R. F. HERSHFIELD,

SEWER AND CULVERT PIPE.

APPLICATION FILED JULY 12, 1910.

988,339. Patented Apr. 4, 1911.

Fig. 1.

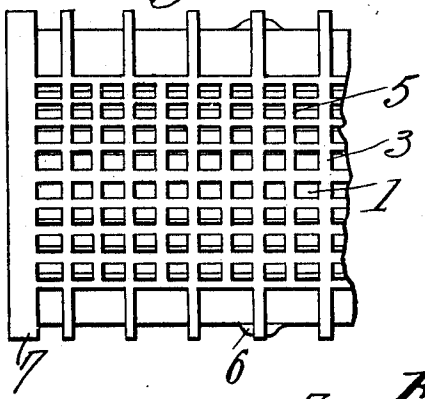


Fig. 2.

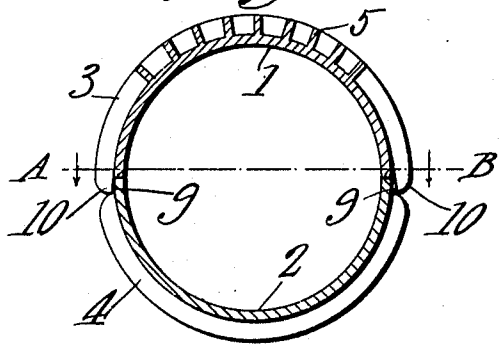


Fig. 3.

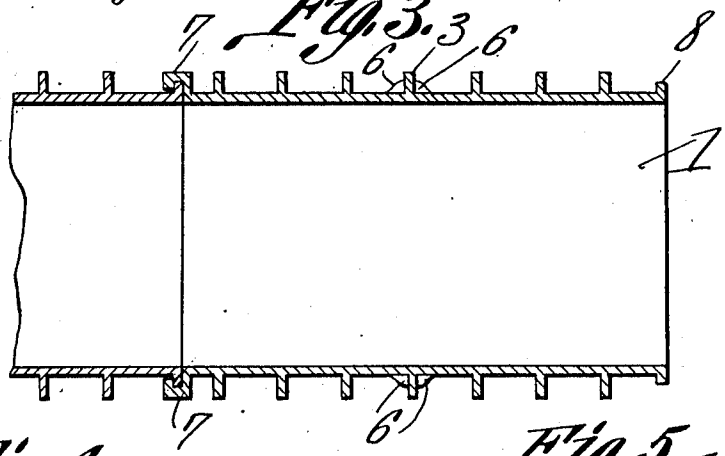


Fig. 4.

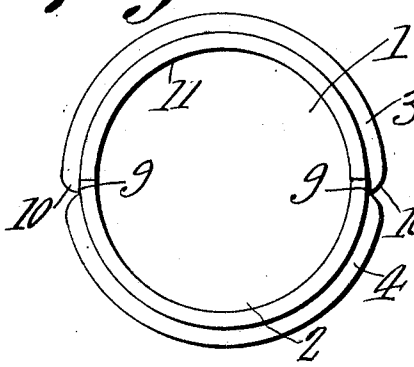
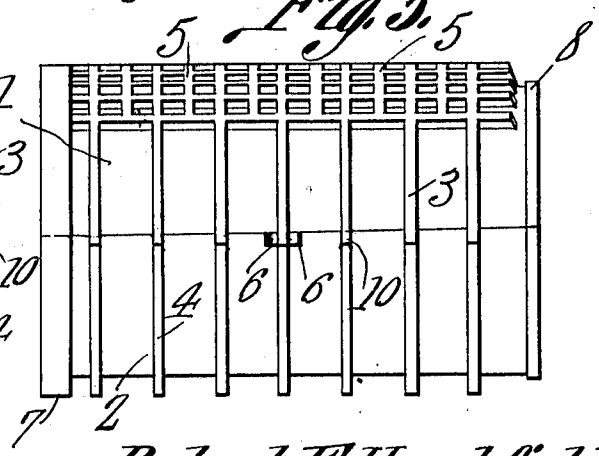


Fig. 5.



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SEWER AND CULVERT PIPE.

988,339. Specification of Letters Patent. **Patented Apr. 4, 1911.**

Application filed July 12, 1910. Serial No. 571,624.

To all whom it may concern:

Be it known that I, ROBERT F. HERSHFIELD, a citizen of the United States, residing at Taylorville, in the county of Christian and State of Illinois, have invented a new and useful Sewer and Culvert Pipe, of which the following is a specification.

This invention has reference to improvements in sewer and culvert pipes and its object is to provide a pipe which may be readily laid and at the same time will allow for expansion due to freezing while maintaining the sections in alinement.

The invention comprises a pipe each length of which is made of two members with diametrically disposed longitudinal meeting edges while the ends of each length of pipe are so formed that one length will interlock with the next adjacent length by means of a lock joint.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming a part of this specification, in which drawings,

Figure 1 is a plan view of one end of a length of this pipe constructed in accordance with the present invention. Fig. 2 is a cross section of the same. Fig. 3 is a longitudinal section on line A—B of Fig. 2. Fig. 4 is an end view as observed from the right hand end of Fig. 3. Fig. 5 is a side elevation embodying the present invention.

Each length of this pipe is composed of two semi-cylindrical members 1—2, the member 1 constituting the upper portion and the member 2 the lower portion thereof. Each member is provided with circumferential spaced ribs 3—4 respectively in parallel relation, while the upper member is further provided with longitudinal and cross ribs 5 forming a grid which greatly strengthens this part of the conduit.

The ribs 3 on the member 1 extend beyond the longitudinal edges of the member while the ribs 4 of the member 2 stop short of the corresponding edges of this member. Where the ribs 3 extend beynnd the longitudinal edges of the member 1 they are tangential to the circumference of the member, and that portion of the member 2 between the ends of the ribs 4 and the longitudinal edges of this member has its outer surface straight or tangential to the circumference of the member 2 so as to match the straight portions of the projecting ends of the ribs 3. This arrangement permits the members 1 and 2 to be separated to a small extent without disconnecting them one from the other or permitting movement of one member on the other in a direction perpendicular to the longitudinal axis of these members.

In order that the member 1 shall not move longitudinally on the member 2 the latter is provided at an intermediate point with lugs 6 in spaced relation one to the other and in position to receive the extended ends of one or more of the ribs 3. Usually two pairs of lugs 6 at opposite sides of the member 2 at an intermediate point will be sufficient.

One end of each complete length of pipe made up of the members 1—2 is provided with an overhanging bell 7 turned on itself toward the line of the surface of the pipe, while the other end is provided with a rib 8 formed on the two members in position and of a size to be embraced by the bell 7 so that the pipe lengths when in position will be locked together against longitudinal displacement. The interlocking end joint between two pipe lengths does not interfere in any manner with the expansion of the pipe as provided for by the tangential portion of the member 2 indicated at 9 and the mating tangential portions of the ribs 3 where extending beyond the members 2, as indicated at 10. The pipe lengths are held together against independent longitudinal movement by the lock joints at the ends, and the individual members 1—2 are held against longitudinal movement one on the other by the lugs 6 and the rib 3 entering between these lugs, while the members 1—2 may be separate one from the other at the meeting edges without being disconnected because of the extension of the ribs 3 overlapping the corresponding portions of the member 2 where the ribs 4 stop short of the corresponding edges of the member 2.

The pipe is made in various lengths to meet varying conditions and the thickness of the walls of the pipe and the height and thickness of the ribs will correspond. As an example a length may be made about five feet long and if, say, twenty inches in diameter the walls will be about three quarters of an inch thick and the ribs about one and one quarter inches high and three quarters of

an inch thick. These dimensions however are only illustrative and may be varied largely.

What is claimed is:—

1. A sewer or culvert pipe section formed of two longitudinal members, the uppermost with circumferential ribs extending beyond the longitudinal edges of the member and over its top with a grid between said ribs, and the lowermost with circumferential ribs stopping short of the longitudinal edges of the member, the sides of the second member and the projecting ends of the ribs of the first member for engaging the second member being substantially tangential to the circumference of the pipe.

2. A sewer or culvert pipe section formed of two longitudinal members, one with circumferential ribs extending beyond both longitudinal edges of the member and the other with circumferential ribs stopping short of both longitudinal edges of the member carrying them, the second named member being provided on opposite sides intermediate its ends with two pairs of spaced lugs for receiving the projecting ends of a rib of the first member between them.

3. A sewer or culvert pipe formed of two longitudinal members one with circumferential ribs extending beyond the longitudinal edges of the member and the other with circumferential ribs stopping short of the longitudinal edges of the member carrying them, and interlocking coupling devices at the ends of the pipe each formed in parts terminating flush with the edges of the members thereof.

4. A sewer or culvert pipe formed of two longitudinal members one with circumferential ribs extending beyond the longitudinal edges of the member and the other with circumferential ribs stopping short of the longitudinal edges of the member carrying them, the extended ends of the ribs of the first named member being substantially tangential to the circumference of the pipe, spaced lugs on the second member for receiving the ends of a rib of the first member, and interlocking coupling devices at the ends of the pipe each formed in parts terminating flush with the edges of the sections thereof.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ROBERT F. HERSHFIELD.

Witnesses:
CHARLES F. KRUCKEBERG,
GEORGE F. PIPER.