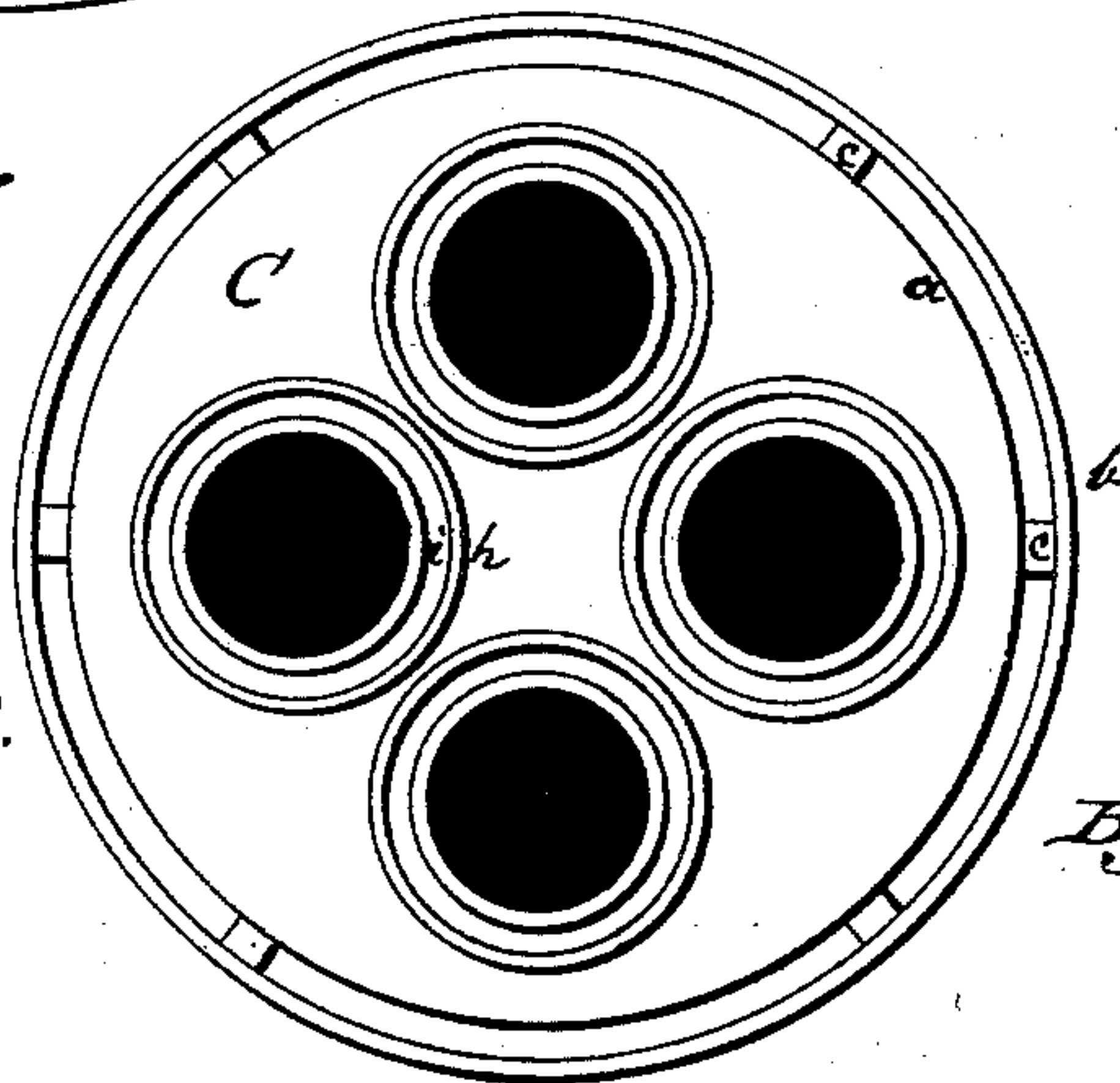
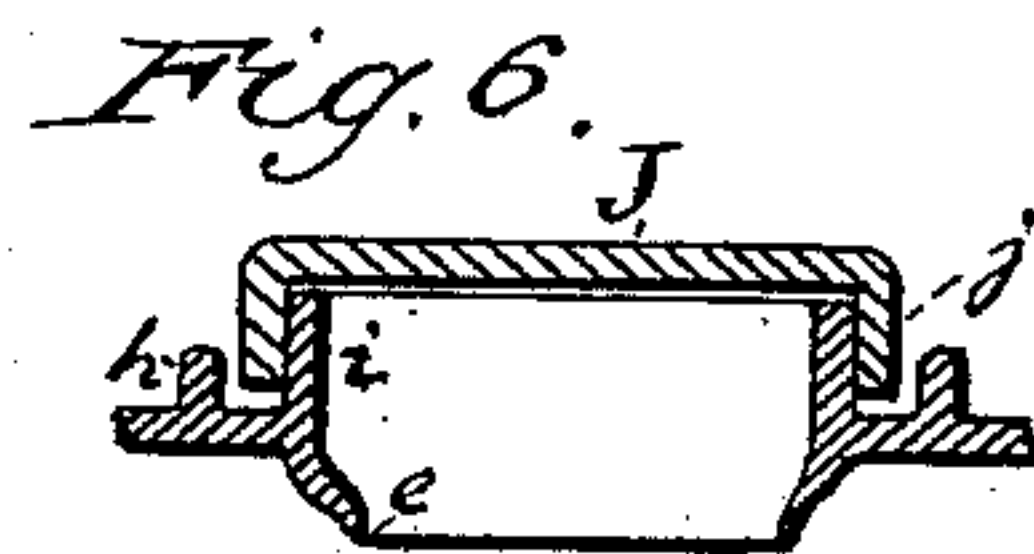
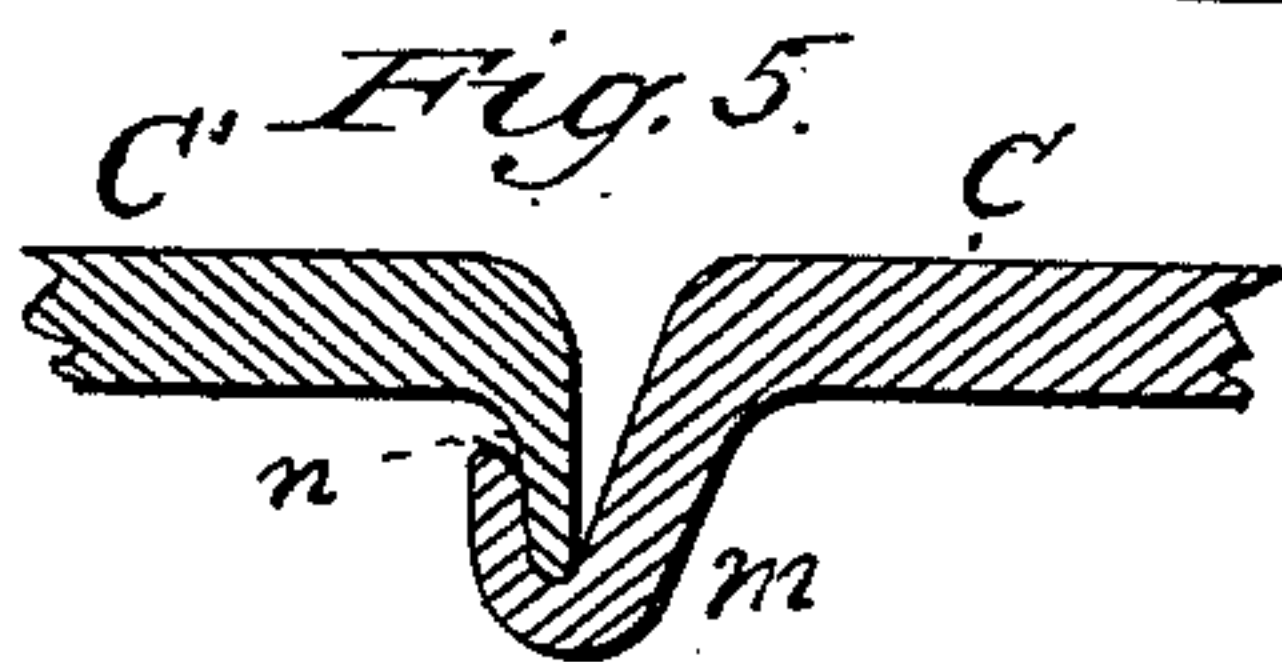
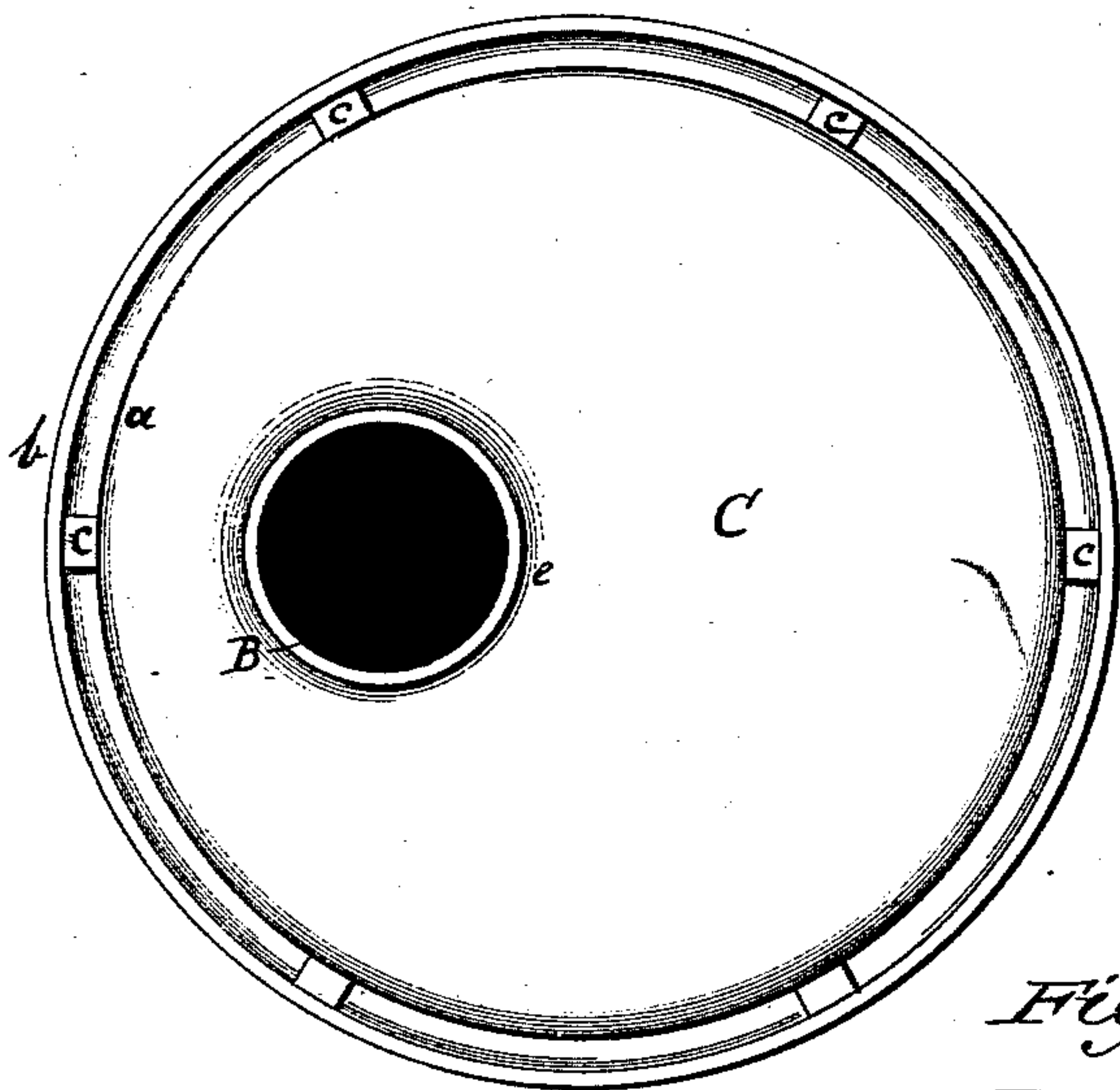
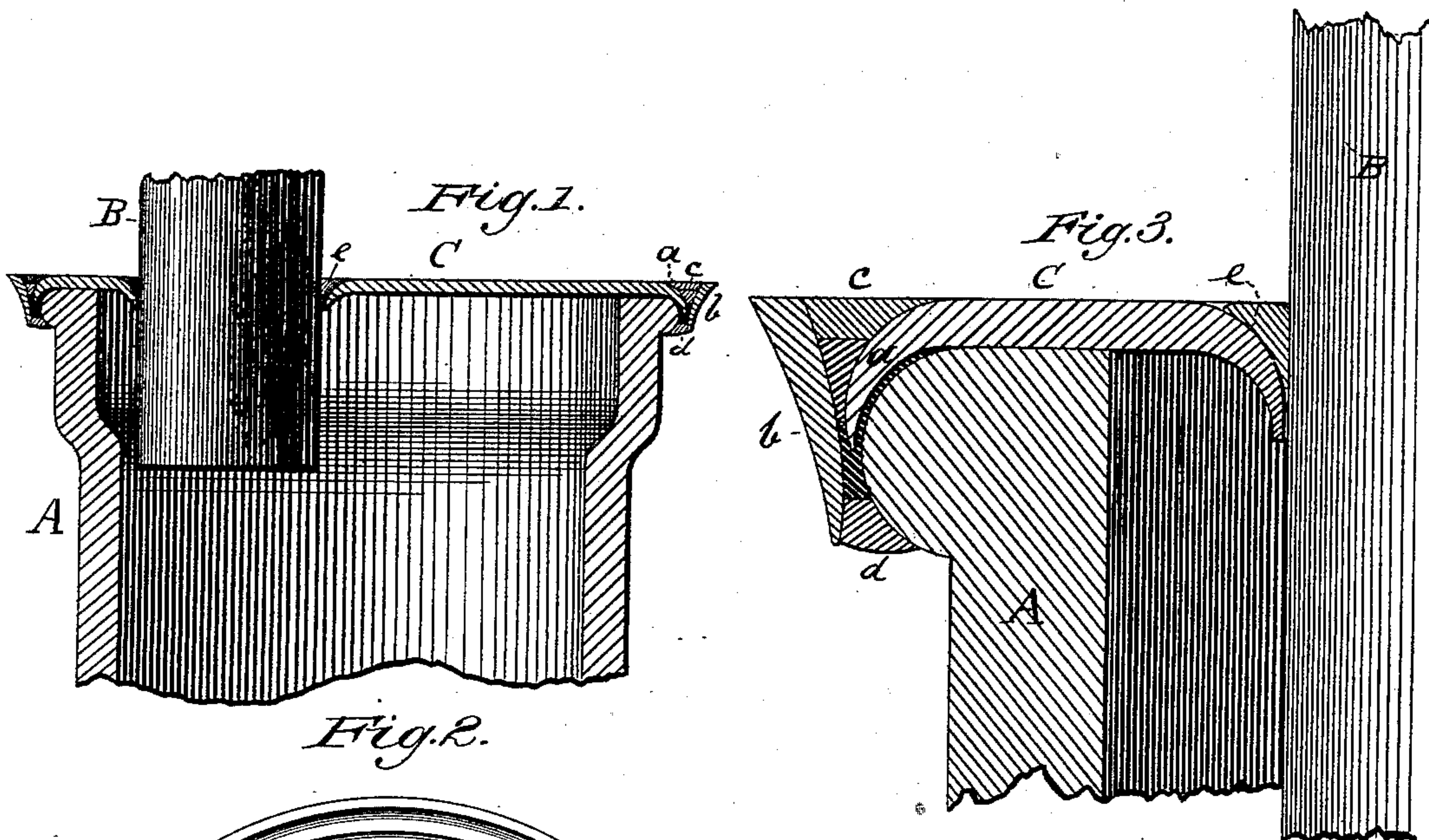


(No Model.)

A. MONTEATH.
SEWER CAP AND JOINT.

No. 278,723.

Patented June 5, 1883.



Witnesses.
Will R. Onshumers.
Adams J. White.

Inventor
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By Wm H Lotz

Atty.

UNITED STATES PATENT OFFICE.

ALEXANDER MONTEATH, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF
TO PATRICK J. McMAHON, OF SAME PLACE.

SEWER CAP AND JOINT.

SPECIFICATION forming part of Letters Patent No. 278,723, dated June 5, 1883.

Application filed December 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER MONTEATH, of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Sewer Caps and Joints; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention has for its object to produce a device for forming a hermetic connection or joint between the waste and soil pipes and the sewers in a building to prevent the escape of sewage-gases into the house, or the overflow of sewage-water in case the sewer is clogged up.

Heretofore the opening around a waste or soil pipe, where it enters the sewer, has been generally closed by pieces of brick and cement, which connection has proved very inefficient, since by the expansion and contraction of the metal pipes or by any jarring or settling of the building the joints thus formed were broken and became loose and leaky, and gave the rats a chance to force an opening, and therefore required constant watching.

My invention consists in providing metal caps that fit the sewer-mouth and have openings for inserting the waste and soil pipes, and that are constructed to form annular channels around the sewer-pipe and the soil or waste pipe to be filled with molten metal that will close all joints hermetically, and will thus permanently prevent the escape of sewage-gases or the overflow of sewage-water through such connection, all as fully hereinafter described and specifically claimed.

In the accompanying drawings, Figure 1 represents a cross-section of the cap as forming the joint between the sewer and waste or soil pipe. Fig. 2 represents a plan of such cap, and Fig. 3 an enlarged cross-section of one side of the same. Fig. 4 shows the plan of a cap arranged for four soil or waste pipes to enter one sewer-mouth; Fig. 5, a section of the construction for jointing a cap made in two halves, and Fig. 6 a section of the device for hermetically closing an opening in the cap that is not to be used.

Corresponding letters in the several figures of the drawings designate like parts.

A denotes the mouth of the sewer, that, for the purpose of leading therein the waste or soil pipe B, is placed in an upright position to extend above the surface of the ground.

C is the sewer-cap, which preferably I make of cast-iron. This cap C, I provide with curved annular flange *a*, that corresponds with the shape of the exterior rim of the sewer-pipe, and provides a sufficient space between such flange and the sewer-pipe rim to be filled with metal. This flange *a* decreases in thickness toward its lower terminus, where it forms a sharp edge. Exteriorly of this flange *a* and concentric therewith I provide a rim, *b*, that is flaring upwardly, and the thickness of which is decreasing toward its bottom edge. This rim *b* is about twice the width of flange *a*, and its upper edge is on a line with the top face of cap C. The rim *b* is connected to be rigid with cap C by a series of bridge plates or ribs, *c*, and otherwise an open margin is left between flange *a* and rim *b*, that is wider on top. This cap, after being placed upon the sewer-pipe end, is hermetically secured thereto by first closing the space between the sewer-pipe and the bottom of rim *b* with a ring of tempered clay, *d*, and then by filling molten lead or other easily-fusible metal into the spaces around flange *a*.

The opening in cap C for inserting the waste or soil pipe B, I make with a downwardly-curved annular flange, *e*, in a manner to form an annular channel or groove around such waste or soil pipe, which I also fill with fused metal, that, with chilling, will form an everlasting hermetic joint.

For a sewer-pipe that is intended to connect with more than one soil or waste pipe, I arrange the caps with a series of openings, as in Fig. 4, which openings may be of different sizes, and, as shown in Fig. 6, I provide each such opening with two concentric annular rims, *h* and *i*, and for the purpose of hermetically closing such openings that are not used at the time, I provide metal covers J, the annular flanges *j* of which are inserted into the groove between rims *h* and *i*, that is then filled with fused metal.

In places where a joint is to be made after the sewer and soil or waste pipe already have been placed in position, the cap has to be in two halves, C and C', to enable its attachment, one half, C, having a pending hook-flange, *m*, and the other half, C', having a pending lip, *n*, that enters the hook-flange, and both halves are thus hermetically connected by casting fused metal into the hook-flange channel that will fill the spaces around lip *n*, all as shown in Fig. 5.

As will be readily seen, a cast-iron cap thus provided for hermetically closing the openings between the sewer-mouth and the waste or soil pipe with fused metal filled in all the joints will not only be entirely safe against all leakages of sewage gas or water, and will be durable in every respect, but such joints cannot be damaged or destroyed by rats or other vermin.

What I claim is—

1. The metallic sewer-cap C, provided with an exterior annular rim, *b*, and a curved annular flange, *a*, that will form an annular channel to and around the mouth of the sewer-pipe

A, to be filled with fused metal, such cap C being provided with one or more openings for hermetically connecting the ends of waste or soil pipes, all substantially as and for the purpose set forth.

2. The sewer-cap C, having openings for inserting waste or soil pipes B, and provided with flange *a* and annular rim-plate *b*, connected by bridge-plates *c*, all constructed and arranged substantially as and for the purpose set forth.

3. The sewer-cap C, having one or more openings for inserting waste or soil pipes B, and provided with flanges *e* and *a*, and with rim-plate *b*, that is connected by bridge-plates *c*, all substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

ALEXANDER MONTEATH.

Witnesses:

LOUIS HOLTING,
R. G. SCHMID.