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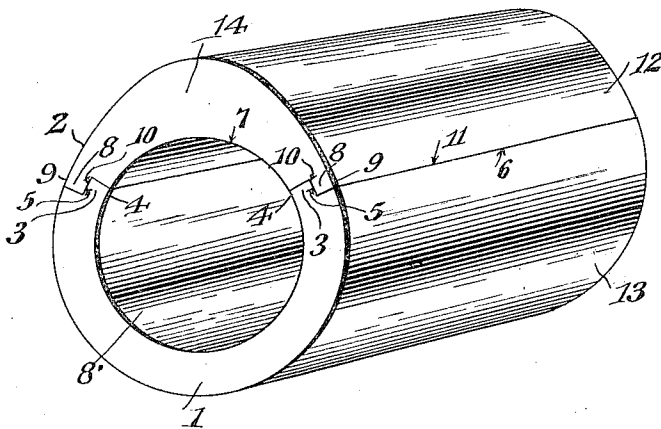
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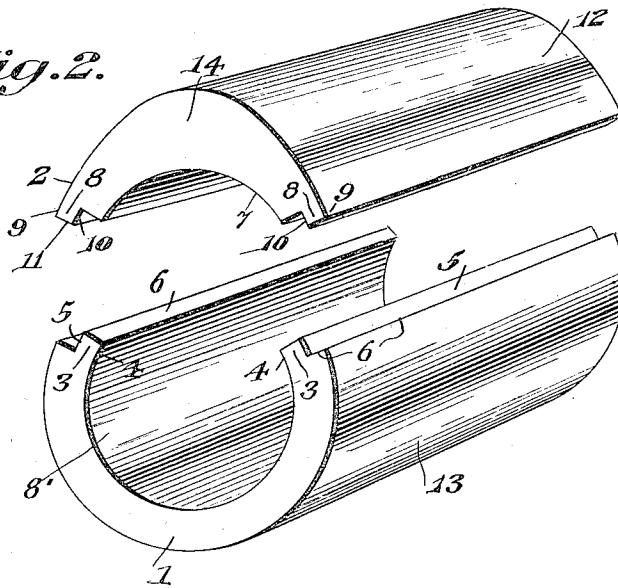
DRAIN PIPE

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*Fig. 1.*



*Fig. 2.*



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# UNITED STATES PATENT OFFICE.

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## DRAIN PIPE.

Application filed November 21, 1922. Serial No. 602,332.

*To all whom it may concern:*

Be it known that I, CLIFTON STILES, a citizen of the United States, residing at Calhoun, in the county of McLean and State of Kentucky, have invented certain new and useful Improvements in Drain Pipes, of which the following is a specification.

This invention relates to a concrete sectional drain pipe, designed primarily for use in the setting up of culverts, but it is to be understood that the pipe construction in accordance with this invention can be employed for any purposes wherein it is found applicable, and the invention has for its object to provide in a manner as hereinafter set forth, a cylindrical pipe body including a stationary base section and a removable top or lid section whereby convenient access can be had to the base section for cleaning the same of any accumulated dirt or drift that may find lodgment therein.

A further object of the invention is to provide in a manner as hereinafter set forth, a cylindrical pipe body including a base section and a removable top or lid section which when the latter becomes worn, damaged or broken, can be quickly removed and a new section substituted without the resetting of the base section or the substitution of a new base section under such conditions providing for a considerable saving in expense.

A further object of the invention is to provide in a manner as hereinafter set forth, a cylindrical pipe body including a base section and a removable top or lid section of greater thickness than the base section and with the top or lid section so set up that it will gradually decrease in thickness in opposite directions from its longitudinal center to each side terminal thereof whereby the durability and strength of the top or lid section is enhanced should the same become exposed to traffic.

Further objects of the invention are to provide a drain pipe for the purpose set forth which is simple in its construction and arrangement, strong, durable, including a conveniently removable top or lid section, efficient in its use, readily assembled, and comparatively inexpensive to manufacture.

With the foregoing and other objects in view the invention consists in the novel construction, combination and arrangement of parts as hereinafter more specifically described, and illustrated in the accompanying

drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications, can be resorted to which fall within the scope of the claims hereunto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views:—

Figure 1 is a perspective view of a drain pipe in accordance with this invention, the sections of the pipe being in abutting relation.

Fig. 2 is a like view, with the sections of the pipe disassembled.

A drain pipe in accordance with this invention when set up to provide a culvert, can be of a length equal to the length of the culvert, or instead of employing a single pipe body, a plurality of lengthwise extending opposed pipe bodies, such as hereinafter referred to, equalling in length to the length of the culvert, can be employed.

A drain pipe, in accordance with this invention, for the purpose set forth, is formed from a hollow sectional cylindrical body of concrete and includes a base section 1 and a removable top or lid section 2.

The base section 1 is greater than a half cylinder, has its side terminals bevelled, and is formed at each side terminal with an integral lengthwise, upwardly extending tongue 3, approximately of a width equal to half the width of a side terminal and substantially rectangular in cross section. Each of the tongues 3, has its inner side face 4, flush with the inner face of the base section 1 and forms a continuation of the arc thereof, and the outer side face 5 of each tongue 3, is upon the arc of a circle and concentric to its inner side face 4. Each of the tongues 3 has a squared connecting edge 6, between the side faces 4 and 5 and which is bevelled. The tongues 3 are oppositely disposed with respect to each other. The base section 1 from the inner terminus of one tongue 3 to the inner terminus of the other tongue 3 is of the same width throughout.

The removable top or lid section is less than a half cylinder and has its outer face of substantially semi-oval contour and its inner face of semi-circular contour.

The removable top or lid section 2 is of less width than the width of the base section 1 and the said section 2 has its inner face 7

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extending upon and forming a continuation of the arc, of the inner face 8, of the base section 1. The section 2 has its side terminals bevelled and which are oppositely disposed with respect to the bevelled side terminals of the section 1, and formed at each side terminal of the section 2 is an integral depending lengthwise extending tongue 8, approximately half the width of the side terminal and substantially rectangular in cross section. The outer side face 9, of each tongue 8, is flush with the outer face of the section 2 and forms a continuation of the arc thereof, and the inner side face 10, of each tongue 8, is upon the arc of a circle and concentric to its outer side face 9.

Each of the tongues 8 has a squared connecting edge 11, between the side faces 9 and 10 and which is bevelled. The bevelled connecting edges 11 of the tongues 8 are oppositely disposed with respect to the bevelled side terminals of the section 1. The radius of the outer face 12, of the section 2, is less than the radius of the outer face 13 of the section 1, whereby the width of the section 2, will gradually increase in thickness from each side terminal thereof to its longitudinal center, so that the section 2 is provided with a thickened upper portion 14 which increases the durability and strength of the section 2, especially when the latter is exposed to traffic. The side terminals of the section 2 are of the same width as the side terminals of the section 1, so that the sections will be flush with each other at the joints.

The removable section 2, provides for convenient access to be had to the section 1, when occasion requires, to remove any accumulation of dirt or drift that may find lodgment therein, and further the removable section 2 as it becomes injured, damaged or broken, can be quickly removed and a new section substituted without resetting the sec-

tion 1, or substituting a new base section under such conditions providing for a considerable saving in expense.

From the foregoing description, taken in connection with the accompanying drawings, a construction of drain pipes is set up which readily adapts itself for use in connection with culverts, or for any other drainage purposes for which the pipe construction is found applicable, and although the preferred embodiment is as illustrated, yet it is to be understood that changes in the details of construction can be had without departing from the spirit of the invention as claimed.

What I claim is:—

1. A drainage pipe comprising a hollow cylindrical body formed of a base section and a removable lid section, said base section of a size greater than half a cylinder, said lid section of a size less than half a cylinder and having its outer face of substantially semi-oval contour and its inner face of semi-circular contour whereby the body portion of said lid section increases in thickness from each side terminal thereof to its longitudinal center.

2. A drainage pipe comprising a hollow cylindrical body formed of a base section and a removable lid section seated thereon, said base section of the same thickness throughout, the terminals of the base section being of the same thickness as the terminals of the lid section, and said lid section having its outer face of substantially semi-oval contour and its inner face of semi-circular contour whereby the body portion of said lid section increases from each terminal thereof to its longitudinal center and whereby said lid section is of greater thickness between its terminals than the thickness of the body portion.

In testimony whereof, I affix my signature hereto.

CLIFTON STILES.