limit the

independent movement of the lower mold plunger without departing from the spirit of this part of my invention.

In the present invention the subsequent motion of the lower mold plunger 8, will carry with it the mold proper 3, 4, up out of the stationary mold housing 2, so that the sectional walls 4, will be capable of swinging apart leaving the compressed block, wholly supported by the lower mold plunger, either directly, or through an interposed palette, 12, in a condition ready for easy and convenient removal.

In the practical carrying out of my invention, it is immaterial whether the mold housing 2, remains stationary while the mold proper 3, 4, moves vertically, as heretofore described and as illustrated in the drawings or whether the mold plunger remains stationary while the mold housing 2, is moved vertically from engagement therewith, the same results accruing from either mode of operation.

The space in the mold in which the upper mold plunger 7, has movement is left plane, and may be provided with wear plates 13 if so desired, and the lower frame 3, may be similarly provided if so desired. The space in the mold between the limit of inward travel of the mold plungers 7 and 8, is provided with removable liners or sections 14, the face of which is formed of any required configuration, so as to produce the desired form of block, the liners being ribbed or tongued, on their backs so as to afford a firm and convenient means for securing them to their respective mold sections or walls 4.

The vertical joints at the corners of the sectional mold may be of any ordinary or usual form, preferably the beveled form illustrated in Fig. 3.

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

1. The combination of the mold housing 2, the lower mold frame 3, and the vertical walls or sections 4, pivoted thereto and provided with flanges or rims 6, at their upper ends, as and for the purpose set forth.

2. The combination of the mold housing 2, the lower mold frame 3, and the vertical walls or sections 4, pivoted thereto and provided with flanges or rims 6, and removable facings or linings 14, as and for the purpose set forth.

3. The combination of the mold housing 2, the lower mold frame 3, and the vertical walls or sections 4, pivoted thereto and provided with flanges or rims 6, removable facings or linings 14, and wear plates 13, as and for the purpose set forth.

4. The combination of the mold housing 2, vertical walls or sections 4, and the lower mold frame 3, connected to the sections 4 by hinges or pivots, with the lower mold plunger and means for confining or limiting its vertical movement independent of the mold, substantially as herein described.

5. The combination of the mold housing 2, vertical walls or sections 4, and the lower mold frame 3, connected to the sections 4 by hinges or pivots, and provided with inturned flange 11, with the lower mold plunger 8, provided with top and bottom flanges 9 and 10, as described and for the purpose set forth.

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

GEORGE M. GRAHAM.

Witnesses:
ROBERT BURNS,
M. W. BYRNE.