June 16, 1925. 1,541,918

J. W. BRENNAN

DRAINAGE TILE

Filed April 27, 1923

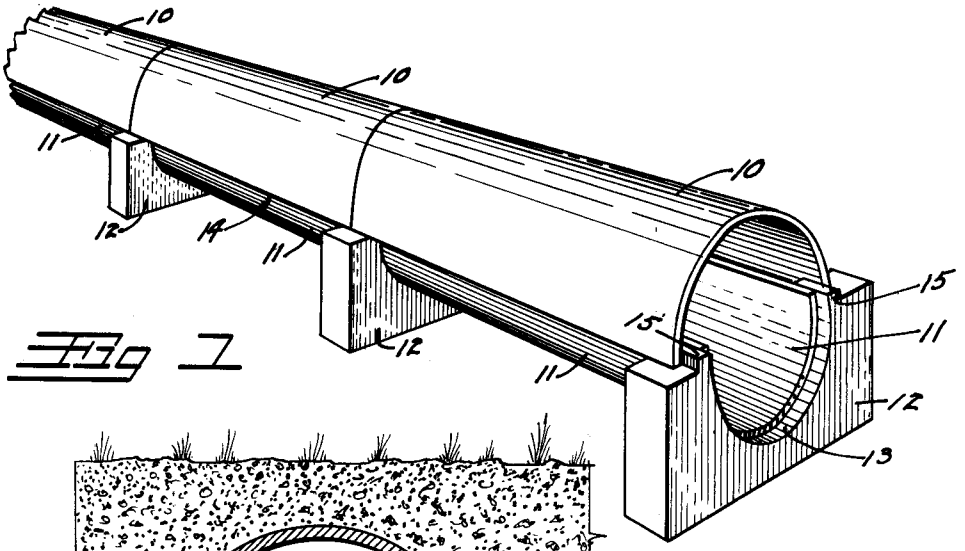


Fig 1

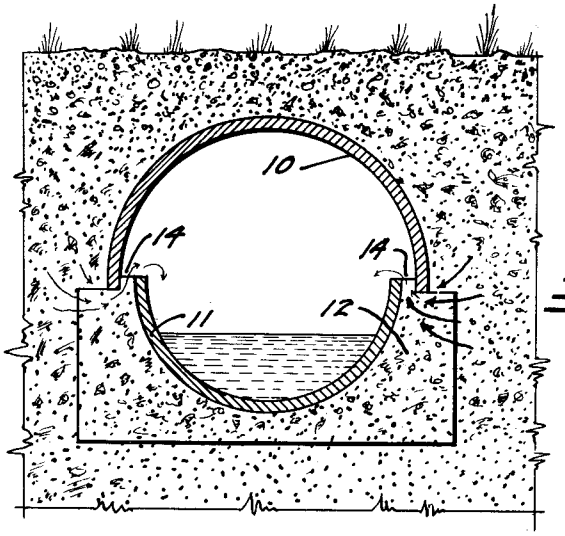


Fig 2

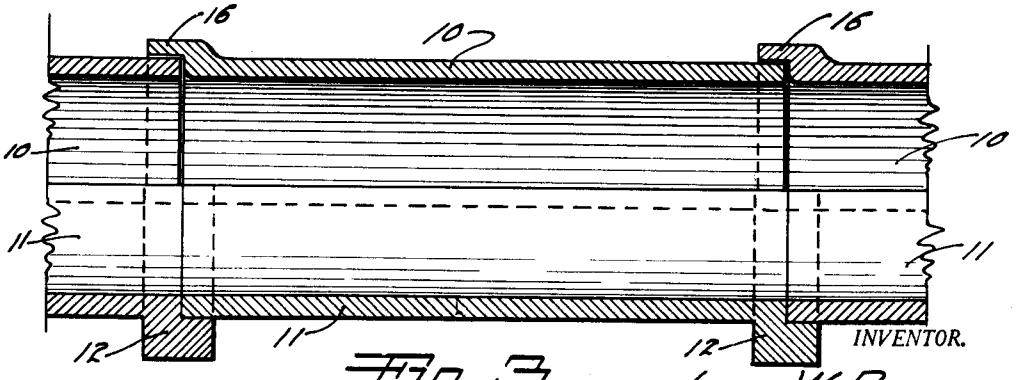


Fig 3

INVENTOR.

BY JOHN W. BRENNAN.

ATTORNEY.

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UNITED STATES PATENT OFFICE.

JOHN W. BRENNAN, OF DENVER, COLORADO.

DRAINAGE TILE.

Application filed April 27, 1923. Serial No. 635,057.

To all whom it may concern:

Be it known that JOHN W. BRENNAN, a citizen of the United States of America, residing at Denver, in the county of Denver and State of Colorado, has invented certain new and useful Improvements in Drainage Tiles, of which the following is a specification.

This invention relates to tile of the type used for the purpose of draining off surplus soil moisture and has for its principal object the provision of a tile of this character, which can be cheaply and easily manufactured and which will present a minimum of resistance to the entrance of drainage water and prevent soil, sand and other foreign material from entering the tile.

A further object of the invention is to so shape the tile that it can be quickly and cheaply installed in the ground and so that it will be supported at the joints to prevent the twisting and buckling due to soft marshy ground.

A still further object is to form a drainage tile in which it will be unnecessary to core or punch holes in the walls thereof for the entrance of the drainage water.

Other objects and advantages reside in the detail construction of the invention, which results in simplicity, economy and efficiency, and which will become more apparent from the following description.

In the following detailed description of the invention reference is had to the accompanying drawing which forms a part hereof. Like numerals refer to like parts in all views of the drawing and throughout the description.

In this drawing:

Fig. 1 is a fragmentary perspective view of several lengths of the improved tile as they would appear when installed.

Fig. 2 is a cross sectional view of the improved tile as it would appear in use, the section being taken intermediate the supporting blocks.

Fig. 3 is a vertical longitudinal section through an alternate form of the invention.

The invention comprises, a semi-cylindrical top section 10; a semi-cylindrical bottom section 11, of smaller diameter than section 10; and joint supporting blocks 12.

Bottom section 11 rests, at its extremities, in a semi-circular groove 13 in each of the blocks 12, the open side of the section facing upward. The top section 10 also rests at its extremities upon the blocks 12 with its open side facing downward.

Owing to the differing diameters of the sections 10 and 11, a drainage opening 14 is left at each side extending throughout the length of the tile. It will be noted that the longitudinal edges of the sections 10 and 11 overlap, as shown in Fig. 2.

The drainage water enters the tile through the openings 14, where it rises in a vertical column owing to the overlapped edges, and flows into the lower section 11 where it is carried off. Since the water must rise in the openings 14, in order to flow over the edges of the section 11, the tendency to wash soil and other foreign substances into the tile is reduced to a minimum.

Spacers 15, are formed on the blocks 12 to center the upper section 10 over the lower section 11 and keep the openings 14 of even width.

In Figs. 1 and 2, the sections 10 and 11 are shown as plain hollow half cylinders, without projections or holes of any kind; the blocks 12 being entirely separate from the sections. This is perhaps the most economical form of the invention and has been found by actual experience to be entirely satisfactory. If desired, however, bells 16, as shown in Fig. 3, might be formed on one extremity of each of the sections 10, to overlap the end of the adjacent section. This form, while possibly more expensive to manufacture, would insure a tighter joint between the sections 10.

Should it be desired, the blocks 12 might be moulded integrally with and upon one end of each of the sections 11, as shown in Fig. 3. This form would reduce the number of parts to the device and would cheapen the cost of installation.

While a specific form of the improvement has been described and illustrated herein, it is desired understood that the same may be varied, within the scope of the appended claims, without departing from the spirit of the invention.

Having thus described the invention, what is claimed and desired secured by Letters Patent is:—

1. A hollow drainage tile, comprising in combination, an upper semi-cylindrical section; a lower semi-cylindrical section coacting with and of less diameter than said upper section, the edges of said coacting sections overlapping; a longitudinal opening

between said overlapped edges and blocks arranged to support both said upper and lower sections and holding said sections in spaced relation and out of contact with each other.

2. A hollow drainage tile comprising in combination, an upper semi-cylindrical section; a lower semi-cylindrical section co-acting with and of less diameter than said upper section and blocks for supporting both said sections out of contact with each other, said blocks being substantially flat on the bottom and having a semi-circular groove for the reception of said lower section.

3. A hollow drainage tile comprising in combination, an upper semi-cylindrical section; a lower semi-cylindrical section co-acting with and of less diameter than said upper section and blocks for supporting both said sections out of contact with each other, said blocks being substantially flat on the bottom and having a semi-circular groove for the reception of said lower section, and having upward projecting lugs adapted to pass between said upper and lower sections.

4. A hollow drainage tile comprising in combination an upper semi-cylindrical section and a lower semi-cylindrical section co-acting with it and of less diameter than said upper section, said upper section being provided at its one extremity with a bell for the reception of another section, said lower section being provided at its one extremity with a substantially rectangular block for the support of said section.

5. A hollow drainage tile comprising in combination an upper semi-cylindrical section and a lower semi-cylindrical section co-acting with it and of less diameter than said upper section, said upper section being provided at its one extremity with a bell for the reception of another section, said lower section being provided at its one extremity with a substantially rectangular block for the support of said section, said block being recessed for the reception of the next adjoining lower section, and having upward projecting lugs which contact with the inner surface of said upper section.

6. In a drainage tile the combination of an upper inverted semi-cylindrical trough; a lower semi-cylindrical trough of less diameter than said upper trough and substantially rectangular blocks provided with a semi-circular depression for the reception of said lower trough and with projecting shoulders for the reception of the edges of said upper trough.

7. A support for drainage tile of the type comprising two co-acting troughs of differing size, one to act as a lid for the other, comprising a flat bottomed block provided with a depression for the reception of the lower of said troughs and shoulders adapted to support the upper of said troughs out of contact with the lower.

8. A support for drainage tile of the type comprising two co-acting troughs of differing size, one to act as a lid for the other, comprising a flat bottomed block provided with a depression for the reception of the lower of said troughs; shoulders adapted to support the upper of said troughs and lugs carried by said shoulders for holding said upper and lower troughs in longitudinal alignment and out of contact with each other.

In testimony whereof I affix my signature.

JOHN W. BRENNAN.