G. M. MYERS.

PIPE FORMING APPARATUS.

APPLICATION FILED JAN. 18, 1910.

1,015,334.

Patented Jan. 23, 1912.

2 SHEETS—SHEET 1.

FIG. 1

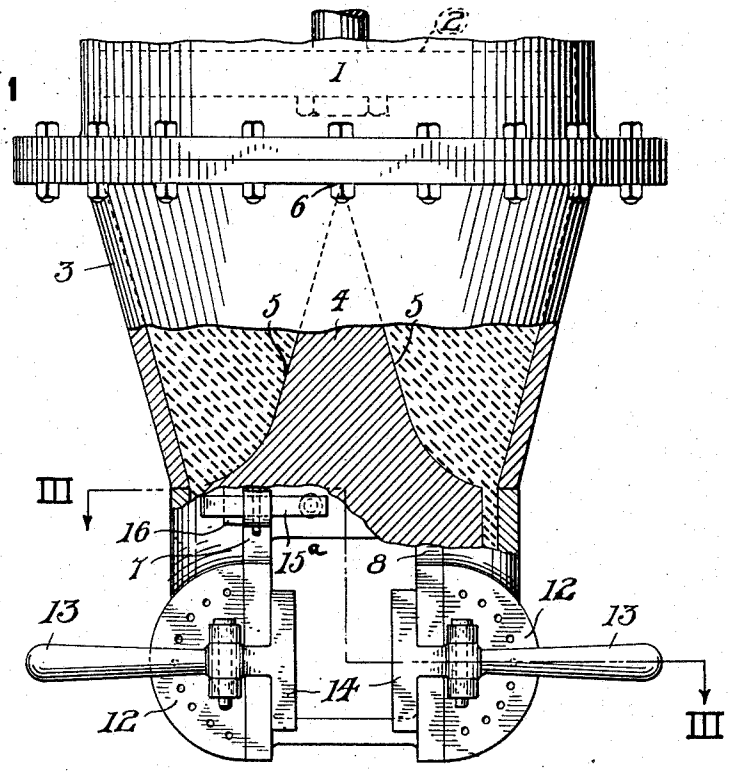
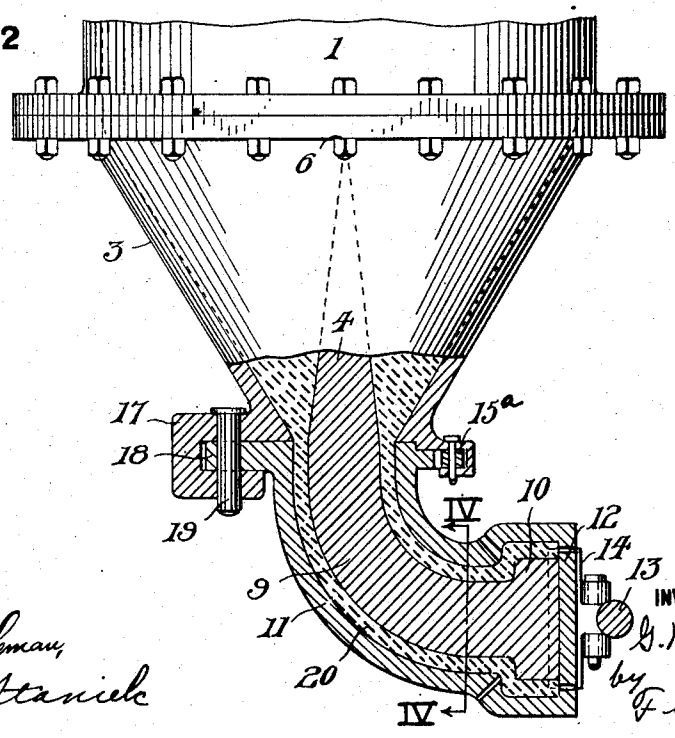


FIG. 2



WITNESSES

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2 SHEETS—SHEET 2.

FIG. 3

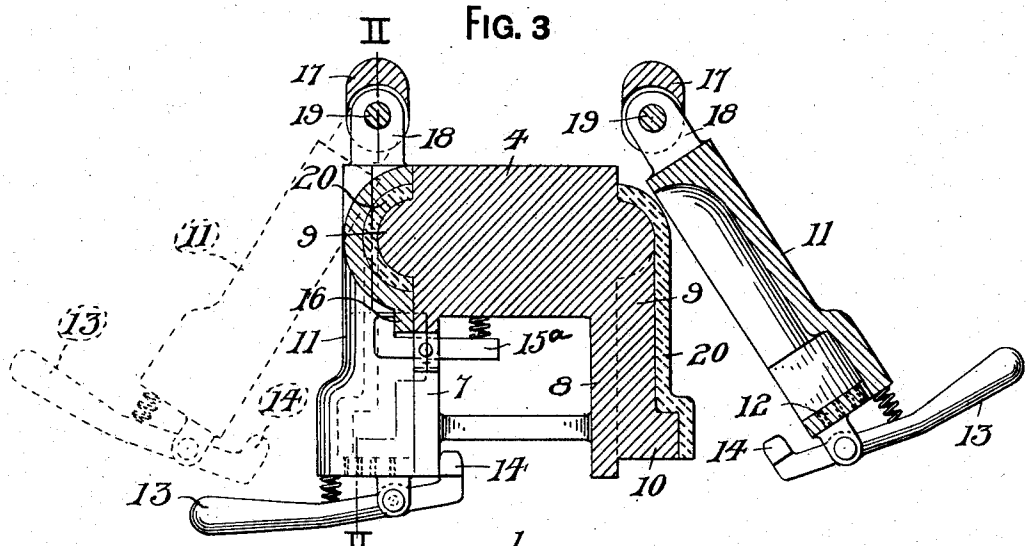


FIG. 4

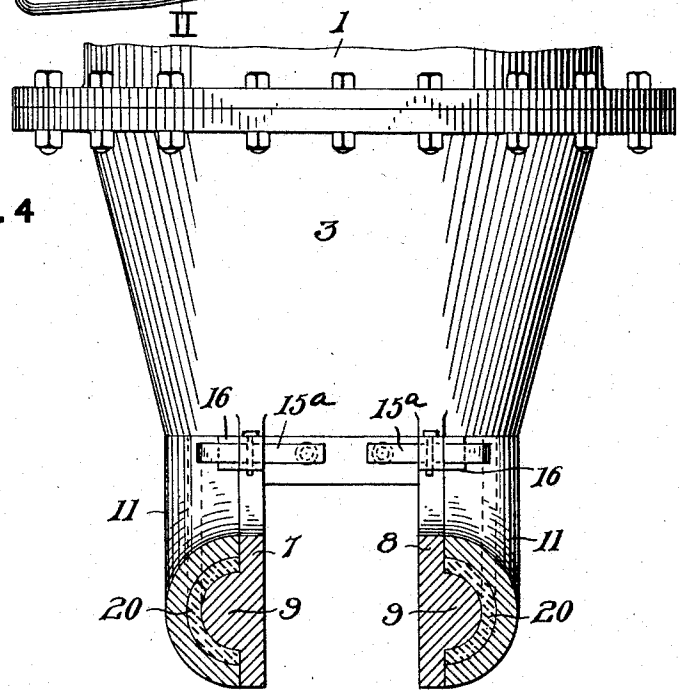
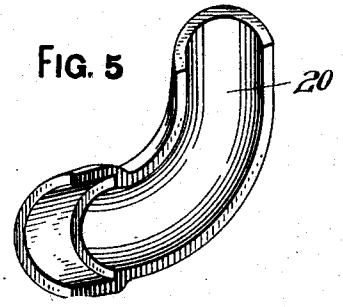


FIG. 5



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UNITED STATES PATENT OFFICE.

GEORGE M. MYERS, OF TORONTO, OHIO.

PIPE-FORMING APPARATUS.

1,015,334. Specification of Letters Patent. Patented Jan. 23, 1912.

Application filed January 18, 1910. Serial No. 538,755.

To all whom it may concern:

Be it known that I, GEORGE M. MYERS, a citizen of the United States, residing at Toronto, in the county of Jefferson and State of Ohio, have invented or discovered new and useful Improvements in Pipe-Forming Apparatus, of which the following is a specification.

My invention relates to apparatus for forming pipe from clay or similar material, and more particularly to apparatus for forming the halves of L's and S's, which are subsequent to their formation joined together to form complete pipes.

Heretofore, it has been the practice to shape the halves of L's, S's, and the like in coreless plaster of Paris molds by hand, this process being very slow and expensive. A skilled molder could form only about sixty sections or halves a day, by this old hand method, whereas by my improvements a single machine can make a thousand or more a day. Such hand-made halves were more or less rough and heterogeneous while the machine-made parts are smooth and homogeneous. In the preferred form of my invention, I make two halves simultaneously and as soon as they are taken from the molds, their edges are moistened and the halves are matched so as to make a complete pipe, this matching being performed the same as in the hand method.

Referring to the accompanying drawing, which illustrates the preferred form of my invention, Figure 1 is an elevation thereof, the central part being broken away to show the interior; Fig. 2, a vertical section taken on the line II—II, Fig. 3; Fig. 3, a horizontal section on the line III—III, Fig. 1; Fig. 4, an elevation, the lower part showing a vertical section on the line IV—IV, Fig. 2; and Fig. 5, a perspective of a molded article.

On the drawings, 1 represents a ring or hopper in which the clay to be molded is deposited and from which it is forced in any desired manner as by the plunger 2, shown in dotted lines on Fig. 1, into the supplemental ring or hopper 3, which contains a vertical wedge-shaped partition 4 with its sides 5 converging in the line 6 at or near the top of the supplemental hopper. At the bottom of the supplemental hopper 3 are two parallel extensions 7 and 8. These extensions 7 and 8 are vertical plates, lying beneath diametrically opposite portions of the hopper or ring 3 and projecting downwardly and forwardly corresponding to the general shape of the pipe to be made. The outer vertical faces of the extensions are each provided with a rib or male die member 9 integral therewith, portions of the extensions at the sides of the rib 9 constituting the stationary base for shaping the longitudinal edges of the halves of the pipe. The outer ends of the ribs or die members 9 are enlarged, as at 10, to correspond to the shape of the bell or socket of the pipe.

The female die member 11 is trough-shaped and has its longitudinal edges seated against the outer faces of the extensions 7 and 8, and its body arranged parallel to the male die member 9 and spaced therefrom the thickness of the wall of the pipe which it is desired to make. The outer end of the die 11 has the end wall 12 which closes the end of the molding space between the die members and fits against the outer ends of the socket-forming member 10. The ends 12 carry pivoted latches 13 having the hooks 14 to engage behind the outer end of the extensions 7 and 8 to lock the members of the die together. The expansion springs located between the latches and the ends 12 tend to hold the latches in locking position, as shown at the left-hand side of Fig. 3. The upper edges of the extensions 7 and 8 support pivoted spring-pressed latches 15^a, which engage the lugs 16 on the die members 11 to assist in holding the latter tightly together. The rear of the ring or hopper 3 supports the lugs or hinge-members 17 to which the lugs or hinge-members 18 on the die members 11 are connected by the hinge-pins 19.

The two spaces at opposite sides of the wedge or partition 4 converge downwardly and lead to the upper ends of the spaces between the die-members 9 and 11, as drawn in Figs. 1 and 2. The die members being locked by the latches 13 and 15, the clay in the hoppers or rings 1 and 3 is forced down into the molding spaces between the said die members where it is formed into the two halves which, when united in the usual manner, will form a complete L-pipe. The articles are indicated by the numeral 20. When the die has been entirely filled with clay, the die-members are unlocked and the die members 11 are swung out as indicated in Fig. 3 by full lines at the right-hand side and by dotted lines at the left-hand side.

The molded articles after being cut by a knife or other sharp tool from the material remaining above the top of the die member 11 are then removed, their edges moistened, and matched as hereinbefore stated, whereupon a completely-shaped pipe is formed ready for drying and burning.

I do not limit myself to the precise shape of the dies, as articles of various shapes may be made, nor do I limit myself to any definite number of dies.

I claim—

In an apparatus for molding half-tubes, a hopper, a plunger operable in the upper end thereof, a partition dividing the lower end of the hopper below the plunger into lateral portions, a die connected to the bottom of each of the lateral portions of the hopper, each die having a fixed vertical base member with a convex portion, and a hinged concave member having its edges resting on the base portion, and a latch carried by each hinged member and adapted to catch over the edges of the base member, the two dies being parallel and close together, whereby they may be formed simultaneously and readily joined by their edges to form pipes.

Signed at Pittsburgh, Pa., this 10th day of January, 1910.

GEORGE M. MYERS.

Witnesses:
F. N. BARBER,
SUZANNE S. BEATTY.