

(No Model.)

2 Sheets—Sheet 1.

M. MEEHAN.
PROCESS OF MANUFACTURING CONDUITS AND MACHINE THEREFOR.
No. 376,748. Patented Jan. 24, 1888.

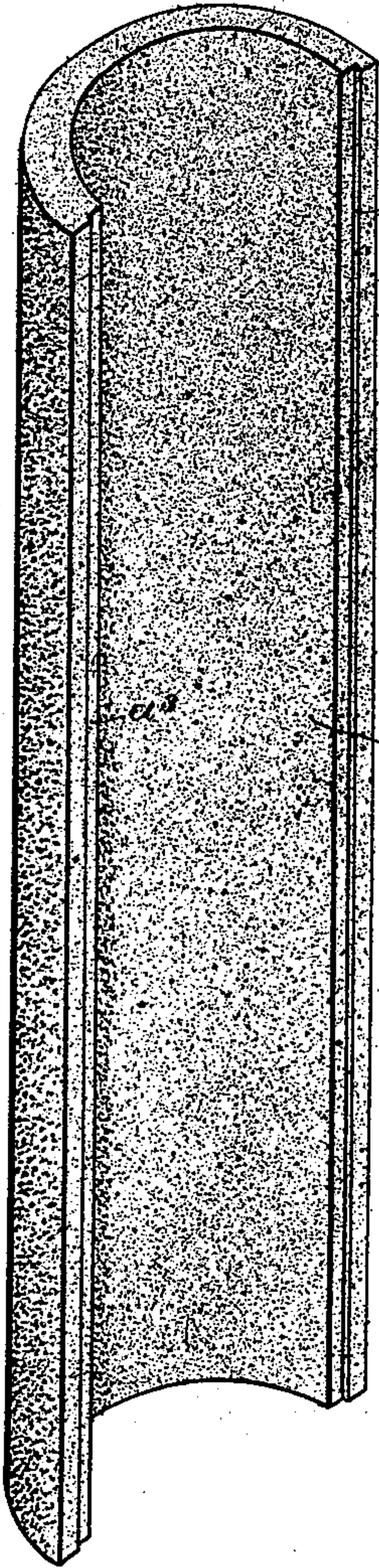


Fig. 4.

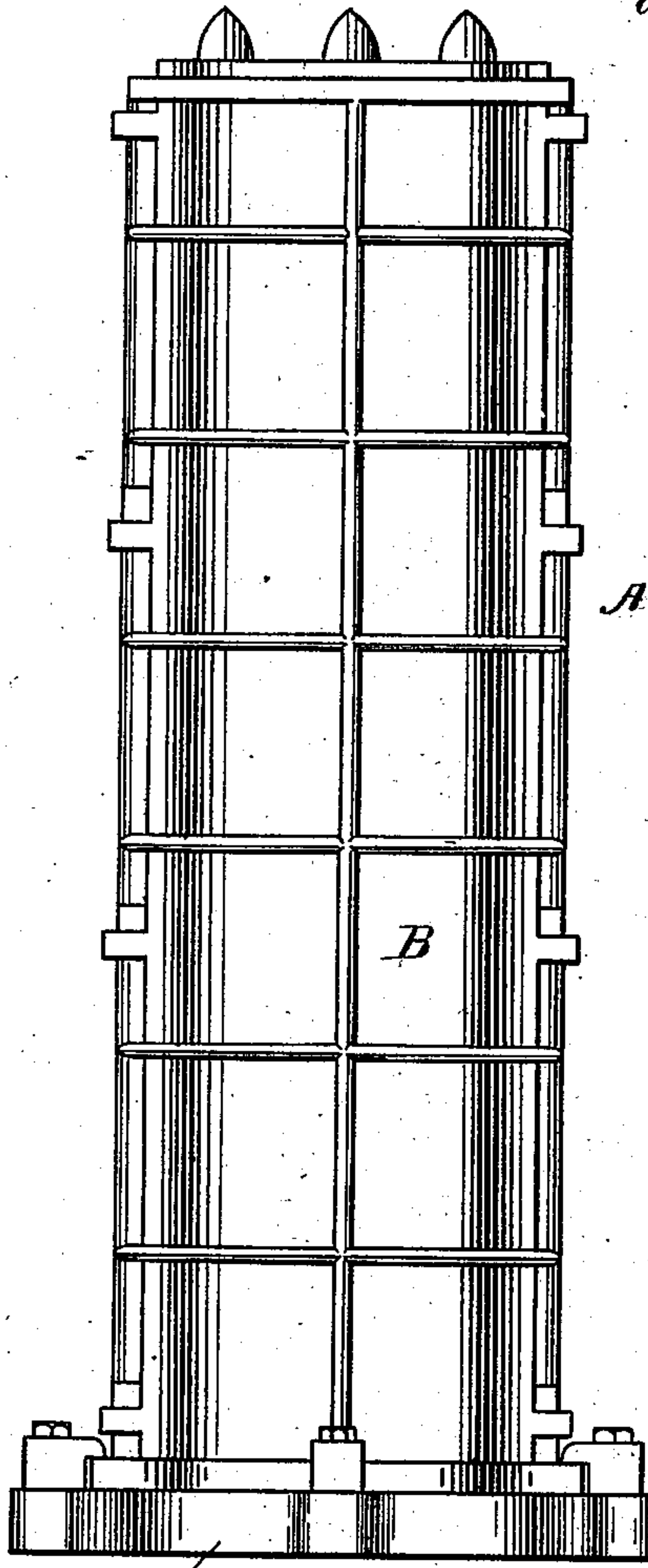


Fig. 1.

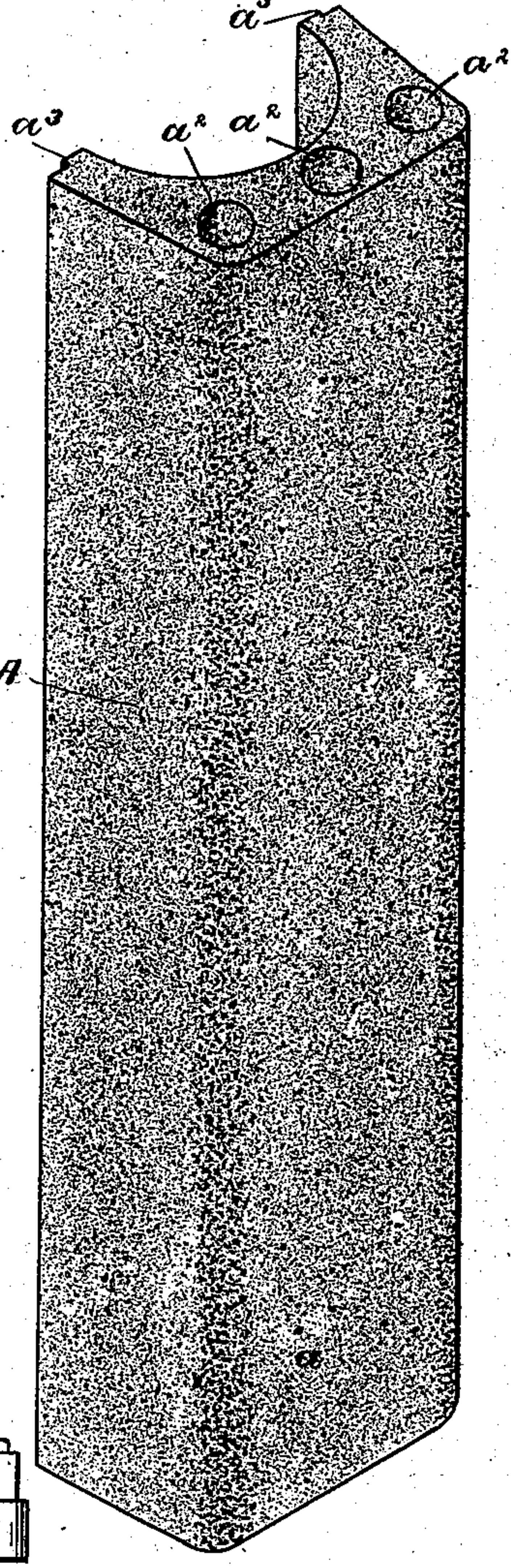


Fig. 3.

Fig. 11.
WITNESSES.
J. W. Dolan,
Fred. B. Dolan.

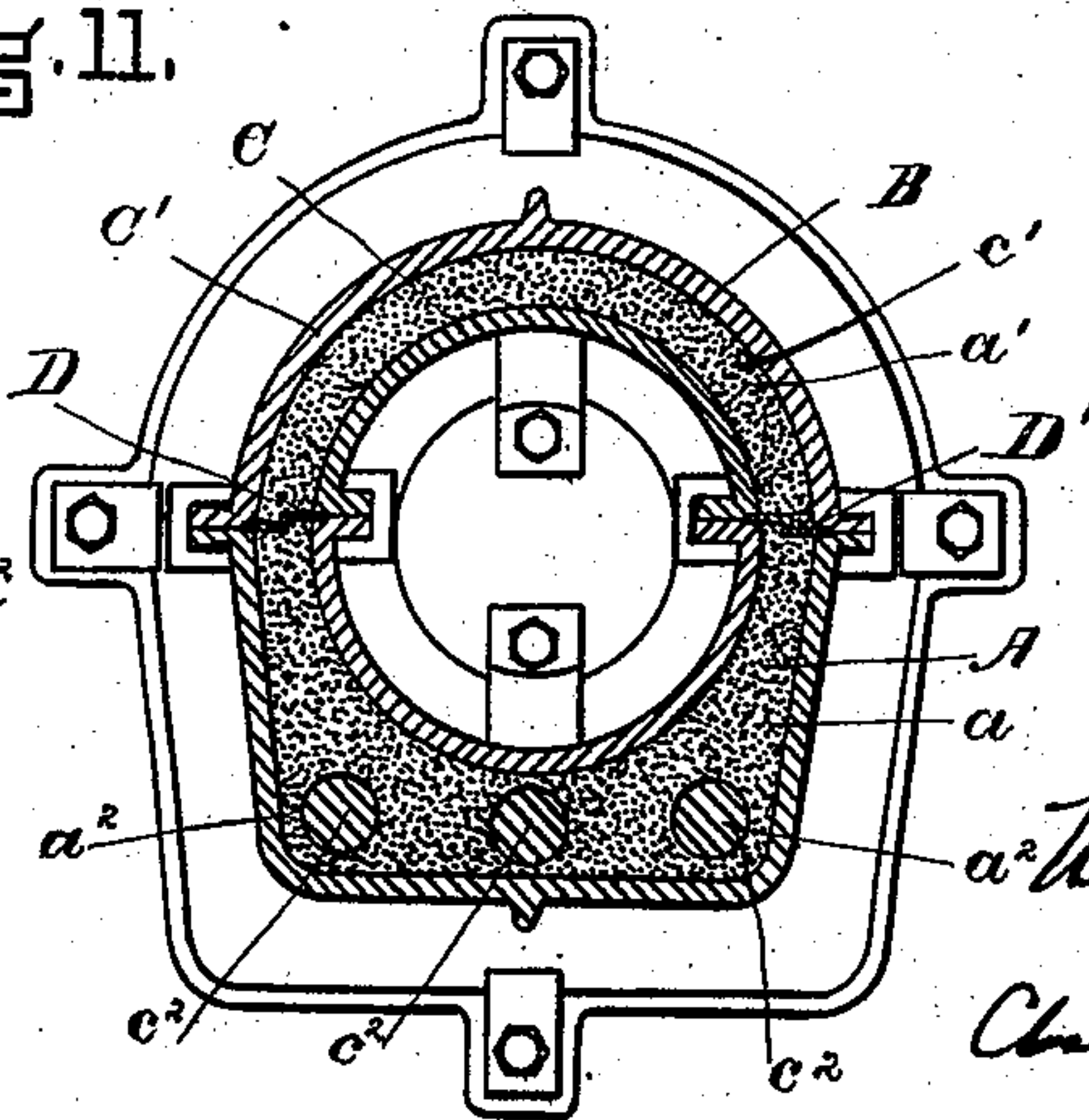


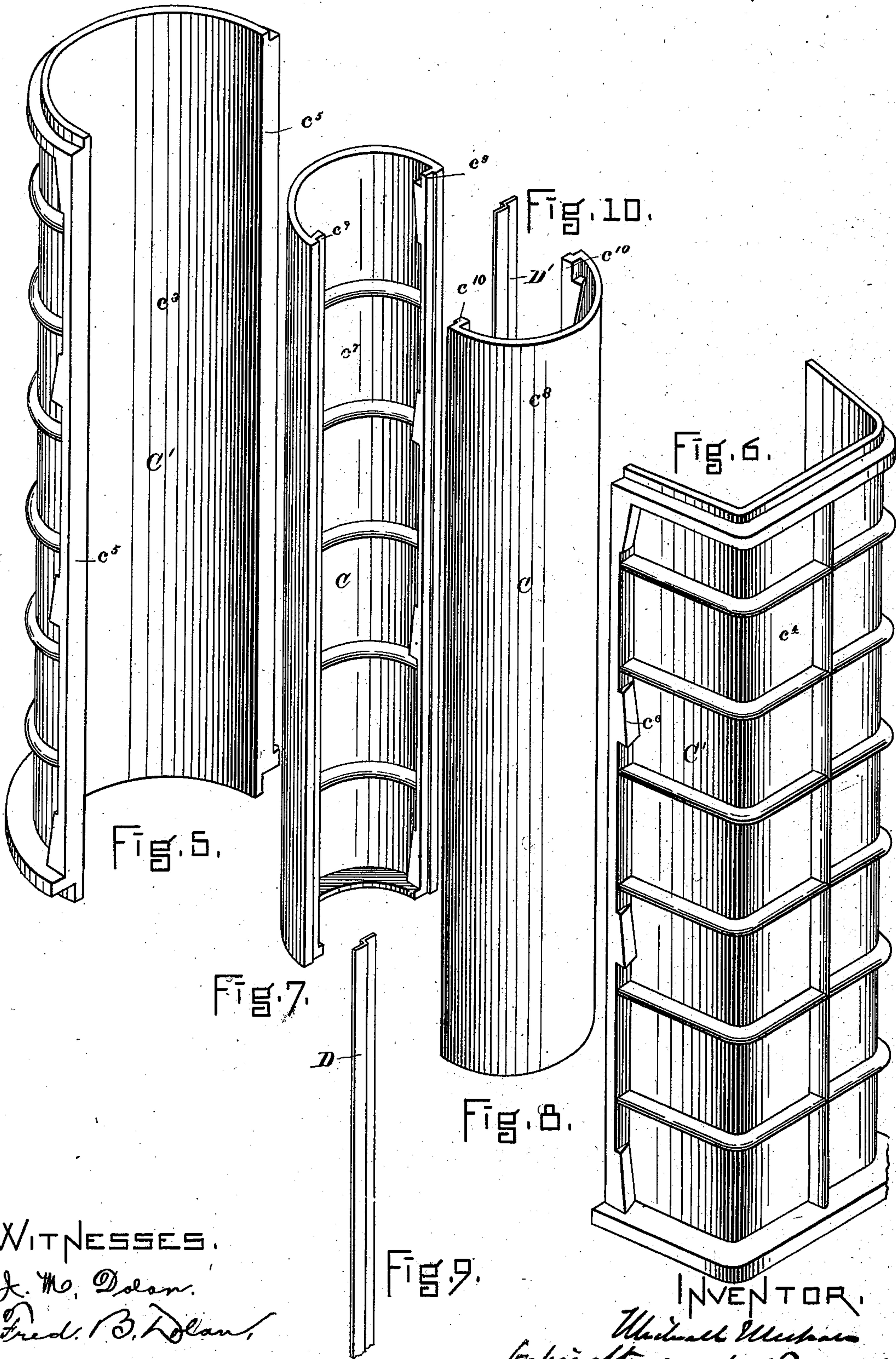
Fig. 2

INVENTOR,
Michael Meehan
by his atty
Charles & Raymond

(No Model.)

2 Sheets—Sheet 2.

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WITNESSES.

J. M. Dolan.

Fred. B. Dolan.

Fig. 9.

INVENTOR,
M. Meehan
by his atty Charles F. Raymond.

UNITED STATES PATENT OFFICE.

MICHAEL MEEHAN, OF BOSTON, MASSACHUSETTS.

PROCESS OF MANUFACTURING CONDUITS AND MACHINE THEREFOR.

SPECIFICATION forming part of Letters Patent No. 376,749, dated January 24, 1888.

Application filed July 13, 1887. Serial No 244,130. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL MEEHAN, of Boston, in the county of Suffolk and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Process of Manufacturing Conduits and Apparatus Therefor, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention relates to an apparatus for and method of making the conduit described in my application for Letters Patent of the United States filed June 18, 1887, Serial No. 241,694. The conduit therein described is made in two longitudinal parts—namely, a base or lower section and a cover—and both of these parts are made of cement and sand, or other similar material; and the present invention relates, first, to the method of manufacturing the conduit, whereby the base and cover are simultaneously made; and, second, to the mold-box used in practicing the method, whereby the two parts of the conduit—namely, the base and the cover—may be simultaneously formed.

In the drawings, Figure 1 is a view in elevation of the mold-box. Fig. 2 is a cross section thereof and of a conduit therein contained. Fig. 3 is a view in perspective of the body of the conduit. Fig. 4 is a view in perspective of the top or cover of the conduit. Fig. 5 is a view in perspective of one part of the outer section of the mold-box. Fig. 6 is a view in perspective of another part of the outer section of the mold-box. Figs. 7 and 8 are views in perspective of the inner sections of the mold-box. Figs. 9 and 10 are views of the partition-plates. Fig. 11 is a cross-section of the conduit.

Referring to the drawings, A represents the conduit. It is made in two longitudinal sections—namely, the base a and the cover a' . The base may also have the longitudinal holes a^2 , and the cover and base are united by lapping-joints a^3 . To simultaneously form both the base and the cover and also the sections of the lapping-joints, I use the mold-box B, which preferably comprises the inner or core section, C, and the outer section, C'. Each section is firmly bolted to a bed-plate, c , the

section C inside of the outer section, C', so as to form a space, c' , in which the base and cover of the conduit are formed. There is also arranged to extend from the base-plate c into the cavity of the mold the mandrels or formers c^2 . This enables me to make the base and the cover of the mold at the sametime. They must, however, be made in two parts or sections, and there must also be formed at the same time the lapping sections a^3 of the joints at the edges which come together; and I obtain both of these results—namely, the making of the two parts of the conduit separately—and the proper formation of the edges which are to abut in the finished conduit by extending across the mold-cavity the partition-plates D D', one from each side. These partition-plates not only divide the mold into two longitudinal parts or sections, one of which is adapted to form the base of the conduit and the other the cover, but they also serve to give shape to the longitudinal edges of the cover and base, the shape given the edges of one section being the reverse of the shape given the other, so that when the two parts are put together a section of each edge of one part overlaps a section of the edge of the other part. These partition-plates D D' are united by one or both edges either to the outer section, C', of the mold-box or the core C, or to both; and in the figures I have represented the outer section, C', of the mold made in two parts, c^3 c^4 , and provided with flanges c^5 c^6 , by which they are united together by bolting, or in any other similar way, and the core C, I have also shown made in two parts, c^7 c^8 , and provided with the inwardly-extending flanges c^9 c^{10} , by which they are bolted or fastened together. The core, however, may be made in one piece if desired. I have represented a recess formed on each side of the flanges c^5 c^6 c^9 c^{10} , in which the edges of the partition-plates D D' extend, and which permits them to be clamped between the flanges of the various parts of the mold; but I do not confine myself to this particular way of supporting the partition-plates.

In use, the two sections of the conduit are simultaneously made; and I prefer to employ a machine similar in construction and operation to that described in the application of George Richardson for patent filed June 8,

1887, Serial No. 240,595, employing a number of drop-tamps, which are operated to be dropped upon the cement and sand or other material used in forming the conduit as it is fed in small quantities into the mold-cavity—that is, sand and cement or other similar material are properly mixed and fed into the cavities of the mold upon both sides of the partition-plates D D' in small quantities and solidified and compressed in the cavity of the mold by successive action of the tamps which are dropped or forced upon it as it is fed, and this alternate feeding and tamping continues until both sections of the mold are filled. The mold, with the completed sections of the conduit, is then taken from the machine and the sections removed therefrom and cured and finished or completed in any desired way.

By this method I am enabled to make the cover and base simultaneously, and, barring cost of material, substantially as cheap as one section can be made. Not only this, but I am enabled to form joints or sections of joints upon the longitudinal edges of the two sections in a manner to insure an accurate fit when they are brought together while the sections are being formed or molded.

I would say that I do not confine myself to the especial form of joint shown and described herein, but may use any other form of joint.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The method of manufacturing the base and cover sections of a conduit from moldable material, consisting in constructing a mold of the shape of the complete base and cover of the conduit, then dividing the mold into two parts or sections by partitions, and then simultane-

ously forming in said mold-cavity by pressure the cover and base of the conduit as one operation, as and for the purposes described.

2. The method of simultaneously forming the lap-joints to the edges of cover-section and to the edges of a base-section of a molded conduit by forming a mold-box having a cavity of the shape of the complete base and cover of the conduit, and dividing the cavity or space into two parts by division-plates, which are shaped to form a section of a lap-joint upon each longitudinal edge of the cover-section and of the base-section of the conduit, as and for the purposes described.

3. The mold for forming the base and cover sections of a conduit, comprising a mold-box, an interior core box or former, and partitions extending from the core-box to the outer or main box, as and for the purposes described.

4. The combination of the mold-box C', the core-box C, and the partition-plates D D', extended across the mold-cavity to separate the same into two parts, and attached or supported either by the mold-box or by the core-box, or by both, as and for the purposes described.

5. A mold-box for forming a base and cover of a conduit having partition-plates D D', extended across the cavity thereof to divide the same into two parts or sections, and also to shape the edges of the said parts or sections, as and for the purposes specified.

6. The mold-box having the outer case or box, C', the inner case or box, C, the partition-plates D D', and the mandrels or formers c², as and for the purposes described.

MICHAEL MEEHAN.

In presence of—

F. F. RAYMOND, 2d,
FRED. B. DOLAN.