No. 771,911. PATENTED OCT. 11, 1904.

O. JOHNSON.

PIPE MOLD.

APPLICATION FILED MAY 31, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

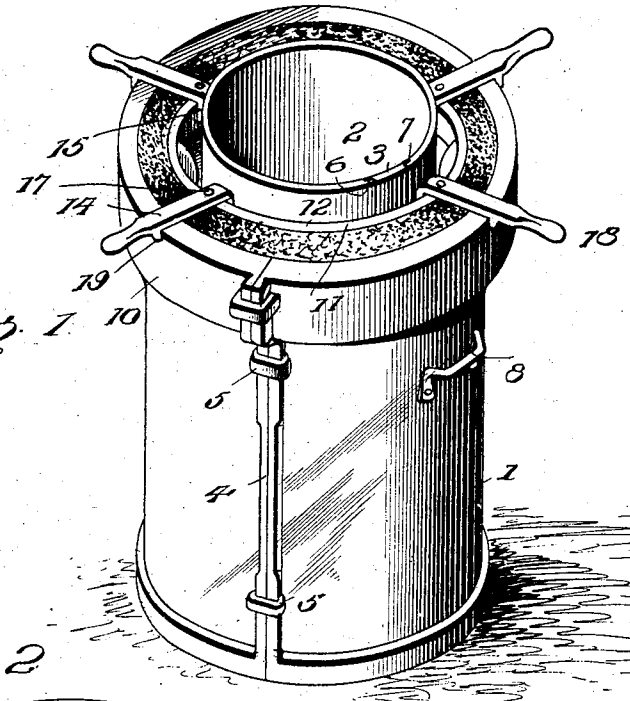


FIG. 1

FIG. 2

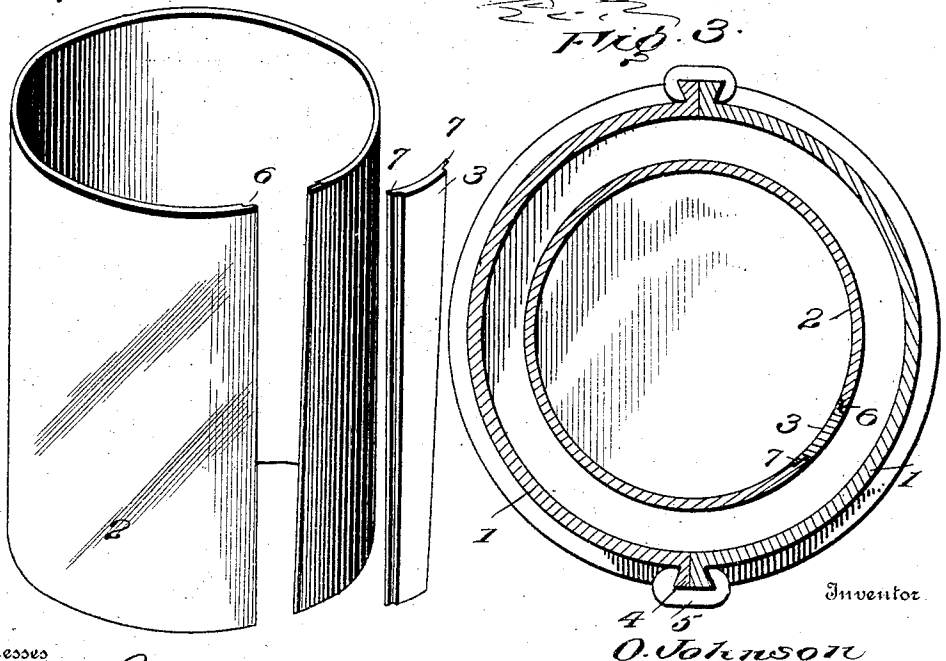


FIG. 3.

Witnesses

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O. Johnson

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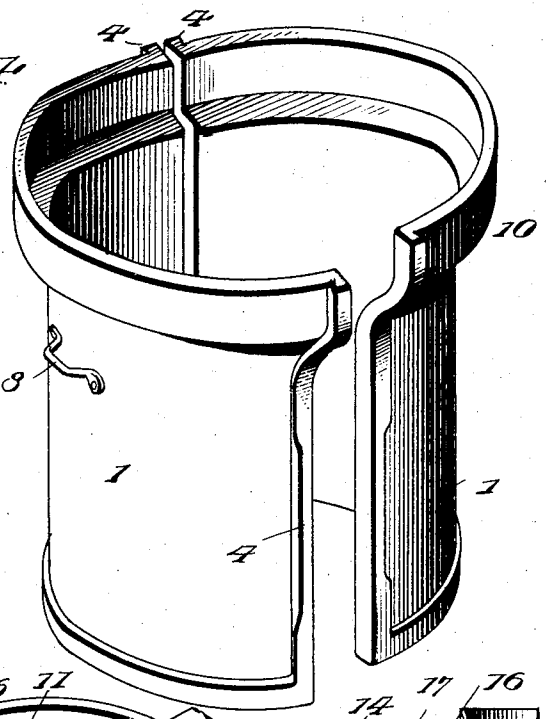
O. JOHNSON.

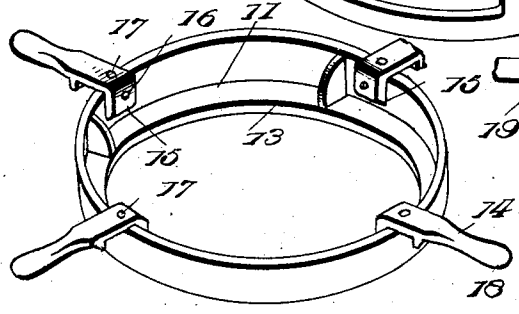
PIPE MOLD.

APPLICATION FILED MAY 31, 1904.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4





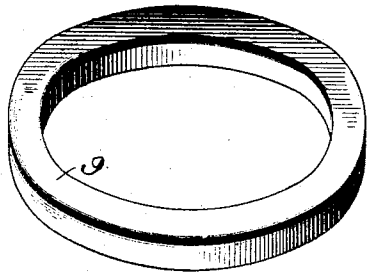


Fig. 5.

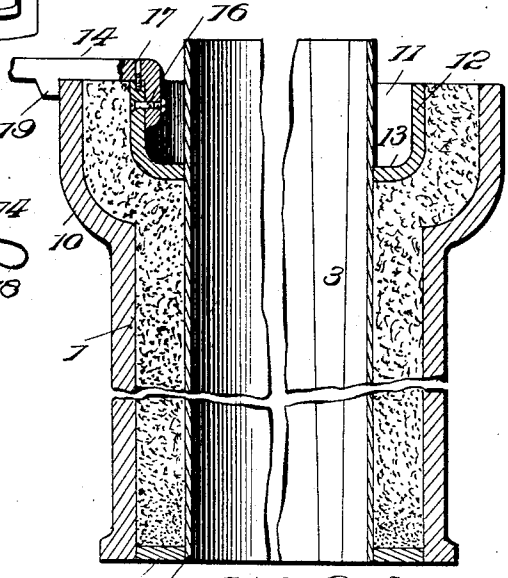


Fig. 6

Witnesses

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No. 771,911. Patented October 11, 1904.

UNITED STATES PATENT OFFICE.

OLE JOHNSON, OF BROOKINGS, SOUTH DAKOTA.

PIPE-MOLD.

SPECIFICATION forming part of Letters Patent No. 771,911, dated October 11, 1904.

Application filed May 31, 1904. Serial No. 210,561. (No model.)

To all whom it may concern:

Be it known that I, OLE JOHNSON, a citizen of the United States, residing at Brookings, in the county of Brookings and State of South Dakota, have invented certain new and useful Improvements in Pipe-Molds, of which the following is a specification.

This invention provides improvements in pipe-molds of the sectional type; and the primary object of the invention is to increase the general simplicity of the mold both as to structure and operation.

Further, the invention provides a special construction of forming-ring which coöperates with the mold-sections to form the usual flared end of sewer-pipe sections and which is also utilized for tamping the cement or concrete solidly between the mold-sections and the core.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a mold constructed in accordance with my invention. Fig. 2 is a combined perspective view of the core-sections. Fig. 3 is a horizontal sectional view. Fig. 4 is a perspective view of the mold-sections. Fig. 5 is a combined perspective view of the upper forming-ring and the bottom ring of the mold. Fig. 6 is a vertical sectional view partially broken away.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In carrying out my invention the mold comprises, essentially, the mold-sections 1, which are of corresponding form, and the core consisting of the core-sections 2 and 3. The mold-sections 1 are semicircular in form, and when in operative position the vertical edges thereof are in meeting relation, in a manner which will be readily comprehended by those versed in the art to which my invention relates. The vertical edge portions of the sections 1 of the mold are provided with outwardly-projecting vertical ribs 4, which are adapted to abut, and the mold-sections are held together by means of slip-clamps 5, which engage the ribs 4 aforesaid. Any suitable number of slip-clamps 5 may be utilized within the contemplation of my invention. The core consists of the body-section 2, which is made, preferably, of metal to secure a certain degree of flexibility, and the section 3 of the core is removable therefrom to admit of ready displacement of the said core after the preliminary formation of the pipe within the mold. The vertical edges of the core-section 2 are provided with longitudinal grooves 6 upon their inner sides, and these grooves 6 are adapted to receive the edge portions of the removable section 3 of the core, the latter being likewise provided with extensions 7 longitudinally of its edges to be received by the grooves 6 of the section 2, so as to permit the section 3 to rest flush against the section 2. For ready manipulation of the mold-section 1 the same may be provided with suitable handles 8. The spacing or bottom ring 9 is adapted to be received at the lower end of the mold and spaces the core in proper vertical alinement relative to the mold-sections 1 as regards the lower end of the said core. The upper portions of the mold-sections 1 flare outwardly, as shown at 10, so as to secure the necessary contour to the flaring end of the molded pipe-section. A forming-ring 11 is utilized to hold the upper end of the core in proper alined position and to tamp the concrete or cement solidly in the mold, and this forming-ring comprises the vertical portion 12 and the horizontal portion 13. In other words, the ring 11 conforms in its sectional shape with the flaring formation of the upper ends of the mold-sections 1 for obvious purposes.

The means for supporting the forming-ring 11 have been specifically devised for the purposes of my invention, and the said means comprises outwardly-extending arms 14, which project laterally from the vertical portion 12 of the ring 11 aforesaid. The arms

14 are provided at their inner ends with the downward extensions 15, which extensions are secured to the vertical portion 12, with the forming-ring, by means of a fastening 16. In order to reinforce the connection between the arms 14 and the forming-ring 11, the body portion of each of the arms is secured by means of a vertical fastening 17, which extends into the upper edge of the vertical portion 12 of the ring 11, thus compactly and rigidly attaching the arm from displacement and holding same against vertical and horizontal strain. The arms 14 project laterally, as before premised, and are adapted to rest upon the upper portions of the mold-sections 1, so as to properly support the forming-ring thereupon, and these arms are so extended as to form handles 18, which may be grasped for manipulation of the ring 11 either when tamping the cement in the mold or for removal of the ring or similar purposes. Projected from the under sides of the arms 14 are lugs 19, which are adapted to engage the outer portions of the upper ends of the mold-sections 1, so as to properly position the forming-ring centrally of the mold-section, and by so doing the core will likewise be held firmly in its proper vertical alinement within the mold-sections. The arms 14 thus perform an important function, in that they constitute the means for supporting the forming-ring 11 for properly positioning this ring relative to the mold-sections 1 and also for alining the core within the mold. To reinforce the vertical and horizontal positions of the ring 11, integral lugs are formed with the said portions, said lugs being extended from the outer side of the ring, so as to brace the parts of the said ring when in use.

The mold when constructed as hereinbefore described is operated as follows: The sections 1 are first assembled and secured by means of the slip-clamps 5. The spacing-ring 9 is next placed in position and the core then disposed within the mold. The mold is filled with the cement or concrete or whatever the composition from which the pipe is to be made may be, which is firmly tamped between the core and the mold-sections 1, after which the ring 11 is placed in position to form the upper end of the pipe. This having been done, the ring 11 and the core may be removed and used in connection with other mold-sections adjacent, if desirable. The pipe would of course remain in the mold a certain length of time for purposes of hardening.

Having thus described the invention, what is claimed as new is—

In a pipe-mold, the combination of mold-sections, an inner core, a spacing-ring between the lower end portions of the core and mold-sections, the upper portions of the mold-sections being outwardly flared, a forming-ring surrounding the core and comprising vertical and horizontal portions, arms projected laterally from the forming-ring, extensions projected downwardly from the inner ends of the arms and attached to the vertical portion of the forming-ring, projections extended downwardly from the arms between the ends thereof and engaging the mold-sections, and handles extended from the arms and formed integral therewith.

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

OLE JOHNSON. [L. S.]

Witnesses:

HALVOR C. SALBERG,

LOUIS ERICKSON.