(No Model.) 2 Sheets—Sheet 1.

D. H. DORSETT.

MOLD FOR CASTING PIPE OF PLASTIC MATERIAL.

No. 284,191. Patented Sept. 4, 1883.

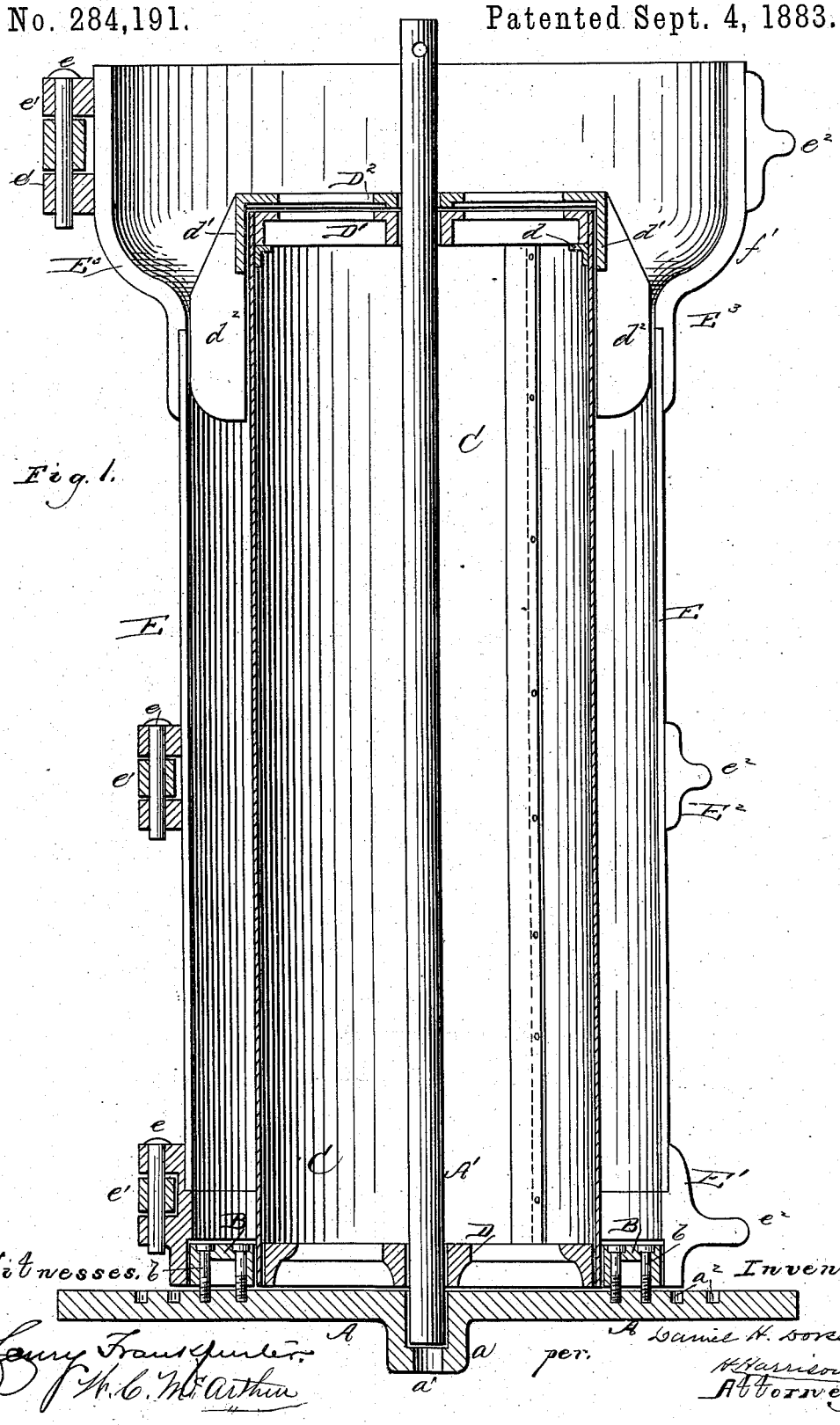


Fig. 1.

Witnesses. b

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(No Model.) 2 Sheets—Sheet 2.

D. H. DORSETT.

MOLD FOR CASTING PIPE OF PLASTIC MATERIAL.

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Fig. 2.

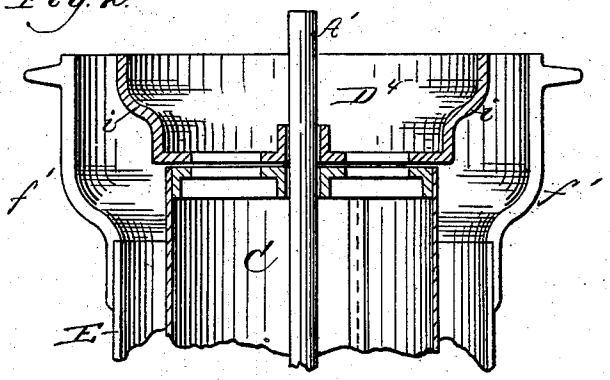


Fig. 3.

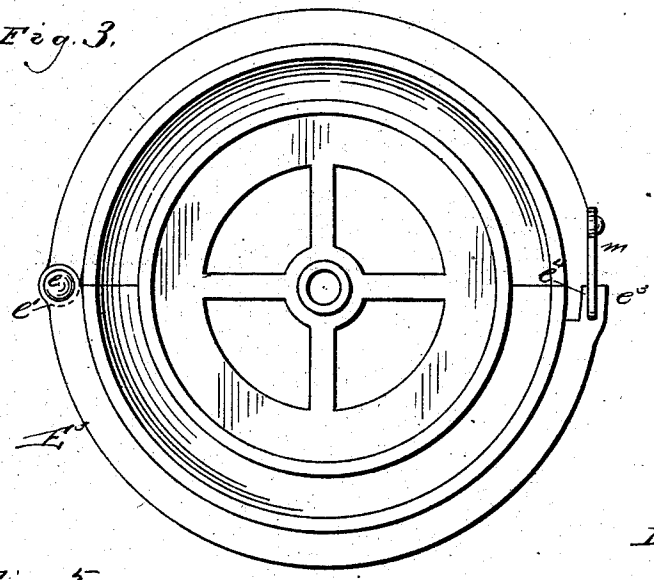


Fig. 4.

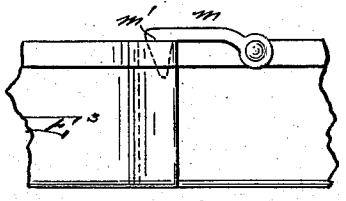


Fig. 5.

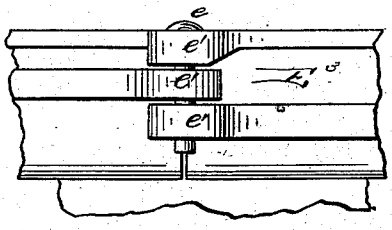


Fig. 6.

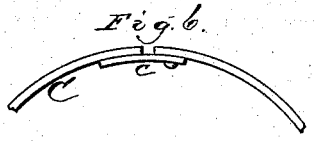
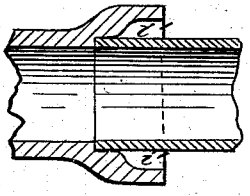


Fig. 7.



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UNITED STATES PATENT OFFICE.

DANIEL H. DORSETT, OF CHICAGO, ILLINOIS.

MOLD FOR CASTING PIPE OF PLASTIC MATERIAL.

SPECIFICATION forming part of Letters Patent No. 284,191, dated September 4, 1883.

Application filed January 3, 1883. (No model.)

To all whom it may concern:

Be it known that I, DANIEL H. DORSETT, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Molds for Casting Pipe of Plastic Material, of which the following is a specification, to wit:

This invention relates to an improvement in molds for casting pipe of plastic material, and adapted especially for use with that class of material which is rendered plastic by heat; and it consists in the combination and arrangement of parts hereinafter more fully described, and pointed out in the claims.

In order to enable others skilled in the art to which my invention relates to make and use the same, I will now proceed to describe its construction and operation, referring to the accompanying drawings, in which—

Figure 1 is a central vertical section of the mold. Fig. 2 is a similar view of the upper part of the same with the flange-core in position. Fig. 3 is a top view. Fig. 4 is a side view of the fastening device; Fig. 5, a similar view of the hinges; Fig. 6, a view of the overlapping edges of the core-cylinder, and Fig. 7 a view of a joint of two sections of pipe formed in this mold.

A represents a base-plate, cast with a downwardly-projecting hub, *a*, having an opening, *a'*, running through it, in which is set a central rod or shaft, A', of suitable size.

Secured to the base-plate A by small screws *b b*, entering holes a^2 in the base-plate, is a ring, B, the upper face of which is of a size corresponding to the thickness of the pipe proposed to be molded. The base-plate is provided with several series of small holes, a^2 a^2, arranged in concentric circles, in order that rings B of different sizes may be used with the same base to form pipes of different diameters.

Resting upon the base A, just within the ring B, is a sheet-metal cylinder, C, (preferably of sheet-steel,) which extends upward a suitable distance to form the core around which the pipe is molded. This sheet-metal cylinder C is not secured at its meeting edges; but one edge is provided with a bar, *c*, over which the other edge laps, but with a short space between their opposing edges, as shown in Fig. 6, to allow for the expansion of the core during the molding of a section of pipe. The cylinder C is expanded and kept in position close against the ring B by means of a circular expanding-plate, D, slipped over the shaft A' and resting upon the base-plate, as shown in Fig. 1. The upper end of the cylinder is also braced and expanded by a similar plate, D', upon the central shaft, and resting upon small projections *d* on the interior of the cylinder. Both these plates D D' are formed with small recesses upon their outer edges, for the reception of the lap-bar *c* on the edges of the cylindrical core C. A third plate, D^2, is also slipped over the post A', which is slightly larger than the plate D', upon which it rests, and is provided with a downwardly-projecting peripheral flange, *d'*, which passes over the outside of the upper end of the cylinder C, forming a cap, which holds it securely together at this end; and this plate D^2 is also provided with a number of radial wings, d^2, of the same width as the ring B, and which serve to center the outer shell, as will be presently more fully understood.

E represents the outer shell of the mold, also formed of sheet metal, divided into two parts vertically, and secured to which are three half-circular rings, E' E^2 E^3, which are preferably cast of brass and hinged together by pivots *e* pressing through lugs *e'*, cast on the rings at one end. Each ring is also formed with a strengthening-flange, e^2. The flanges e^2 are at their meeting edges, on one side of the shell, formed with a tongue, e^3, and recess e^4 for its reception, as seen in Figs. 3 and 4, and one side is also provided with a pivoted hook, *m*, having a wedge-shaped nose or point, *m'*, as seen in the drawings, which enters a slot in the tongue e^3, and serves to draw the two sections of the mold together and hold them firmly in place, while the fastenings cannot become lost or displaced when the mold is thrown open, but are always in position for use when required. The lower ring, E', rests upon the base A closely against the outer side of the ring B. The upper ring, E^3, is enlarged at its upper end, as seen at *f'*, to form a flange upon this end of the pipe, for the reception of the small end of another section when they are joined together in use.

D^4 represents a cup-shaped casting, forming

a core for the enlarged end of the pipe, and which is substituted for the winged centering-ring at the proper time, as presently described. This core D^4 is formed, near its lower outer corner, with an annular enlargement, *i*, which forms a similar depression, *i'*, in the inner side of the pipe when molded, for the reception of a packing to keep the mouths of the pipe-sections properly in line when used, as represented in Fig. 7.

The mold having been set up, as already described, the material from which the pipe is to be formed is reduced to a plastic state and poured in at the top of the mold, being packed or rammed down tightly by any instrument suitable for this purpose. The mold is filled up to the centering-wings d^2, and the ring D^2 is then removed and replaced by the cup-shaped casting D^4, (shown in Fig. 2,) which forms a core for the flanged or enlarged end of the pipe. More of the plastic material is then placed in the mold and the pipe-section completed. When it has had time to set, the piece D^4 and ring D^2 are removed, the sheet-metal cylinder C is sprung together and removed, as also the post A', and the outer shell is folded back upon its hinges and removed, leaving the pipe-section intact, and it may be readily placed on one side, the mold put together, and the process repeated.

The mold so constructed is easily and handily used, very quickly taken apart and replaced, and the peculiar formation of the meeting edges of the cylindrical core allows of its expansion when the hot material is packed around it, while the bar *c* prevents any of said material from being forced inside the case, and leaves the inner surface of the pipe clean and smooth.

I am aware that it is not new to make drain-pipe from hot metallic, concrete, or other similar material by the arrangement of an elastic metallic outer wall, an expansible sliding core, a mold-base, and devices to connect the parts together. I do not claim the same, broadly; but

What I do claim, and desire to secure by Letters Patent, is—

1. In a mold for forming pipe from plastic material, the base-plate A, formed with a central hub, *a*, and several concentric series of holes, a^2, for the attachment of rings B of different sizes, substantially as shown and described.

2. A mold for forming pipe from plastic material, consisting, essentially, of the base A, formed as herein described, the central post, A', the ring B, the sheet-metal core C, having one side open, and provided with a lap-bar, *c*, the expanding-plates D D', recessed for the reception of this lap-bar, the winged centering-plate D^2, the core-flange D^4, and the outer shell, E, made in two parts, hinged together, and having cast strengthening-rings E' E^2 E^3, each formed in two parts, with locking devices, all constructed, combined, and arranged to operate substantially as and for the purpose set forth.

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

DANIEL H. DORSETT.

Witnesses:

J. E. STEVENSON,

FRANK JOHNSON.