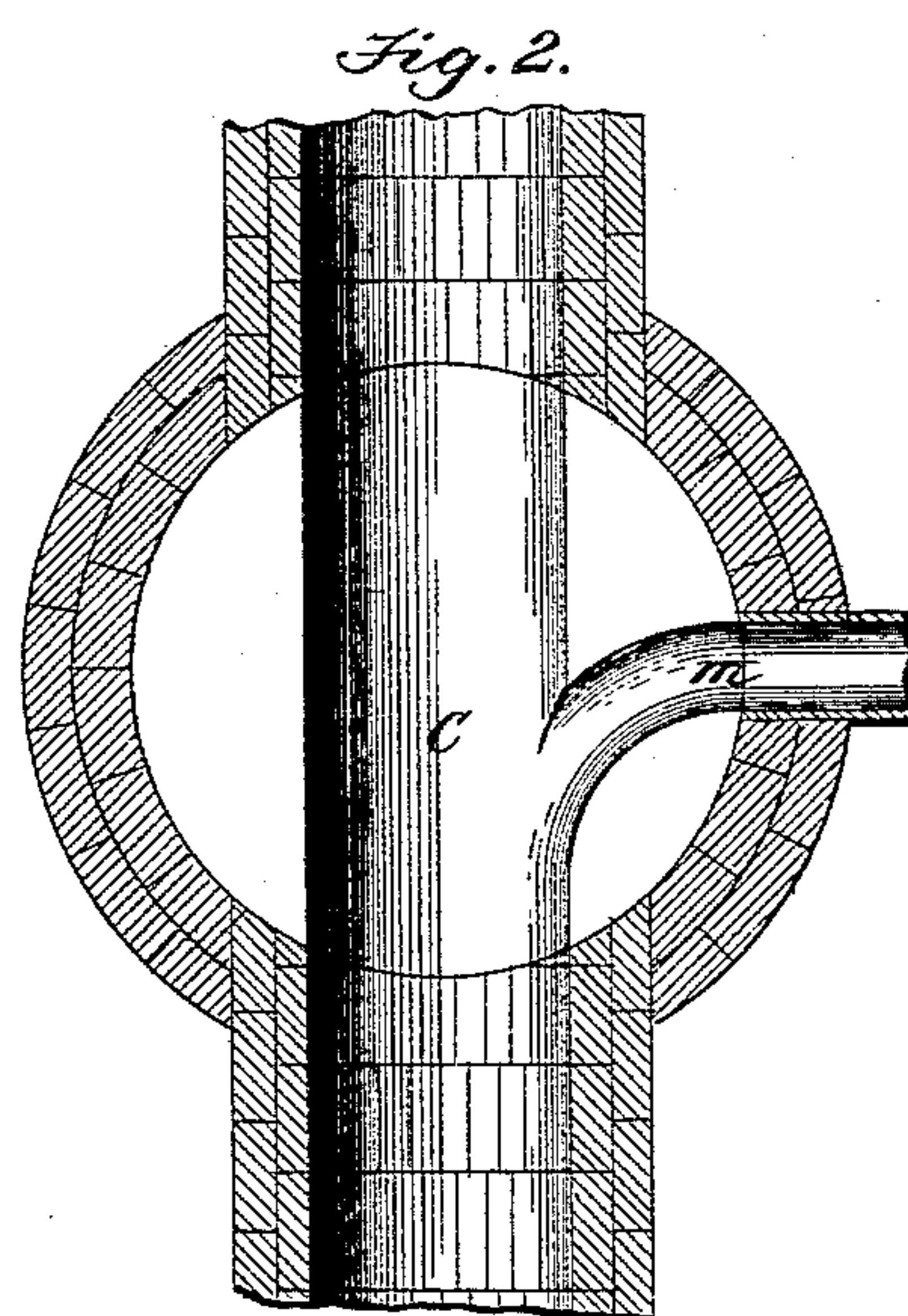
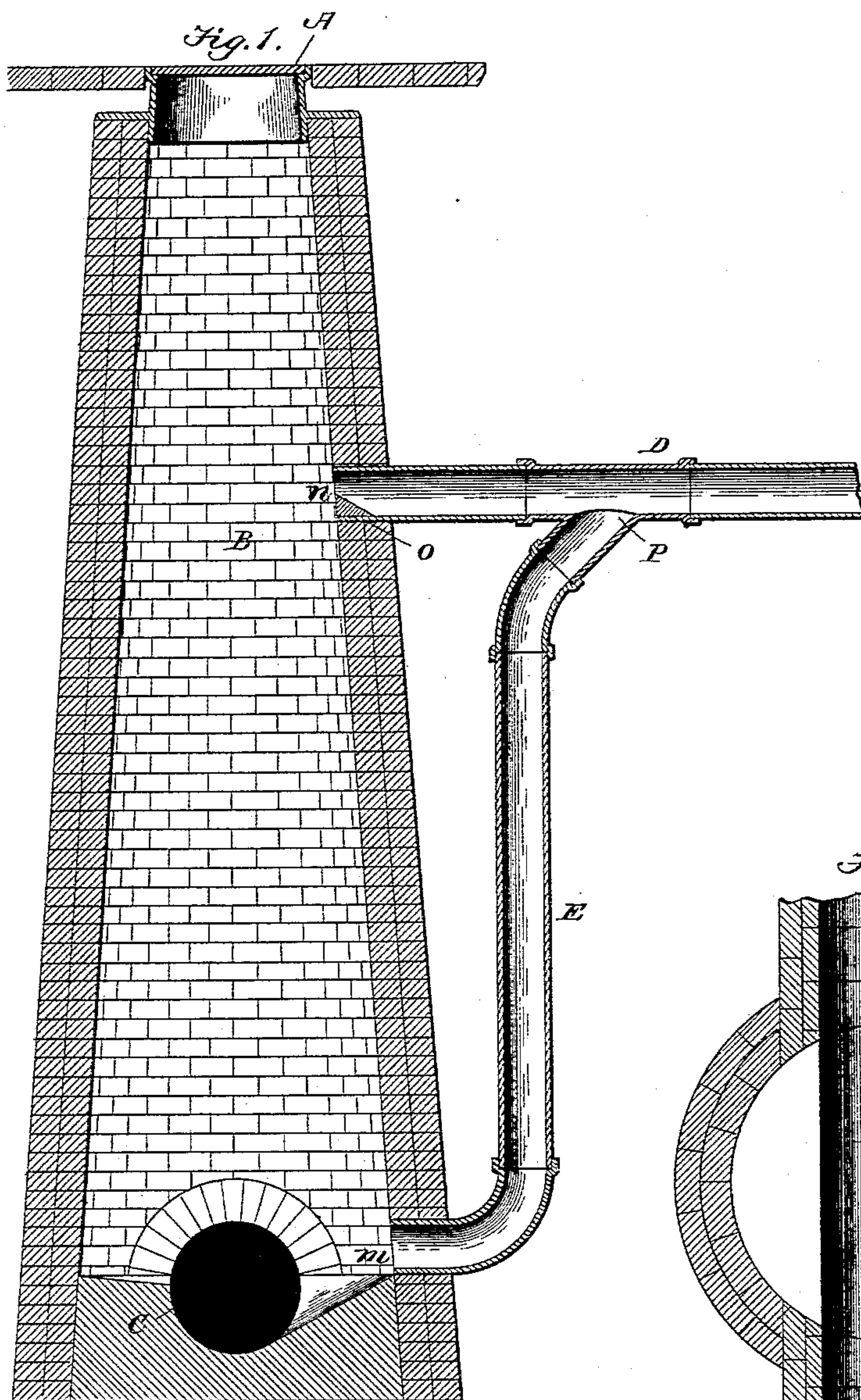


(No Model.)

J. P. BATES.  
MANHOLE AND SEWER CONNECTION.

No. 476,440.

Patented June 7, 1892.



Witnesses  
Frank H. Thatcher  
Wm. G. Griffin

By

Inventor  
James P. Bates  
Patrick O'Farrell,  
Attorney.



# UNITED STATES PATENT OFFICE.

JAMES P. BATES, OF SPRINGFIELD, MISSOURI, ASSIGNOR OF ONE-HALF TO  
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## MANHOLE AND SEWER CONNECTION.

SPECIFICATION forming part of Letters Patent No. 476,440, dated June 7, 1892.

Application filed November 14, 1891. Serial No. 411,922. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES P. BATES, a citizen of the United States of America, residing at Springfield, in the county of Green and State of Missouri, have invented certain new and useful Improvements in Manhole and Sewer Connections, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to manhole and sewer connections; and it consists in providing means for inspecting the main and connecting sewers at the same time, whether the pipes are laid on the same plane or not. I attain my object by the means and in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of a manhole, showing the opening into the main sewer and the manner of connecting a lateral sewer that would otherwise enter the manhole at a greater elevation. Fig. 2 is a cross-section of the manhole, taken on the line *xx*, looking down, showing the main and connecting-sewers at the bottom, the connecting-sewer in this figure being on the same plane as the main sewer.

Referring to the several parts by letters, A indicates the cover for the manhole of the usual form.

B is the opening extending down to the main sewer C at the bottom.

In Fig. 1 the lateral or connecting sewer is shown as entering the manhole at an elevation considerably above that of the main sewer; but as it is not desirable that the connecting or branch sewers should be emptied into the main sewer through the manhole, I provide a connecting-pipe E, which conveys the contents of the sewer D to the main sewer C by extending downwardly outside of the manhole until on the same plane as the main sewer and then entering the sewer C from the side at *m*. The pipe D, however, is carried forward in a straight line or at a slight elevation, as preferred, until it enters the manhole at *n*, this extension being only for purposes of inspection. I prevent the sewer D when being flushed from discharging its contents through it and into the manhole by means of a dam *o*;

but a door, valve, or stopper may be used in lieu of the dam. It will be seen by this arrangement that the contents of the sewer D will pass into the pipe E at *p* and down said pipe into the main sewer C at *m*, and that when the main sewer is inspected the connecting sewer or sewers may be inspected at the same time, no matter what may be their plane of elevation above the main sewer. Several sewers might in this manner be connected by branch pipes with the main sewer, no one of which would be on the same plane, and by permitting them to connect with the manhole at the plane of their respective elevations they may be conveniently inspected at their several points of entrance, while they would all discharge their contents into the main sewer on the common plane of that sewer. Should these connecting-sewers be constructed on the plane of the main sewer, so the points of coincidence would be the same without the use of the connecting-pipe E, as shown in Fig. 1, it will be observed that they can be inspected in connection with the main sewer just as well. It will be also observed that the connecting-pipe E may be located on the inside of the manhole, if preferred.

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

1. A system of underground drainage, consisting of a manhole B, lateral pipe D, opening into said manhole and provided with a discharge-pipe E, by which the contents of the pipe D may be discharged into a connecting-sewer, substantially as described.

2. In a system of underground drainage, a manhole B, having a cover A and opening into a sewer C, in combination with the pipe D, provided with a dam *o* and a discharge-pipe E for connecting the pipe D with the sewer, substantially as described.

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

JAMES P. BATES.

Witnesses:

THOMAS S. COLLINS,  
WILLIAM D. TATTON.