No. 776,794. PATENTED DEC. 6, 1904.

G. L. PEABODY.

MANUFACTURE OF BUILDING BLOCKS.

APPLICATION FILED MAR. 14, 1904.

NO MODEL.

Fig. 2.

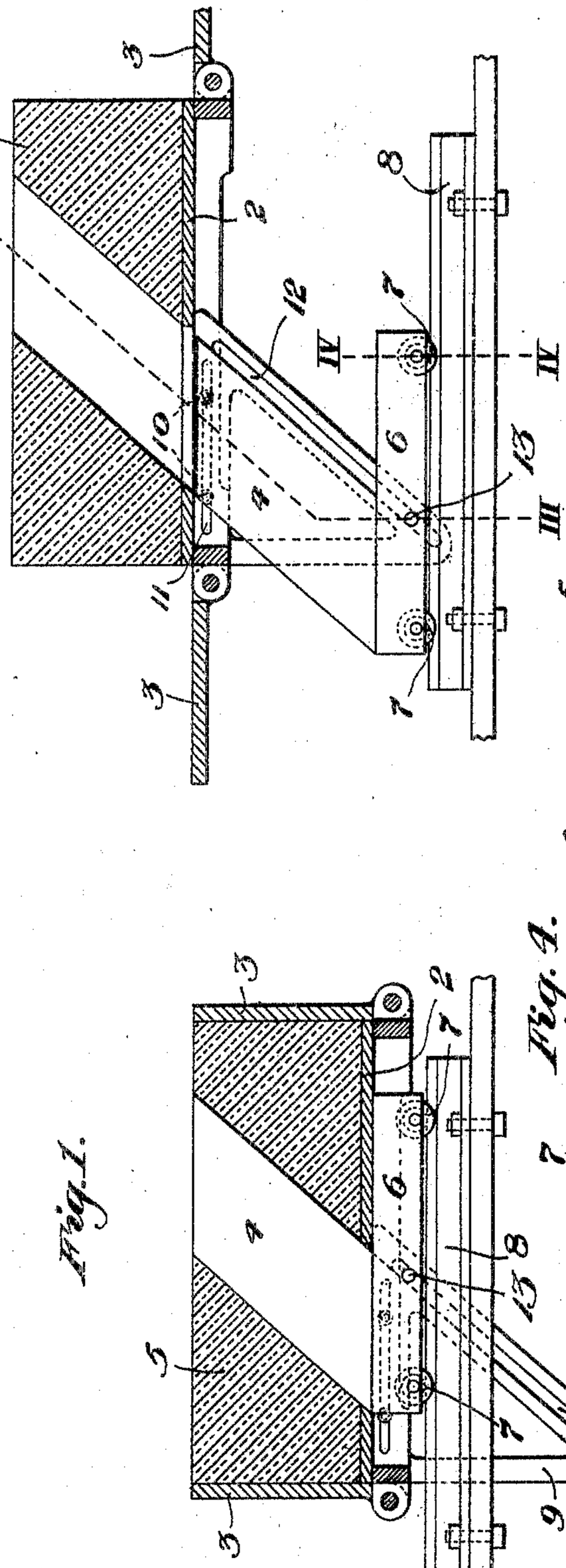

Fig. 3.

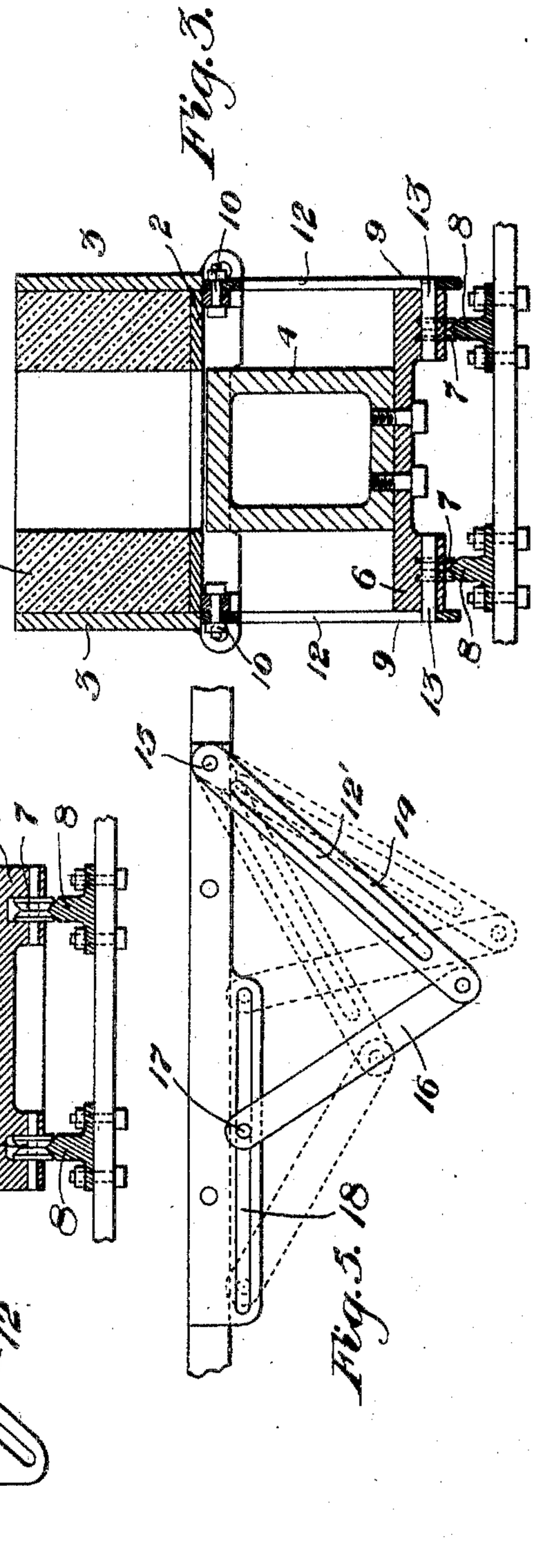

Fig. 4.

Fig. 5.

Fig. 1.

Witnesses.

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No. 776,794. Patented December 6, 1904.

UNITED STATES PATENT OFFICE.

GEORGE L. PEABODY, OF PITTSBURG, PENNSYLVANIA.

MANUFACTURE OF BUILDING-BLOCKS.

SPECIFICATION forming part of Letters Patent No. 776,794, dated December 6, 1904.

Application filed March 14, 1904. Serial No. 197,932. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. PEABODY, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in the Manufacture of Building-Blocks, of which the following is a specification, reference being had therein to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical longitudinal section of a molding-machine used in carrying out my invention, showing a molded building-block formed within the hinged sides and around the removable core. Fig. 2 is a similar view showing the block raised upon the supporting-base, the ends and sides open, the core having been moved toward one end after the block has been raised away from it. Fig. 3 is a vertical cross-sectional view on the line III III of Fig. 2. Fig. 4 is a cross-section on the line IV IV of Fig. 2. Fig. 5 is a detail view, in side elevation, showing an adjustable shifting-groove.

My invention refers to the manufacture of concrete or cement building-blocks, and refers more particularly to the manner in which an inclined cavity is provided, the cavity extending diagonally or slantingly through the block. Heretofore in making blocks of this character it has been impossible to economically or practically mold them with slantingly-arranged openings, owing to the difficulty in withdrawing the core, and such blocks have therefore been provided with transverse openings at right angles to the opposite faces and are consequently limited in their use as building material.

The object of my invention is to manufacture blocks having slantingly-arranged openings for chimney or other flues, such as are disclosed in a companion application filed herewith bearing the Serial No. 197,931.

My invention consists of an improvement upon molding-machines of the class disclosed in Letters Patent No. 734,487, dated July 21, 1903; and in general terms it consists in providing a laterally-movable core in combination with a vertically-movable flask, with cooperating means for controlling the movement of one by the other, whereby the slanting core may be moved laterally simultaneously with the vertical travel of the flask, so as to permit the molded block to be raised away from the core, or vice versa, leaving the channel or passage open, clear, and undisturbed.

Referring now to the drawings, 2 is the floor or base of the flask, adapted to be raised or lowered by any suitable mechanism, such as is shown and described in the patent referred to, the sides of the flask being composed of hinged sections 3, adapted to open outwardly when the flask is raised, as shown in Fig. 2, or of any other suitable construction.

4 is the core or pattern around which the block 5 is molded within the flask, which core is preferably slightly tapered toward its upper end to facilitate removal and separation of the finished molds therefrom. The core, as shown, is rectangular in cross-section, although, as is obvious, it may be of any other suitable form or design. The core is mounted upon a horizontal traveling base 6, mounted, by means of rollers or wheels 7, upon corresponding tracks or ways 8, supported on the base of the machine, underneath the flask. The tracks are preferably of V form to prevent accumulation of dust. The flask is provided with one or more downwardly-extending guiding-frames 9, preferably adjustable by bolts 10 through slots 11, the frame being of the same angle or slant as that of the pattern 4. Suitable lugs, abutments, or rollers 13 are secured to the flask or its supporting-base and are adapted to engage grooves 12 and to move horizontally when the frames 9 are moved vertically. By this construction as the flask is raised or lowered the base 6 and core 4 are simultaneously moved longitudinally of the machine in one direction or the other. After the block has been molded within the flask, around the core, as in Fig. 1, the flask is raised, and at the same time the core is moved laterally toward one end at the same degree of travel, owing to the corresponding inclination of the core and grooves 12. The block thus recedes away from the core, while the lateral travel of the core allows of such with-

drawal without interference. If desired, the inclination of the core may be varied, a corresponding variation being made in the inclination of the shifting-grooves. The cores are preferably made detachable from their bases for such purposes, and in Fig. 5 I have shown a modified arrangement of shifting-grooves adapted to be set to different angles to suit the cores. In this construction the grooves 12′ are formed in an arm 14, pivoted at 15 to the base, while an adjusting-arm 16 is pivoted to arm 14 and adjustably secured by a bolt or set-screw 17 in a longitudinal slot 18, connected with the core-base. By this means the shifting-grooves may be accurately adjusted within a wide range to suit cores of varying angles.

If desired, the core may be arranged to be withdrawn vertically either up or down while the flask is moved laterally, and it is also evident that the flask may be lowered away from the core, suitable compensating lateral movement being imparted to the other moving element—*i. e.*, either the core or flask. Various other means may be provided for causing simultaneous vertical movement of the flask and horizontal movement of the core, and different constructions or designs of track, as horizontal ways or grooves, may be submitted with good results.

Other changes and variations may be made by the skilled mechanic in the design, proportions, mechanism, or other details without departing from the invention; but all such changes are to be considered as within the scope of the following claims.

What I claim is—

1. In the manufacture of hollow building-blocks, the combination with a vertically-moving flask, of a laterally-moving vertically-immovable core.

2. In the manufacture of hollow building-blocks, the combination with a vertically-moving flask of a laterally-moving vertically-immovable tapered core.

3. In the manufacture of hollow building-blocks, the combination with a vertically-moving flask, of a laterally-moving vertically-immovable core with means for moving the core laterally at the same rate as the vertical travel of the flask.

4. In the manufacture of hollow building-blocks, the combination with a vertically-moving flask, of a laterally-moving vertically-immovable core, with means for causing the flask and core to move simultaneously.

5. In the manufacture of hollow building-blocks, the combination with a vertically-moving flask, of a laterally-moving vertically-immovable core, with means for causing the flask and core to move simultaneously and at proportionate speeds whereby the block is removed from the core without interference.

6. In combination with a vertically-moving flask provided with slantingly-arranged shifting-guides, of a laterally-moving vertically-immovable core provided with bearing devices in engagement with said guides.

7. The combination with a vertically-movable flask provided with slantingly-arranged shifting-guides, of a slanting core mounted upon a supporting-base, horizontal tracks for the base, and bearing devices in engagement with the slanting guides.

8. The combination with a vertically-movable flask provided with slantingly-arranged shifting-guides, of supporting-rollers mounted thereon, and having bearing devices in engagement with the slanting guides.

9. The combination with a vertically-movable flask provided with slantingly-arranged shifting-guides of supporting **V**-shaped tracks, a core provided with supporting-rollers mounted thereon, and having bearing devices in engagement with the slanting guides.

10. In combination with the flask of a molding-machine, adjustable shifting-guides secured to the flask and in engagement with the bearing devices of a laterally-shifting vertically-immovable core.

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

GEORGE L. PEABODY.

Witnesses:

JAS. J. MCAFEE,

C. M. CLARKE.