

J. D. BARBER.
MACHINE FOR MOLDING CONCRETE BLOCKS.
APPLICATION FILED SEPT. 27, 1909.

1,052,557.

Patented Feb. 11, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

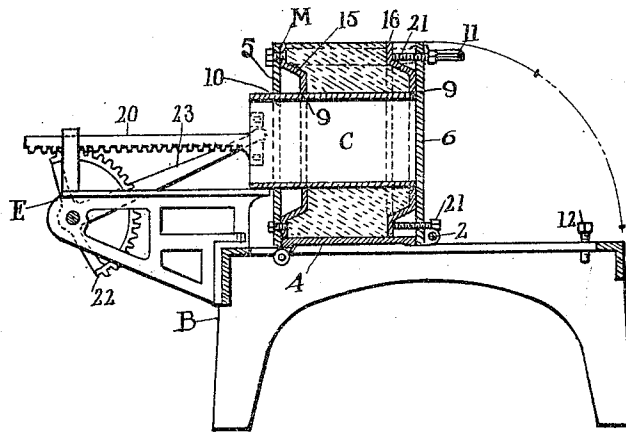


Fig. 2.

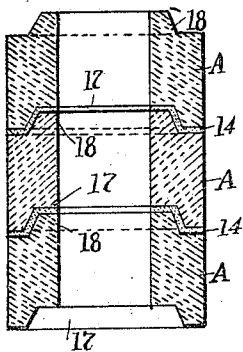


Fig. 3.

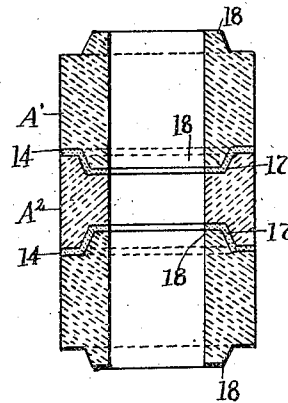
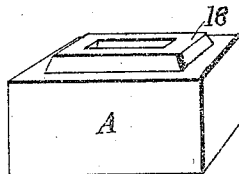


Fig. 4.



ATTEST
E. M. Fisher.
Cora M. Esterbrook.

INVENTOR
JOHN D. BARBER.
BY Fisher & Woolsey ATTYS.

J. D. BARBER.
MACHINE FOR MOLDING CONCRETE BLOCKS.
APPLICATION FILED SEPT. 27, 1909.

1,052,557.

Patented Feb. 11, 1913.

2 SHEETS—SHEET 2.

Fig. 5.

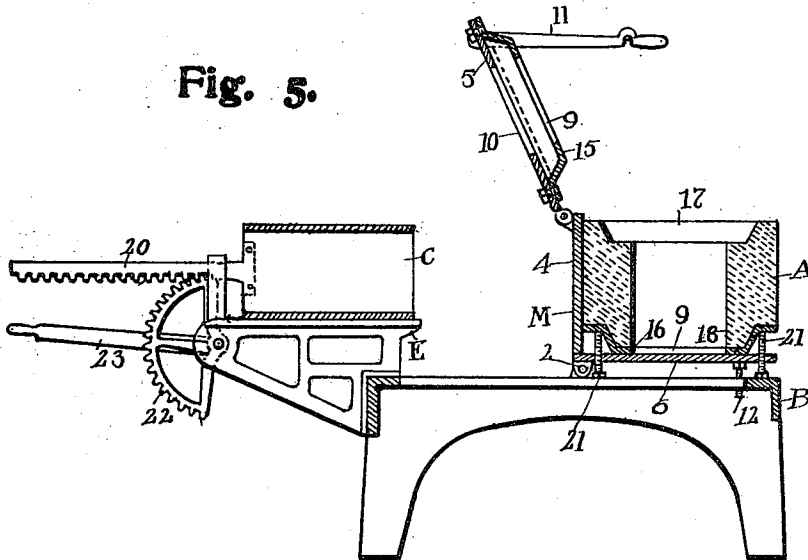


Fig. 6.

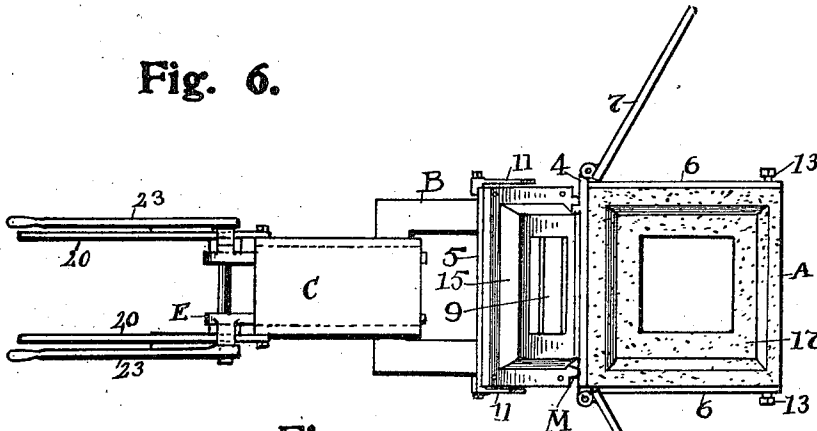
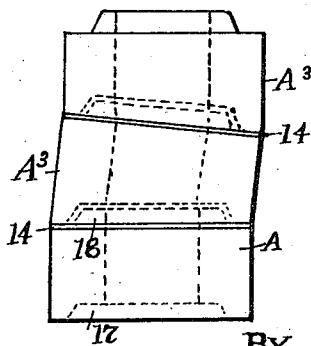


Fig. 7.



ATTEST
E. M. Fisher
Chas. M. Osterbrook

INVENTOR
JOHN D. BARBER

BY Fisher & Moore ATTYS.

UNITED STATES PATENT OFFICE.

JOHN D. BARBER, OF CLEVELAND, OHIO.

MACHINE FOR MOLDING CONCRETE BLOCKS.

1,052,557.

Specification of Letters Patent.

Patented Feb. 11, 1913.

Application filed September 27, 1909. Serial No. 519,742.

To all whom it may concern:

Be it known that I, JOHN D. BARBER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Machines for Molding Concrete Blocks, of which the following is a specification.

This invention has reference to a machine for molding interlocking fire proof concrete chimney blocks, all substantially as shown and described and particularly pointed out in the claim.

In the accompanying drawings Figure 1 is a sectional elevation of the machine lengthwise thereof with the parts in molding position and a block therein. Figs. 2 and 3 are sectional elevations of portions of chimneys built with my improved blocks and showing different forms of blocks as hereinafter described. Fig. 4 is a perspective view of one of the said blocks. Fig. 5 is a sectional elevation of the machine corresponding to Fig. 1 but with the parts thereof separated and the cement block ready to be removed therefrom. Fig. 6 is a plan view of the parts complete as shown in Fig. 1. Fig. 7 is a side view of a drawn chimney and shows the special blocks made therefor in my machine.

The object of the invention will be seen from the foregoing views, and consists broadly in a machine adapted to produce concrete chimney blocks which do away with bricks and flue linings and constitute a complete portion or section of a chimney which is absolutely fire proof. To these ends the said blocks have interlocking or overlapping features on their inside so constructed that one block seats into or upon the other in an overlapped relation and is cemented thereto at the joint, thus sealing the blocks in respect to each other as well as locking them together and making a fire proof structure of the highest efficiency and practically indestructible. To these ends the machine by which such blocks are made, has a suitable base B with legs to support it at a good working elevation, and the mold box M is hinged at 2 on the sides and at about the middle of said base and is adapted to be tilted on said hinges from holding position Fig. 1, to removing position of the finished block. Fig. 5, on the other side of said hinges. The said mold-box M is constituted of a number of plates indicated

by 4, 5, 6, 7, 8, respectively. The plate 4 is referred to herein as the main plate because it serves as a support for other of said plates as will presently be seen, and in molding becomes the bottom plate of the mold, Fig. 5. This plate is set at right angles with the so-called end plate 6 and which corresponds to plate 5 at the opposite side, but which become front and rear plates respectively in molding position. Then there are the real side plates or wings 7 and 8, Fig. 6, hinged to main plate 4 on pintles to be easily removable, and adapted to be opened and closed. When closed they are locked by latches 11 on plate 5 adapted to engage on catches 13 on plate 6. Plate 5 has an opening 10 and is removably hinged at the top of main plate 4, so that plate 4 carries said plate and the side wings 7 and 8, and plates 4 and 6 may be hinged together but are preferably rigid with each other. Screws 12 in main frame or base B form adjustable stops for plate 6. Two shaping plates 15 and 16 are shown. These plates are alike in shape and interchangeable and serve to produce the three different forms of block, A, A' and A² shown in Figs. 2 and 3 according as they are placed in the mold, and also blocks A³, shown in Fig. 7. For example, as seen in Fig. 1, a block is made like that shown in Fig. 2, with a recess on one side and a tenon or projection on the other, said tenon and projection having corresponding bevels and proportioned to fit snugly one upon the other if laid together. But they are not designed to be laid in contact but in cement 14 and which corresponds in depth with the thickness of said inner plates 15 and 16. Thus laid the cement spaces the said blocks uniformly and the thickness of said plates determines the depth of the cement. In Fig. 2 each block has a recess 17 and a tenon 18, whereas in Fig. 3 the block A' has two tenons 18 and the block A² has two recesses 17, and all these forms are made possible by the peculiar construction of said plates 15 and 16. Both plates 15 and 16 have holes or openings 9 through the center corresponding to the hollow of the block and the size and shape of core C. The said core is a tubular member in this instance for lightness and rests and is adapted to slide back and forth on a fixed guideway or frame E which is fixed on base B, and enters said openings 9 in plates 15 and 16 and forms a

core in or for the block when thus positioned, Fig. 1. For operation the said core or core member is provided with rack-bars 20 at its side engaged by toothed sectors 22 5 rotatably supported in frame E and operated by handles or levers 23. When the mold has been folded and its parts locked together and turned to molding position, Fig. 1, the core member C is projected into 10 the mold and the mold is then ready to be filled with cement. This done and the cement sufficiently hardened the core is withdrawn and the mold tilted to discharging position, Fig. 5, in which case the wings 7 15 and 8 are swung open and the plate 5 raised, substantially as in Fig. 6. The block A, can then be removed.

The inner plates 15 and 16 may be removably affixed to or within plates 5 and 6 in 20 any approved way. For convenience of designation the plates 5 and 6 are referred to as inner and outer or front and rear plates and the plates 7 and 8 as side plates or wings.

25 In Fig. 7 I show a block constructed to build a drawn chimney. This block is shown as of greater depth on one side than on the other, and two such blocks will give a corresponding side movement to the chimney when set as shown, and the chimney 20 may be drawn still farther if desired. To make these blocks I raise one side or the other of plate 16 as far as may be needed from plate 6 by means of the adjusting

screws 21, and the core C takes care of the 35 rest.

What I claim is:

A mold-box for concrete block machines adapted to make blocks varying in depth and shape and constructed with a flat bot- 40 tom plate and side and end plates, one of said side plates being hinged and having an opening at its center to pass a core through the same and the two end plates hinged to swing open, in combination with 45 two independently reversible substantially dish-shaped shaping plates of uniform thickness and removably supported on the inside of the said side plates and each shaping plate provided with a hole through 50 its center adapted to pass a core there-through and having an offset flange about its edge on a plane parallel to the bottom of the plate, and the inner of the said shaping 55 plates removably fixed to one of said side plates through its flanged portion and adjusting screws engaging the back of the flanged portion of the other of said shaping plates through the outer of said side plates to fix the two shaping plates in various an- 60 gular relations.

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

JOHN D. BARBER.

Witnesses:

E. M. FISHER,

F. C. MUSSUN.