G. KESLING.

PIPE AND TILE MOLD.

APPLICATION FILED NOV. 30, 1908.

950,567.

Patented Mar. 1, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

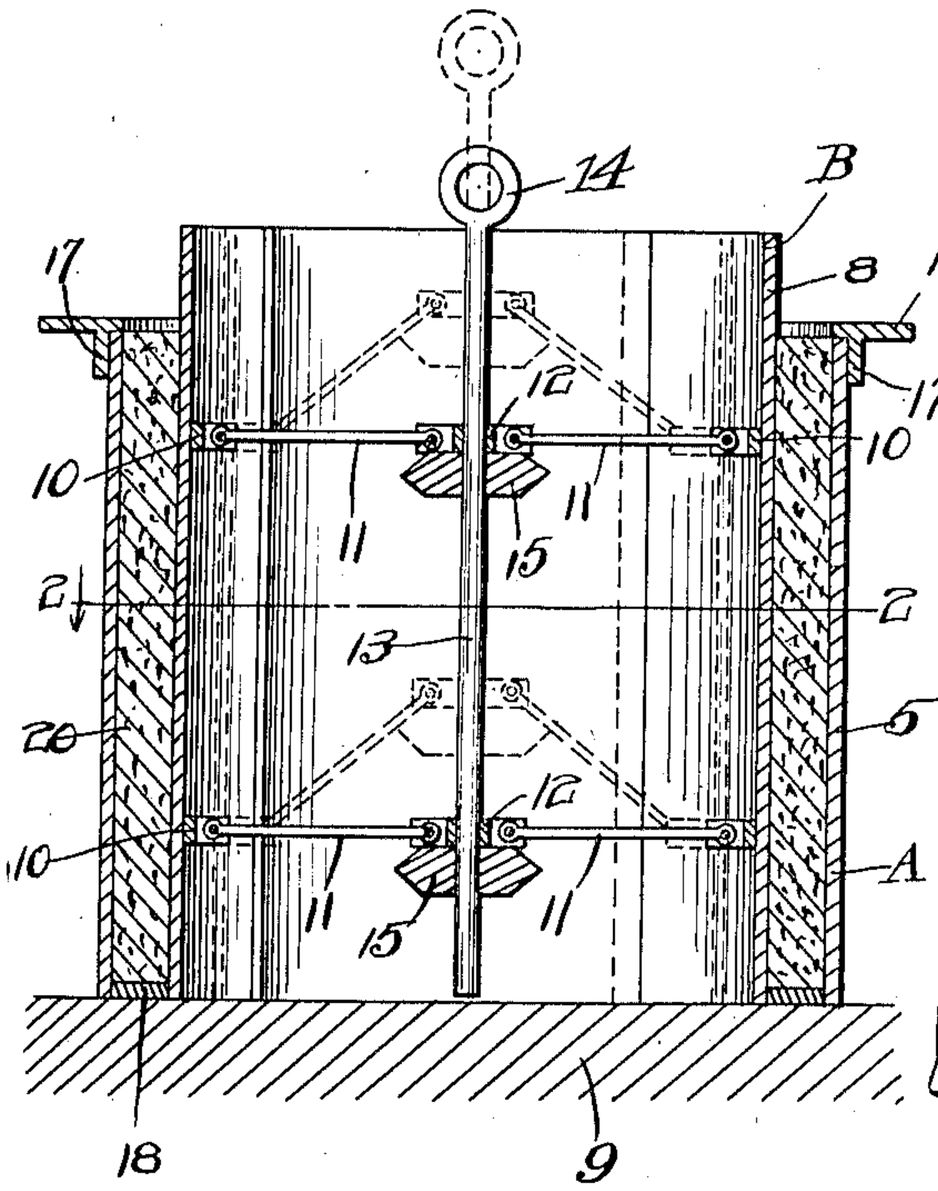


Fig. 3.

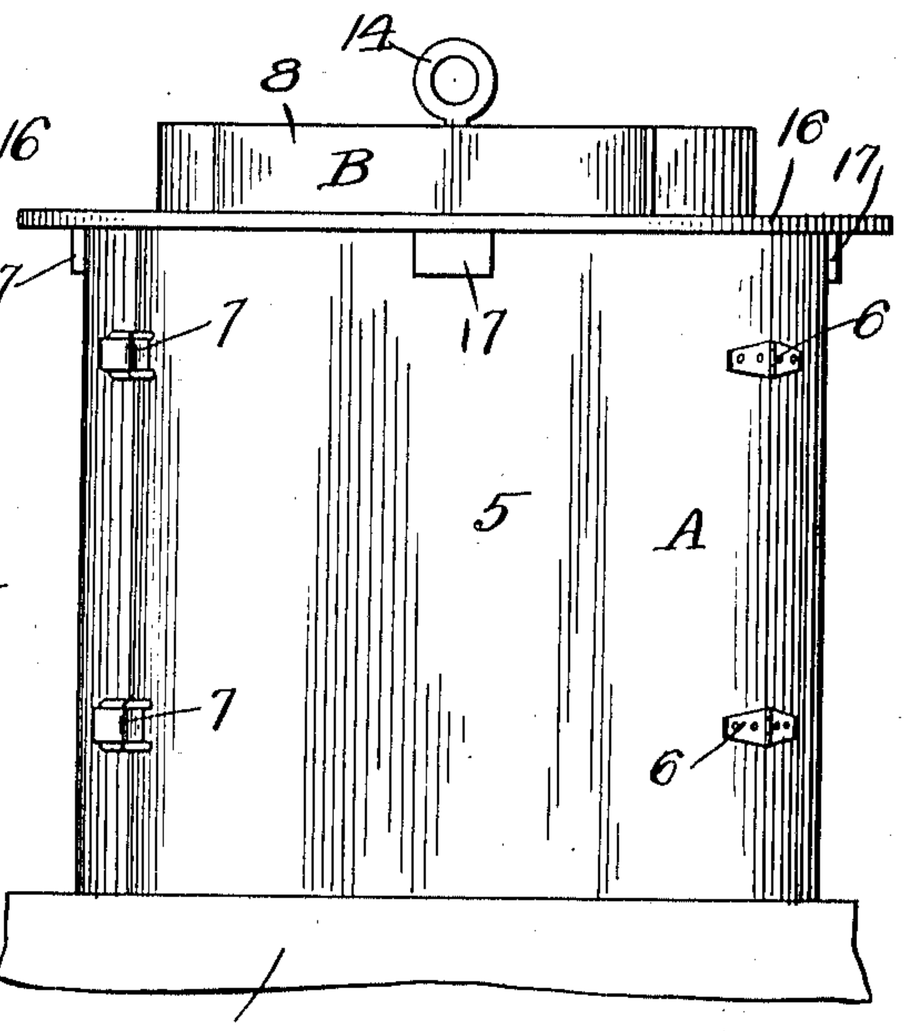
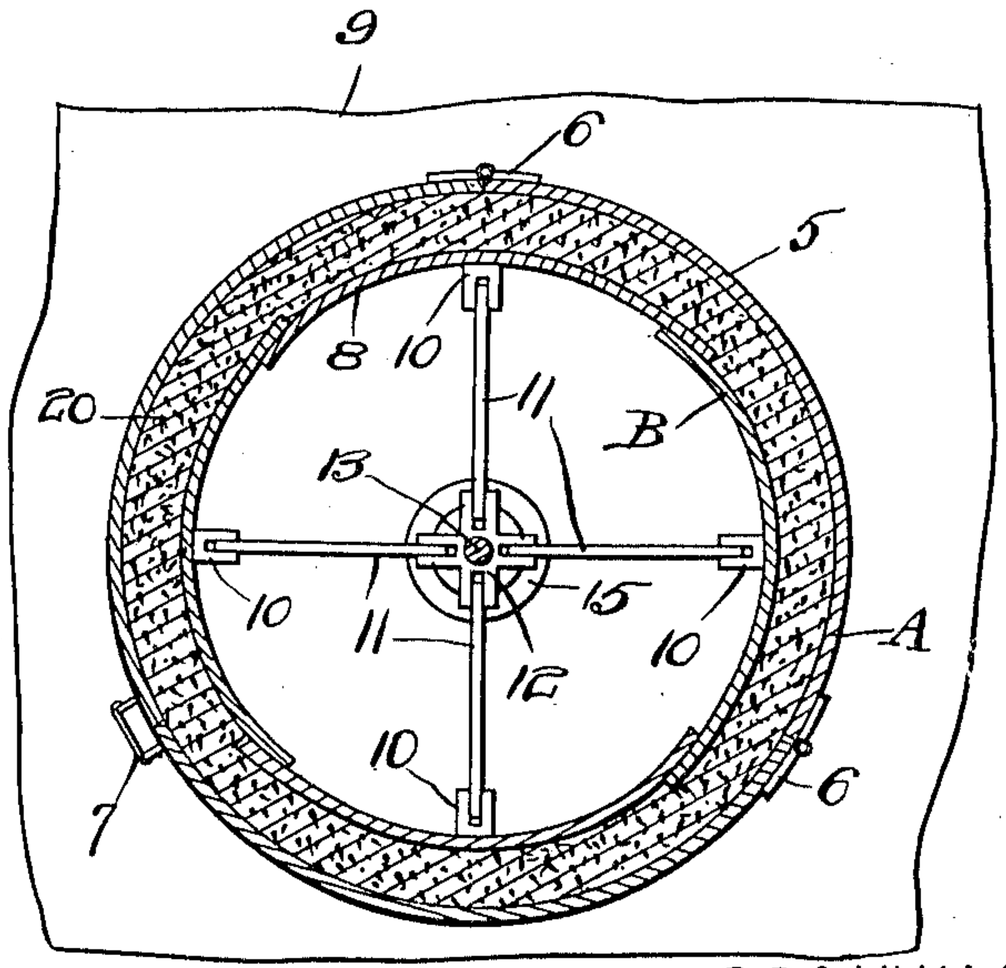


Fig. 2.



Witnesses

H. C. Miller.

L. L. Burket.

Inventor

GRANVILLE KESLING,

By Wm. Baggett & Co.,

Attorneys

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2 SHEETS—SHEET 2.

Fig. 4

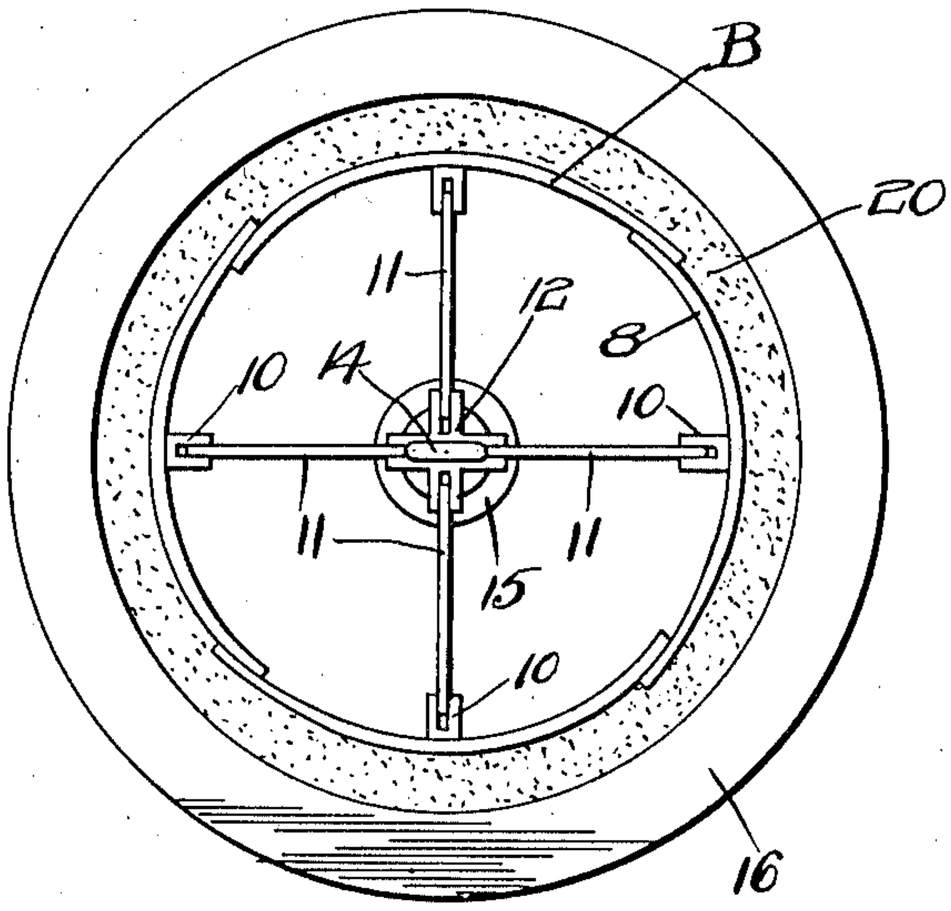


Fig. 5

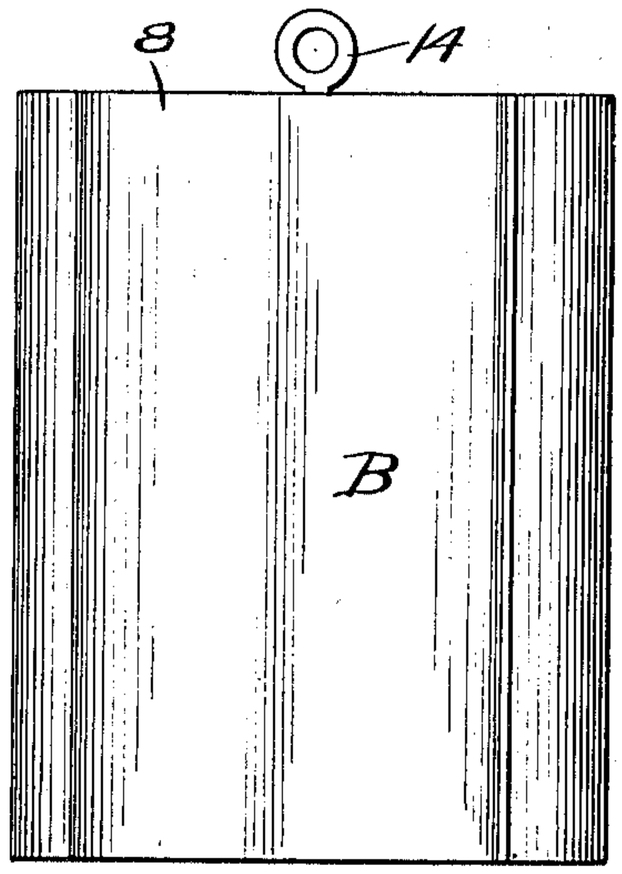


Fig. 6

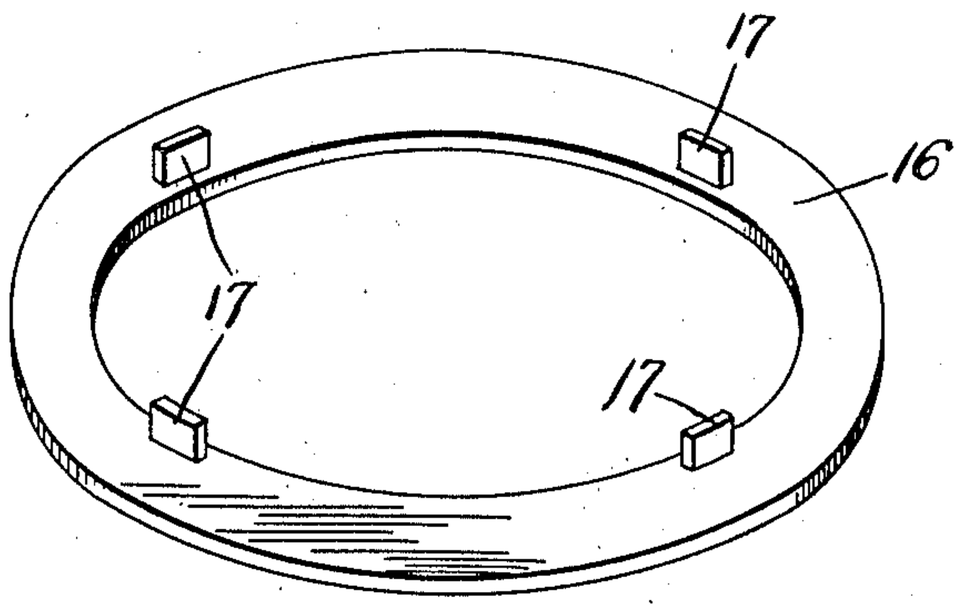
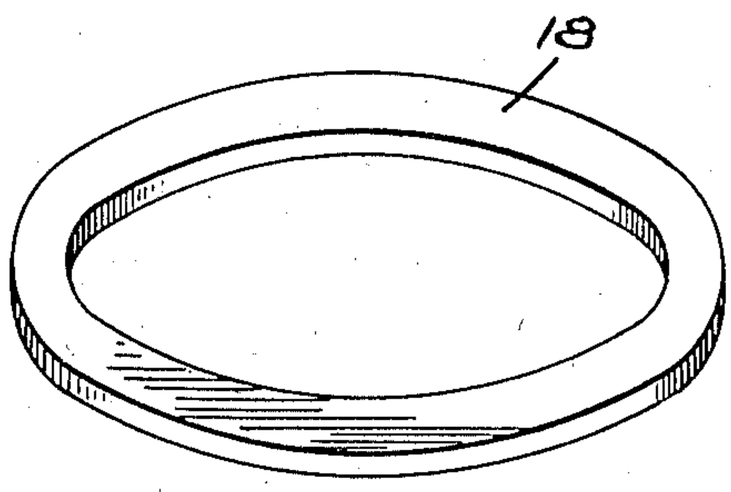


Fig. 7



Witnesses

J. W. Miller.

L. L. Burket.

Inventor

GRANVILLE KESLING,

By Wm. Baggerly & Co.

Attorneys.

UNITED STATES PATENT OFFICE.

GRANVILLE KESLING, OF LOGANSPORT, INDIANA.

PIPE AND TILE MOLD.

950,567. Specification of Letters Patent. Patented Mar. 1, 1910.

Application filed November 30, 1908. Serial No. 465,403.

To all whom it may concern:

Be it known that I, GRANVILLE KESLING, a citizen of the United States, residing at Logansport, in the county of Cass and State of Indiana, have invented certain new and useful Improvements in Pipe and Tile Molds, of which the following is a specification.

This invention relates to molds for making pipes and tiles, from cement and similar plastic material, and it has for its object to provide a mold for this purpose which shall be simple in construction, strong and durable, so constructed as to enable it to be readily filled with the plastic material; and which shall furthermore be constructed in such a manner as to enable the finished article to be very readily removed from the mold without danger of injury or breakage.

Further objects of the invention are to simplify and improve the construction and operation of this class of molds.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawings—Figure 1 is a vertical sectional view showing the improved mold, filled with plastic material as it appears while in use, and with dotted lines indicating the position of the inner portion of mold while in the act of being removed to permit the finished product to be removed from the work table. Fig. 2 is a horizontal sectional view taken on the plane indicated by the line 2—2, in Fig. 1. Fig. 3 is a side elevation showing the complete mold as it appears in Fig. 1. Fig. 4 is a top plan view. Fig. 5 is a side elevation showing the interior portion of the mold. Fig. 6 is a perspective detail view showing the ring or band used in connection with the exterior portion of the mold in inverted position. Fig. 7 is a detailed view of the base plate.

Corresponding parts in the several figures are denoted by like characters of reference.

The improved mold comprises an exterior casing A, and an interior portion or core B; said casing and core being of cylindrical form and of such relative dimensions that when the core is placed concentrically within the casing there will be left an intervening space, the width of which is equal to the desired thickness of the pipe that is to be constructed. The casing A and the core B may be constructed of any suitable material, preferably of sheet metal. The casing is composed of a plurality of segmental sections 5, 5, which are connected together at their meeting edges by means of suitably constructed hinges 6, 6, so as to form a continuous annular wall; two of the segments 5 are provided at their meeting edges, instead of the hinges 6, with suitably constructed latches or fastening members 7, enabling them to be detachably connected with each other, as will be readily understood.

The inner mold-portion or core B, is composed of a plurality of segmental plates 8, 8, of which, in the drawings, four have been shown; said segmental plates being slightly overlapped at their meeting edges so as to form a complete cylinder of the desired dimensions. The plates forming the core B, are made of a height somewhat exceeding that of the plates forming the casing A, and it follows that when the casing and the core are placed upon a flat table or base, as shown at 9 in the drawings, the core will extend above the upper edge of the casing. The segmental plates constituting the core are provided upon their inner faces with bifurcated lugs 10, which are connected by means of pivoted links 11, with cross-heads 12, upon a centrally disposed vertical rod or shaft 13, having at its upper extremity a ring or loop 14 forming a handle whereby it may be conveniently manipulated; the cross-heads 12 are formed with shoulders 15, constituting stops to limit the downward swinging movement of the links 11. It will be readily seen that when the central rod or shaft is grasped by the handle 14 and lifted, the segmental plates 8 will slide or move radially in an inward direction, or in the direction of the axis of the shaft, but the weight of said plates will prevent them from rising until the links 11 encounter the stops or shoulders 15; when this position is at-

tained; as indicated in dotted lines in Fig. 1, the core B will have become partially collapsed, by the overlapping of the plates 8, 8, thus materially reducing the diameter of the core.

In connection with the outer portion or casing of the mold there is used a top plate or ring 16, which is provided upon its under side with downward extending lugs 17, adapted to engage the exterior surface of the casing adjacent to the upper edge of the latter; said lugs 17, being disposed at a distance from the inner edge of the ring 16, which is approximately equal to the thickness of the material employed in the manufacture of the segments 5, of which the casing A is composed. It will be seen that when the ring 16 is placed in position upon the upper edge of the casing, the inner edge of said ring will lie flush with the interior face of the casing, upon the upper edge of which the said ring will be firmly supported; while the lugs 17 will lie snugly against the exterior face of the casing. The latter is in this manner very materially strengthened and reinforced, and is caused to retain its cylindrical shape without danger of being collapsed or distorted; and by the use of the ring 16, I am enabled to utilize thinner and lighter material in the construction of the mold casing than would otherwise be advisable. The ring 16, when in position upon the mold casing also forms a projecting flange which facilitates the filling of the mold with a plastic material. In connection with the improved mold there is also used an annular ring or base-plate 18, of suitable dimensions to fit between the casing A and the core B; said base-plate being placed upon the table or work-bench 9, in the lower end of the mold which is formed by placing the core concentrically within the casing. This base-plate may be made of sheet metal or other suitable material, and it serves to support the finished product which, while supported upon said plate, may be moved about and handled without danger of injury for some time before it becomes perfectly dry and hard.

From the foregoing description taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood by those skilled in the art to which it appertains. The base 9 upon which the mold is supported when in use may be in the nature of a bench or table of wood, metal, stone, cement or other suitable material and the same will obviously be constructed of the necessary strength and dimensions. The mold is composed of the casing A and the core B, the latter being placed concentrically within the casing, and both being supported direct upon the base 9 where they are spaced apart by means of the base-plate 18 which is introduced in the lower end of the mold, between the casing and the core. The latter, it will be observed, extends some distance above the upper edge of the casing, and the latter is provided with the top ring 16, whereby it is reinforced and whereby its proper shape is maintained as previously described. Plastic material, as indicated at 20, is now introduced and packed or tamped in the annular space between the casing and the core until the mold has been filled after which the upper edge may be struck off or finished in any suitable manner. The filling of the mold with plastic material is greatly facilitated by the fact that the core extends above, and is taller than the exterior casing, thus enabling the plastic material to be shoveled into the mold without danger of being dropped within the core; the filling of the mold is likewise facilitated by the presence of the reinforcing ring or flange 16. The article is now permitted to set for a short period; when sufficiently set, the core of the mold is removed by exerting a pull in an upward direction upon the handle at the upper end of the central rod or shaft 13, thereby partially collapsing the core and permitting it to be lifted out of the way. The top ring 16, is now removed, and the exterior casing may then be removed by first releasing the catches or fasteners 7, thus permitting the segmental wall-sections 5, to swing outwardly from the molded article which is left standing upon the base 9, supported only by the plate 10. The latter, as will be readily understood, serves to reinforce the newly molded article while it is being moved from the bench to some other suitable supporting device for drying and seasoning.

The improved mold, as will be seen, is simple in construction and capable of being very readily utilized in the manufacture of drain pipes and tiles from cement and similar plastic material. The use of the improved mold does not call for the use of specially skillful labor; and the mold will be found highly useful and thoroughly efficient for the purposes for which it is provided.

Having thus described the invention, what is claimed is—

1. A device of the character described, comprising an exterior casing composed of a plurality of hingedly connected wall plates two of which are separably connected at their meeting edges, a collapsible core composed of a plurality of segmental wall plates overlapping at their meeting edges, a central shaft having a handle at its upper end, cross-heads upon said shaft, and links connecting said cross-heads with the segmental wall plates; said cross-heads being provided with shoulders forming stops disposed in the path of the movement of the links; and a flat reinforcing ring supported

upon and extending laterally beyond the upper edge of the casing and provided at intervals with downward extending lugs bearing against the outer surface of the casing; the core being of a height exceeding the height of the casing.

2. In a mold of the character described, a core comprising a plurality of overlapping segmental plates having lugs upon their inner faces, a central rod or shaft having a handle at its upper end, cross-heads upon said shaft, and links pivotally connecting said cross-heads with the lugs upon the segmental wall plates; said cross-heads being provided wth shoulders forming stops disposed in the path of the movement of the links.

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

GRANVILLE KESLING.

Witnesses:
FRANK SWIGART,
CLARA H. DOLAN.