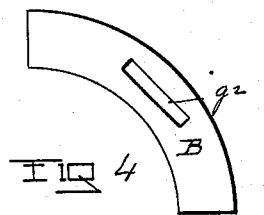
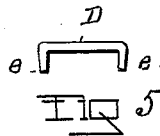
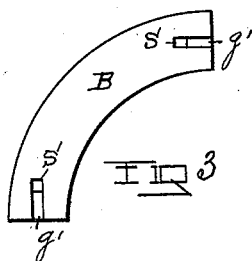
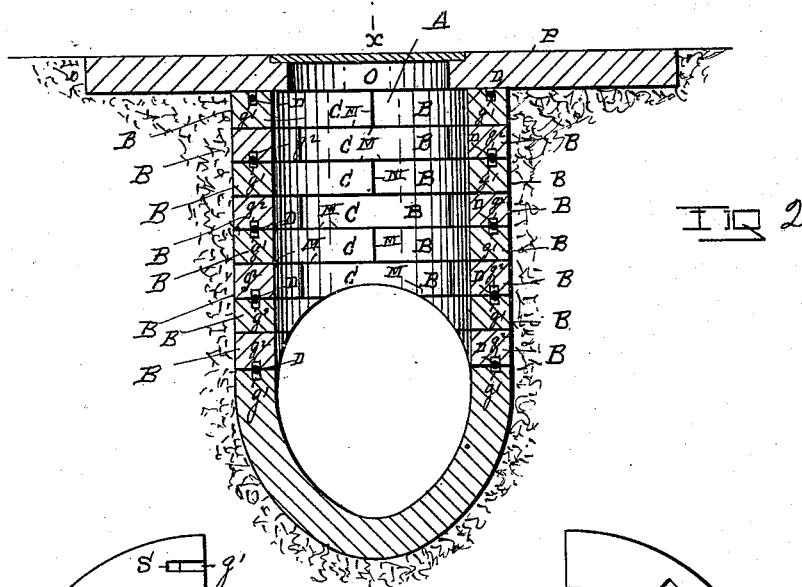
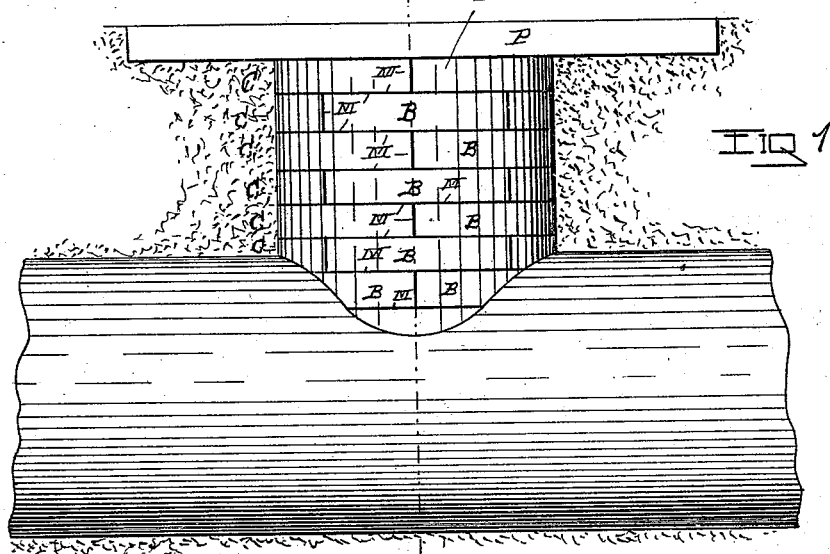


(No Model.)

J. WALLACE.
MAN HOLE FOR SEWERS OR CESSPOOLS.

No. 423,501.

Patented Mar. 18, 1890.



WITNESSES
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JOHN WALLACE, OF TROY, NEW YORK.

MAN - HOLE FOR SEWERS OR CESSPOOLS.

SPECIFICATION forming part of Letters Patent No. 423,501, dated March 18, 1890.

Application filed August 21, 1889. Serial No. 321,528. (No model.)

To all whom it may concern:

Be it known that I, JOHN WALLACE, of the city of Troy, county of Rensselaer, and State of New York, have invented a new and useful Improvement in Man-Holes for Sewers and Cesspools, of which the following is a specification.

My invention relates to a new form of brick for use in constructing man-holes for sewers and cesspools; and the purposes of my invention are to make these circular openings more durable, to render them tight, and to better condition them to resist the action of frost.

As heretofore produced, sewer and cesspool man-holes have been laid up in a circular form by means of bricks laid in courses with their ends forming the inner surface of the opening. Thus made with the bricks radially placed with their ends facing inwardly there were from necessity angular-form gore-shaped places between the outer ends of the brick that were filled with cement-mortar and which, when acted upon by lateral pressure and by frost, tended to break the bond, and the brick gradually loosened and were forced inwardly. To remedy these difficulties, I make bricks in a segment form, so far as their sides are concerned, with ends of the bricks where they abut to form a circle in radial coincidence, and at each end of in the tops of the bricks form a groove, with a sink made in the inner end of the latter, in which groove is placed a dog or binder arranged at each of its opposite ends to hook into the sink made in the groove or engage the registering grooves of each two bricks, and intermediately to rest in the groove of the abutting brick ends, and to form in the bottom of each brick a groove that will, as the bricks are laid to break joints in each course, be over the said dog or binding material to form a clinch to prevent lateral displacement.

Accompanying this specification, to form a part of it, there is a sheet of drawings containing five figures illustrating my invention, with the same designation of parts by letter-reference used in all of them.

Of the illustrations, Figure 1 is a side elevation of a part of a sewer with a man-hole made according to my invention applied thereto. Fig. 2 is a section taken on the line $x x$ of Fig. 1. Fig. 3 shows a top view of one of

the bricks. Fig. 4 shows one of the bricks turned over so as to bring what is its bottom face when in use turned uppermost in the illustration. Fig. 5 is a perspective of one of the dogs.

The several parts of the construction thus illustrated are designated by letter-reference and the function of the parts is described as follows:

The letters B designate the bricks, each of which is made with the groove or recess g' in its upper surface at the ends, said grooves each having at their inner ends the sinks S.

The letter g^2 designates a groove made in what is the under surface of the bricks when laid, said groove g^2 being made long enough to equal the length of the end grooves of each two of the bricks of a course, and so that when laid to break joints this groove g^2 will be over the abutting grooves g' in the bricks of each course and cover the dog D, or take the binding material arranged therein. The dog D is made of metal and has the downcast ends e , and is made of such a length that its ends will fit into the sinks of each two bricks of a course, leaving room between their abutting ends for the mortar or cement.

The letter A designates the man-hole, and C the courses of brick; M, the mortar or cement; P, the cap, and O the man-hole cover.

The man-hole A consists of a series of courses laid one above the other in cement or mortar, with the segmental form bricks B of each course being made to break joints with those of the course below, with each of the bricks of a course connected by the dogs D, or binding material, and with the groove g^2 in the bottom of each succeeding course being over the dog, and the grooves g' of the abutting ends of each lower course, so that the binder in the said grooves g' extending up into the grooves g^2 of an upper course will form a bond therewith to prevent lateral movement or displacement.

While I prefer to use the dogs D to connect the bricks at the end of each course, yet, if desired, the bricks herein described may be laid without the dogs by filling the grooves and sinks with cement, with each of the courses laid so as to break joints and with the sinks made in the bottom of each brick of a course over the end grooves of each two bricks of

the course beneath, the cement thus extending up into the grooves and down into the end grooves and sinks to form a bond between the courses.

5 Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the bricks B, made in a segmental form, and constructed with the
10 grooves g' , having sinks S in their upper surfaces at the ends, and the grooves g^2 made in their bottom surfaces, of the dogs D, made with the downturned ends e adapted to connect with said bricks, substantially in the
15 manner as and for the purposes set forth.

2. The combination, with the bricks B, made

in a segmental form, of the grooves g' , made with sinks arranged in the upper surface and ends of the bricks, and the grooves g^2 , made centrally in their under surface, and a binder
20 in said grooves where vertically in line and between said bricks when laid in courses, to break joints, substantially in the manner as shown and described.

Signed at Troy, New York, this 13th day of
August, 1889, and in the presence of the two
witnesses whose names are hereto written.

JOHN WALLACE.

Witnesses:

W. E. HAGEN,
CHARLES S. BRINTNALL.