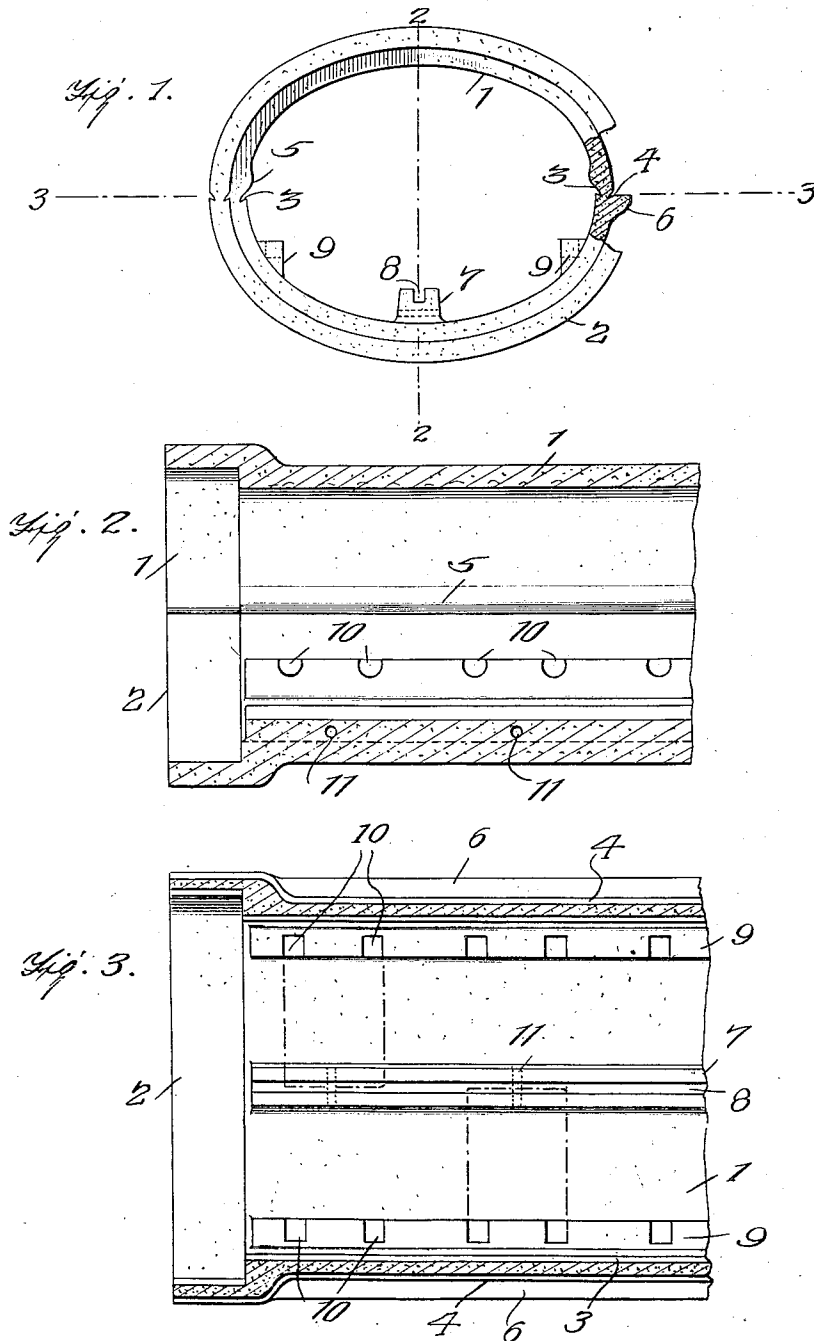


W. B. GRAY.
SEPARABLE INSULATING EARTHEN CONDUIT.
APPLICATION FILED AUG. 22, 1913.

1,110,129.

Patented Sept. 8, 1914.



WITNESSES

L. H. Schmidt.
C. E. Draper

INVENTOR
WILLIAM B. GRAY,
BY *Munn & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM BEALL GRAY, OF LOUISVILLE, KENTUCKY, ASSIGNOR TO MARTIN J. BANNON, OF LOUISVILLE, KENTUCKY.

SEPARABLE INSULATING EARTHEN CONDUIT.

1,110,129.

Specification of Letters Patent.

Patented Sept. 8, 1914.

Application filed August 22, 1913. Serial No. 786,110.

To all whom it may concern:

Be it known that I, WILLIAM B. GRAY, a citizen of the United States, and a resident of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and useful Improvement in Separable Insulating Earthen Conduits, of which the following is a specification.

My invention is an improvement in separable insulating earthen conduits, and has for its object to provide a conduit of the character specified, which may be, after baking, separated into upper and lower sections, to permit the lower section to be laid in the excavation and to receive the pipes to be supported, and to afterward permit the upper section to be placed and permanently connected to the lower section, and wherein the conduit is so constructed that a plurality of independent pipes may be supported in the conduit alongside each other, the supporting mechanisms for the several pipes being also independent.

In the drawings:—Figure 1 is an end view of the improved conduit, and Figs. 2 and 3 are sections on the lines 2—2 and 3—3, respectively, of Fig. 1.

The present embodiment of the invention comprises a conduit 1 of elliptical form, the said conduit being made in sections of suitable length, each of the said sections having one of its ends annularly enlarged as indicated at 2, to receive the end of the adjacent section, whereby to form a continuous conduit.

Each of the said sections of conduit is intended and designed to be laid with its long axis horizontal, and with its short axis vertical, and each section of the conduit is provided at each end on its long axis with a pair of scores, recesses or grooves 3 and 4 respectively, the grooves or recesses 3 being on the inside of the conduit, while the grooves or recesses 4 are on the outside.

The grooves or recesses incline inwardly and downwardly as shown, and each of the said grooves or recesses gradually increases in width from its inner side toward its outer side. At each side and above the adjacent groove or recess 3, each section of the conduit is provided with a longitudinally extending reinforcing rib 5, at each groove or recess 4, and below the same, each section of the conduit is provided with a longitudinally extending rib or ledge 6.

The upper face of each of the ribs or ledges 6 is approximately horizontal, and the said rib or ledge is adapted to support a sealing medium, as for instance cement, concrete, or the like, the said sealing medium filling the grooves or recesses 4.

In use, before laying, the upper section is separated from the lower section by introducing a suitable tool, as for instance a chisel or the like, in the grooves 3 and 4, and forcing the sections away from each other to break the material of the conduit between the bottoms of the grooves or recesses 3 and 4.

After the pipes to be supported have been laid, the sections are replaced, each upper half of the sections being replaced on the lower section from which it has been originally removed, and a sealing medium is introduced into the grooves or recesses 3 and 4, the sealing medium outside of the conduit being supported by the ledge or rib 6.

Each section of the conduit is provided with an internal longitudinally extending rib 7 at the lower end of its short axis, and each of the ribs 7 is provided on its upper face with a longitudinally extending groove or passage 8. At each side of the rib 7, the conduit is provided with an internal rib 9, the said ribs being near the ends of the long axis, but in the lower half of the conduit, and the upper faces of the said ribs 9 are in the same plane, while the inner faces of the said ribs are parallel. Each of the said ribs or ledges 9 is provided with pairs of notches 10, the said pairs being arranged at spaced intervals, and the said notches may be as shown, that is, each having its side wall slightly undercut, or they may be merely rounded notches, as may be desired.

Preferably the notches have undercut side walls, or the said notches may be provided with grooves as shown in my copending application, Serial No. 782,661, filed August 2, 1913. The said grooves or notches 10 are for the purpose of receiving the supporting fingers of the cradles of the pipe supports, forming the subject-matter of my copending applications, Serial No. 709,262, filed July 13, 1912, Serial No. 720,524, filed Sept. 16, 1912, Serial No. 765,282, filed May 3, 1913, and Serial No. 765,281, filed May 3, 1913, and the notches have undercut side walls or grooves to receive a sealing medium

to lock the fingers of the cradle in the notches.

The present type of conduit is, as before stated, designed to carry a plurality of pipes or a plurality of series of pipes, one of the said pipes or one of the said series of pipes being arranged on each side of the central rib 7. When a pipe or series of pipes is supported on each side of the said rib, the cradles are provided with a single set of supporting fingers, the inner ends or sides of the cradle having depending members engaging in the grooves 8 of the ribs 7, and the said rib is provided with transverse openings 11 below the bottom of the groove 8 for receiving a pin, bolt or the like, to lock or secure the inner sides or ends of the cradle to the said rib.

It will be noticed from an inspection of Fig. 3, that the notches 10 of the two ribs 9 register, each rib having the same number of notches as the other rib. The cradles however, (indicated in dotted lines in Fig. 3) are staggered with respect to each other, but the arrangement of the notches permits the arrangement of the cradles to be varied.

I claim:

1. A conduit of the character specified of elliptical cross section, and adapted to be laid with its long axis approximately horizontal, said conduit having an internal longitudinal rib at the center of its lower side, said rib having a longitudinally extending groove in its upper face, said conduit having an internal longitudinally extending rib on each side of the central rib and at a higher level, the upper faces of the said last-named ribs being in the same plane, and each of the last-named ribs having spaced pairs of notches, the notches of one rib registering with the notches of the other rib and the first rib having a transverse opening below the level of the bottom of the groove between each alternate pair of notches for the purpose specified.

2. A conduit of the character specified of elliptical cross section, and adapted to be laid with its long axis approximately horizontal, said conduit having an internal longitudinal rib at the center of its lower side, said rib having a longitudinally extending groove in its upper face, said conduit having an internal longitudinally extending rib on each side of the central rib and at a higher level, the upper faces of the said last-named ribs being in the same plane, and each of the said last-named ribs having

spaced pairs of notches, the notches of one rib registering with the notches of the other rib.

3. A conduit of the character specified of elliptical cross section, and adapted to be laid with its long axis approximately horizontal, said conduit having an internal longitudinal rib at the center of its lower side, said rib having a longitudinally extending groove in its upper face, said conduit having an internal longitudinally extending rib on each side of the central rib and at a higher level, the upper faces of the said last-named ribs being in the same plane.

4. A conduit of the character specified having an elliptical cross section, and adapted to be laid with its long axis approximately horizontal, said conduit having an internal longitudinally extending supporting rib near each end of its long axis and having a central supporting rib between the first-named ribs.

5. A conduit of the character specified having an elliptical cross section, and adapted to be laid with its long axis approximately horizontal, said conduit having an internal longitudinally extending supporting rib near each end of its long axis and having a central supporting rib between the first-named ribs, the central rib having a longitudinally extending groove in its upper face.

6. A conduit of the character specified having an elliptical cross section, and adapted to be laid with its long axis approximately horizontal, said conduit having an internal longitudinally extending supporting rib near each end of its long axis and having a central supporting rib between the first-named ribs, the central rib having a longitudinally extending groove in its upper face, and the lateral ribs having spaced notches in their upper faces, the notches of the ribs registering, and the central rib having the transverse opening intermediate each pair of notches.

7. A conduit of the character specified, having an internal central longitudinally extending supporting rib at its bottom and having an internal longitudinally extending supporting rib at each side of the first-named rib.

WILLIAM BEALL GRAY.

Witnesses:

CHAS. F. TAYLOR,
L. A. THOMPSON.