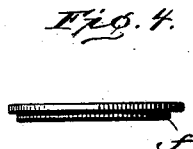
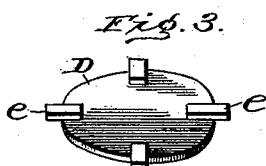
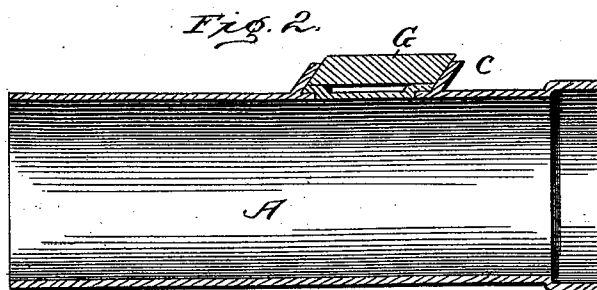
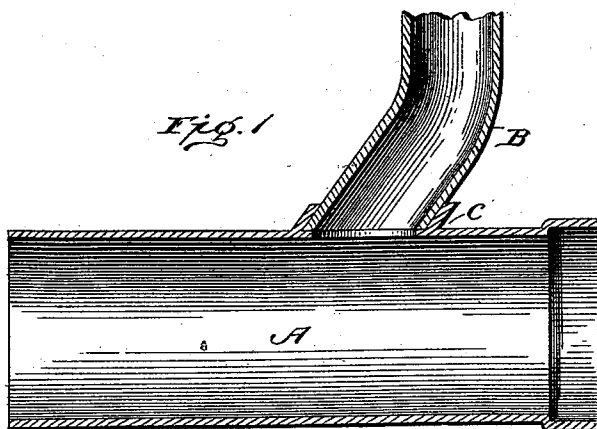


(No Model.)

J. P. BATES.
SEWER PIPE CONNECTION.

No. 523,955.

Patented July 31, 1894.



Witnesses
Frank H. Thatcher,
Alfred J. Hamill

Inventor
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UNITED STATES PATENT OFFICE.

JAMES P. BATES, OF SPRINGFIELD, MISSOURI, ASSIGNOR OF ONE-THIRD TO
FRANK P. CLEMENTS, OF SAME PLACE.

SEWER-PIPE CONNECTION.

SPECIFICATION forming part of Letters Patent No. 523,955, dated July 31, 1894.

Application filed April 3, 1893. Serial No. 468,915. (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 Greene and State of Missouri, have invented certain new and useful Improvements in Sewer-Pipe Connections, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to sewer-pipes; and it consists in main pipe having suitable closures or coverings, and in the process of forming the said closures whereby they can be readily removed when required to make a service connection.

A pipe embodying the essential principles of the invention is illustrated in the accompanying drawings, in which—

Figure 1, is a section or length of main pipe with service pipe connected. Fig. 2, is a longitudinal section of the main pipe with the connections closed. Fig. 3, is a perspective view of the removable section or cover for the opening in the main pipe; and Fig. 4, is an edge view of a modified form of cover in which a similar flange is substituted for the lugs.

Referring to the several parts by reference letters, A, indicates the main pipe, which has an opening normally closed by the cover D. By my improved process the cover is fitted in the opening while the pipe is green, and is sufficiently united to the edges of the opening by baking or the burning of the pipe. The bell or rim C, is also attached to the pipe while green, in the usual way, and surrounds the opening for the cover D, leaving a shoulder between the said opening and the bell, of sufficient width to support the cover by means of the lugs e, which rest on the shoulder. When the plate is removed, this shoulder serves to support the ends of the lateral or end pipe. When the pipe A, is laid without making the service connections, the space within the bell is filled with sand and a thin covering of cement or mortar is placed upon the outside to make a water proof joint G.

In Fig. 1, I show a Y-connection, in which the service pipe B, is curved, which form I generally prefer, although a straight pipe may be used. These connections may be made in the form of a "Y" or "T," or a double "Y" or "T," and being without projecting branches, will occupy less space in the dry-room or in shipping, and will require the main pipe to be passed through the die, instead of the present plan of attaching a smaller to the main pipe before burning.

A pipe formed as above described, will contain no cavities or recesses to become foul and clog, and retard the flow of sewerage.

To make a service connection the cover is easily removed by striking the same one or two light blows to break the points of attachments between it and the pipe, thereby leaving a smooth and neat opening for the attachment with the main of the sewer pipe.

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

1. The herein described process of forming a sewer pipe with a part adapted to be broken out when making lateral connections; consisting in making an opening in the said pipe while in a plastic or green state; and covering the said opening with a plate of like material and uniting the plate and the pipe by baking, substantially as set forth.

2. The herein described process of forming a sewer pipe with a part adapted to be broken out when making lateral connections consisting of making an opening in said pipe while in a plastic or green state; surrounding said opening with a bell or rim of like material, and covering said opening with a plate of like material and uniting the plates by baking, substantially as set forth.

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

JAMES P. BATES.

Witnesses:

W. D. TATLOW,
C. V. BUCKLEY.