No. 689,015. Patented Dec. 17, 1901.

W. C. McNAUGHT.

BRICK MOLDING APPARATUS.

(Application filed June 11, 1901.)

(No Model.)

Fig. 1.

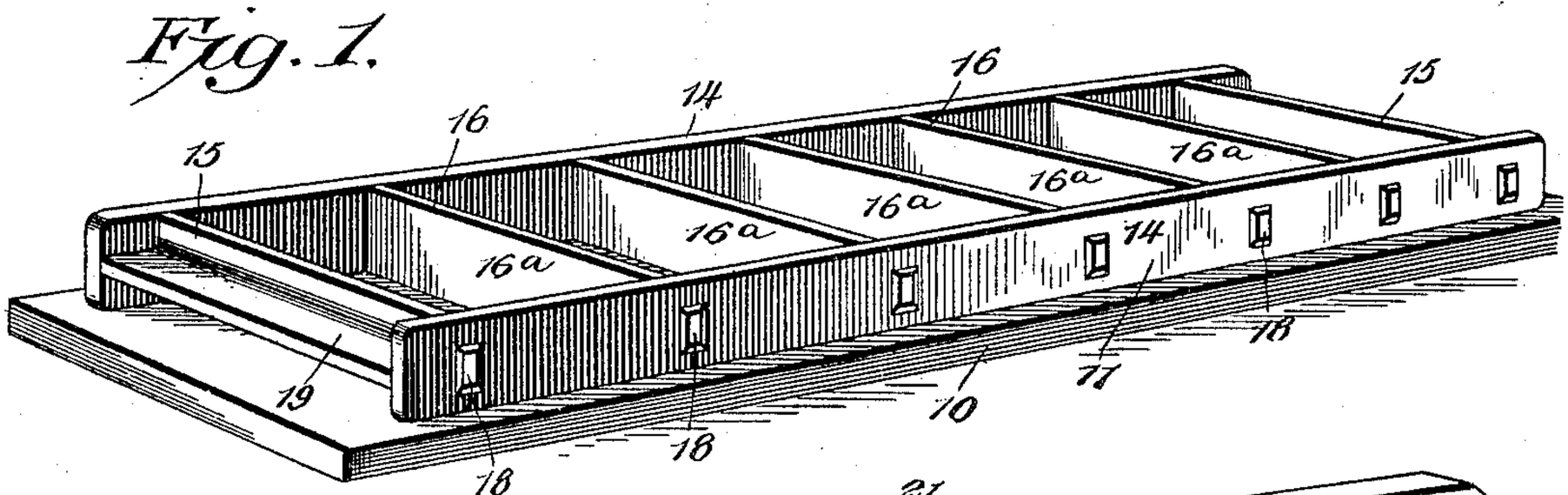


Fig. 2.

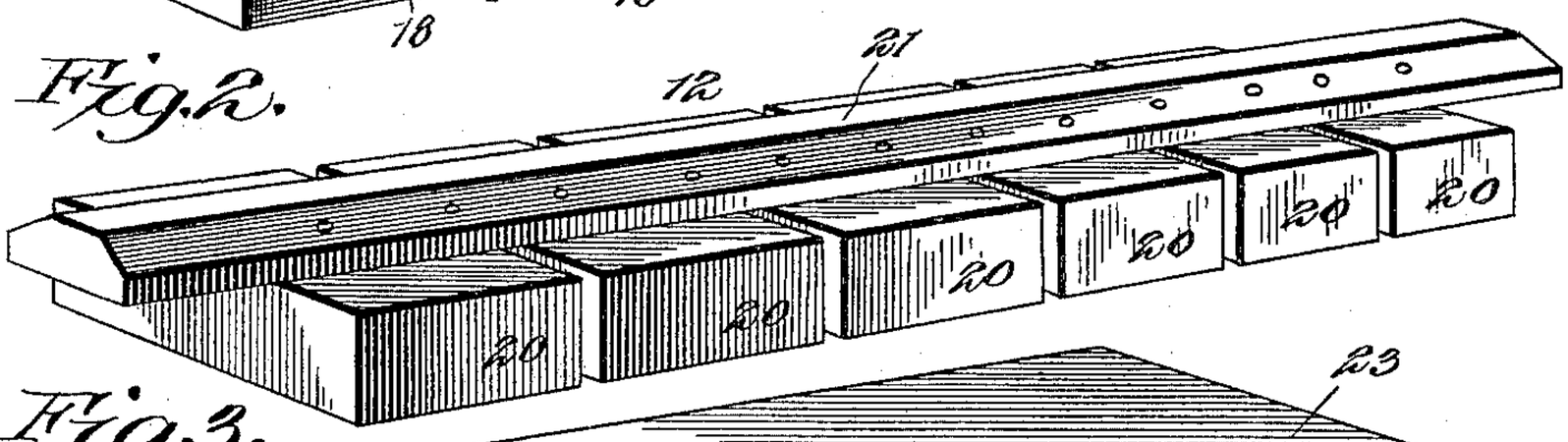


Fig. 3.

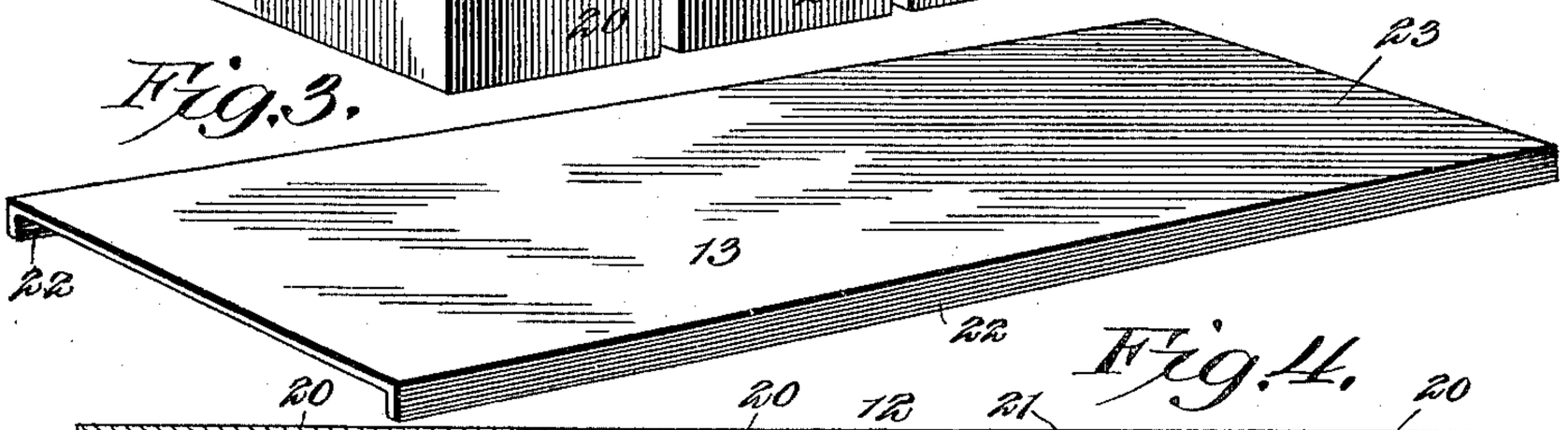


Fig. 4.

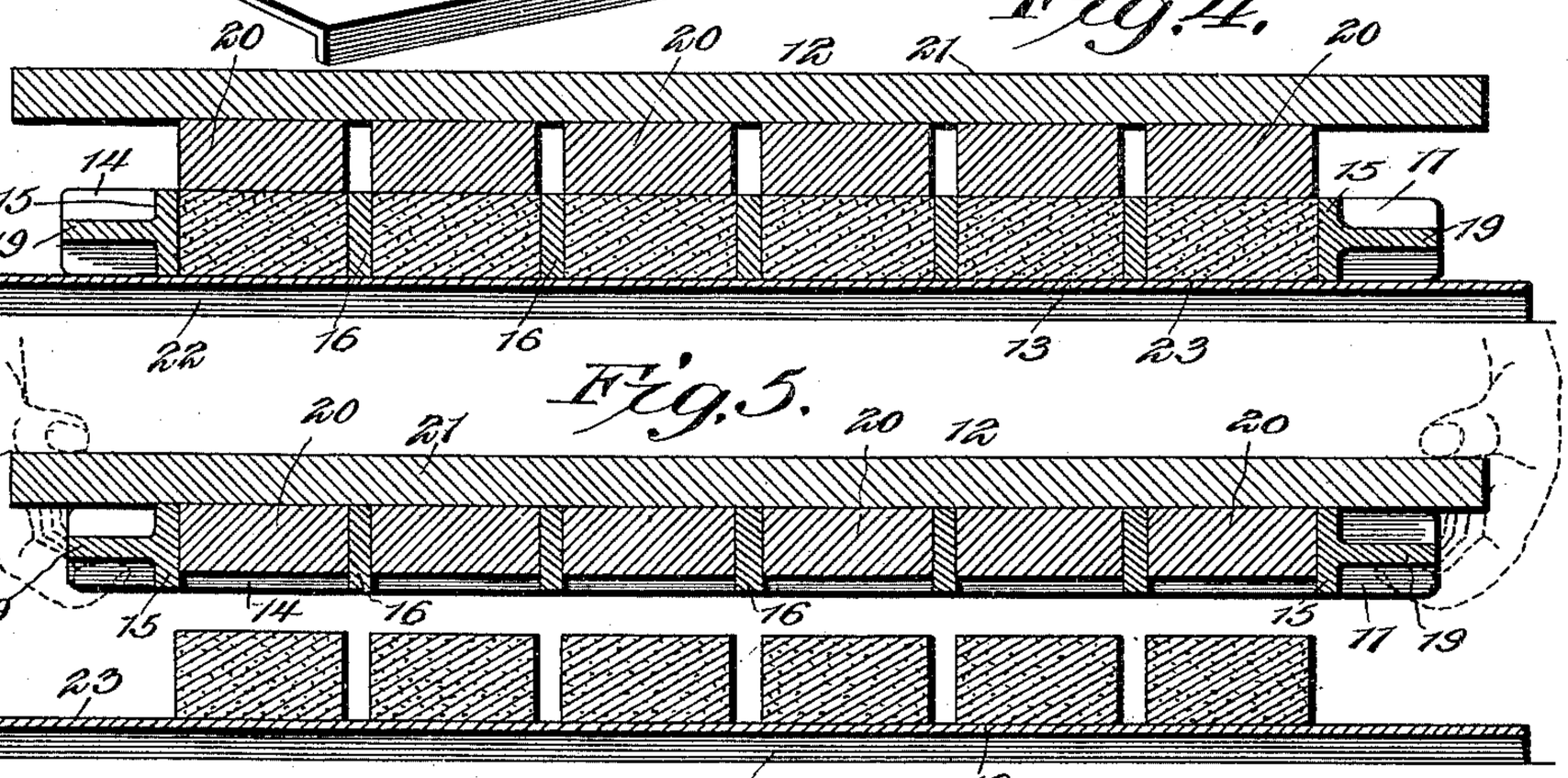
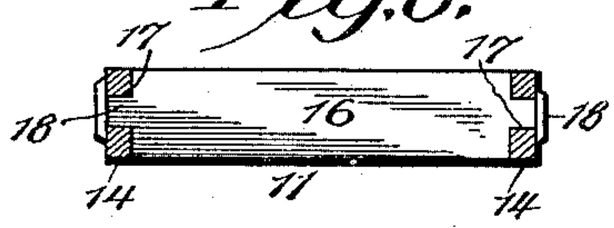


Fig. 5.

Fig. 6.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM C. MCNAUGHT, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO GEORGE W. GRIFFITH, OF JOHNSTOWN, PENNSYLVANIA.

BRICK-MOLDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 689,015, dated December 17, 1901.

Application filed June 11, 1901. Serial No. 64,152. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. MCNAUGHT, a citizen of the United States, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Brick-Molding Apparatus, of which the following is a specification.

The present invention relates to apparatus for molding bricks and analogous articles.

The primary object of this invention is to provide novel means whereby bricks may be rapidly and efficiently molded without the necessity of re-pressing the same, so that they may be taken directly from the mold to the drying apparatus and kilns.

A further object is to construct a very simple manually-operated device by means of which several bricks may be molded and simultaneously expelled from the molding apparatus without the liability of breaking the edges or otherwise injuring them.

To the accomplishment of these several objects the embodiment shown in the accompanying drawings is considered preferable. This embodiment is also fully described in the following specification. It will be understood, however, that such changes may be made therefrom as are within the scope of the claims hereto appended.

In the drawings, Figure 1 is a perspective view of the mold-body when in place upon the base. Fig. 2 is a perspective view of the brick-expelling follower employed in connection therewith. Fig. 3 is a perspective view of the brick-receiving pallet. Fig. 4 is a vertical sectional view illustrating the position of the follower when first applied to the mold-body. Fig. 5 is another vertical section after the bricks have been expelled. Fig. 6 is a cross-sectional view more clearly illustrating the manner of fastening the partitions to the side walls.

Similar numerals of reference designate corresponding parts in all the figures of the drawings.

In the embodiment of the invention as shown in the accompanying drawings four elements are employed—a base-plate 10, a mold-body 11, a brick-expelling follower 12, and the brick-receiving pallet 13.

The base 10 is preferably in the form of a rectangular metallic plate having a smooth upper surface upon which is arranged to be placed the mold-body 11. This mold-body consists of side and end walls 14 and 15 and intermediate transverse partitions 16, whereby a plurality of mold-chambers 16^a are formed. The entire device is preferably made of strips of metal which are connected in the following manner: The side walls 14 are provided with rectangular openings 17, these openings being directly opposite each other, and the partitions and end walls are provided with projecting studs 18, that fit snugly in and pass through the openings 17, the outer ends of these studs being upset over the outer faces of the sides. By this means a perfectly rigid and stable structure is provided. Both the upper and the lower edges of the mold-body are perfectly flat, so that the lower edge will rest flat upon the base-plate 10 and the upper edge will permit of the smoothing of the upper faces of the bricks. The end walls 15 are inset a slight distance from the ends of the side walls and are provided intermediate their upper and lower edges with longitudinally-disposed outstanding flanges 19, that extend from end to end thereof. The outer edges of these flanges are preferably flush with the ends of the side walls.

In connection with the mold-body the brick-expelling follower 12 is employed. This follower comprises a plurality of spaced rectangular plunger-blocks 20, that correspond in size and shape to the mold-chambers 16^a, the spaces between them being equal to the thickness of the partition-walls. Their thickness is, however, a little less than the depth of the chambers, as is clearly illustrated in Fig. 5. These several plunger-blocks are secured to a bar 21, that extends transversely across them and preferably has its ends projecting beyond the outer sides of the end blocks. The brick-receiving pallet 13 may be of any construction desired, but that which is at present employed and considered very satisfactory consists of a sheet-metal plate having downturned flanges 22 at its side edges, so that the upper faces of the intermediate or

platform portion 23 will be level with the upper face of the base when the two are arranged side by side.

The manner of operating the device is as follows: The mold-body is first placed upon the base and filled with the material of which the bricks are made. The pallet is located alongside of the base, and the body, together with the molded material, is slid from the base onto said pallet. Here the upper faces of the bricks are slicked off, and the follower is then placed upon the same. The body and follower are then grasped at their opposite ends in the manner clearly indicated in Fig. 5, wherein it will be seen that the projecting portions of the connecting-bar and the flanges of the end walls of the body constitute handles that may be readily engaged by the operator. The plunger-blocks are then pressed into their respective compartments, and at the same time the body is raised from the pallet. The bricks are thereby expelled from the body and rest in properly-spaced position upon said pallet. At the same time the movement of the plunger and blocks into the chambers is limited by the bar coming in contact with the upper edges of the body, and slight spaces are thus left in the bottom portions of the chambers. This has been found very desirable, for the reason that if the plungers pass entirely through or to the lower edge of the body there is a tendency for the edges of the soft brick to lap over, and thus be imperfect. The pallet is then taken to the drying apparatus and from thence to the kiln. By this construction, therefore, an exceedingly simple apparatus is provided, by means of which it has been found in actual practice that bricks may be rapidly and evenly molded and that the necessity for re-pressing them is entirely obviated. While the embodiment shown is intended for making the ordinary well-known rectangular bricks, it may be successfully employed in making arch and other brick.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In brick-molding apparatus, a mold-body comprising metallic sides having spaced openings therethrough, metallic partitions extending transversely across the space between the sides and provided with integral lugs that pass through the openings thereof and are upset at their ends over the outer faces of said sides, said lugs constituting means for holding the transverse partitions in place within the body and securing the side walls against outward displacement, and metallic end walls also provided with integral lugs that extend through openings in the ends of the sides and are upset over the outer faces of the same, said end walls being substantially T shape in cross-section, having on their outer faces longitudinally-disposed integral flanges, the opposite side faces of which are located within the planes of the top and bottom of the mold-body, said flanges constituting handles for the body, whereby it can be reversed and used either side up.

2. In brick-molding apparatus, the combination with a mold-body comprising side and end walls, and an intermediate partition forming a plurality of mold-chambers having open tops and bottoms, said end walls being provided on their outer faces with handles, of an expelling-follower entirely separate from and independent of the mold-body, said follower comprising a plurality of spaced plunger-blocks corresponding in size and shape to the chambers and arranged to fit therein, and a connecting-bar secured flat upon and transversely across the plunger-blocks at an intermediate point, said bar being of less width than the lengths of the blocks and having its ends projecting beyond the outer edges of the end blocks to constitute handles which coact with those of the body.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM C. McNAUGHT.

Witnesses:

JOHN H. SIGGERS,

B. G. FOSTER.