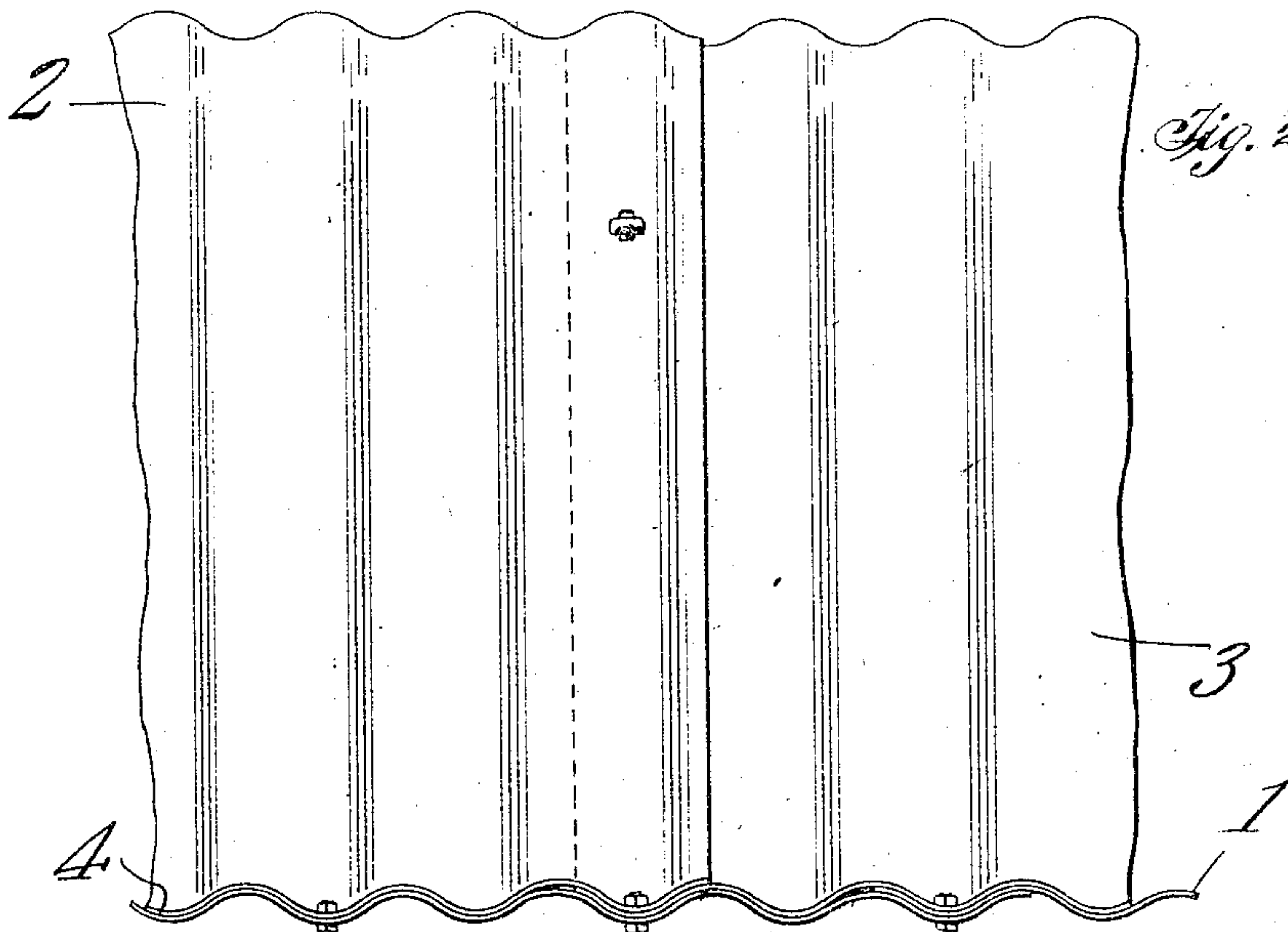
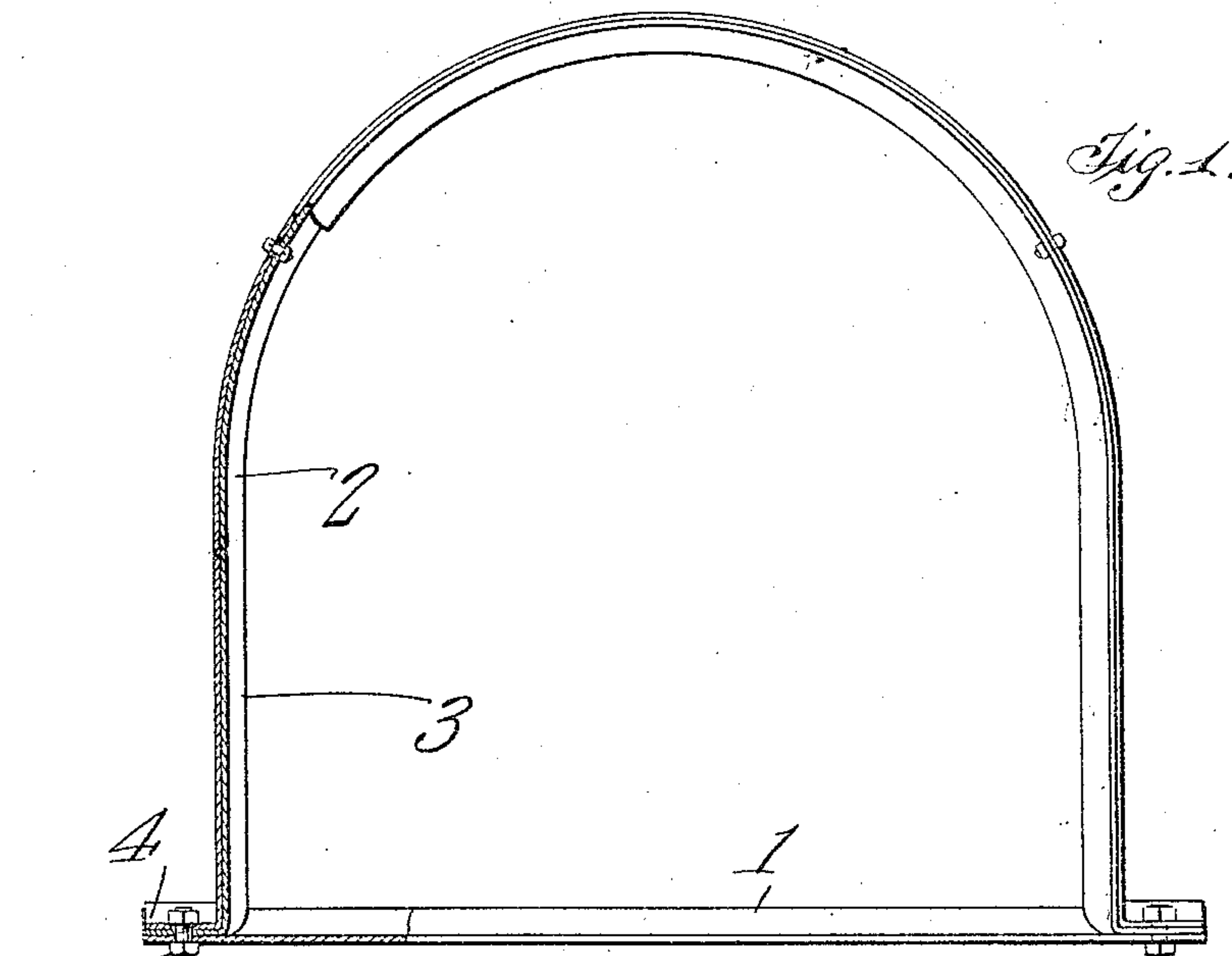


J. B. JARMIN.
FLAT BOTTOM CULVERT.
APPLICATION FILED OCT. 25, 1909.

951,124.

Patented Mar. 8, 1910.



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JAMES B. JARMIN, OF SPOKANE, WASHINGTON.

FLAT-BOTTOM CULVERT.

951,124.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed October 25, 1909. Serial No. 524,439.

To all whom it may concern:

Be it known that I, JAMES B. JARMIN, a citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented a new and useful Flat-Bottom Culvert, of which the following is a specification.

This invention relates to improvements in sheet metal culverts and the object of the invention is to provide a culvert which will possess the maximum strength and which may be readily assembled at the place where it is to be used and which will be of such form as to effectually resist the crushing strain.

The invention consists in certain novel features of the device illustrated in the accompanying drawings, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is an end view partly in section of a culvert embodying my present invention. Fig. 2 is a side elevation of a portion of the culvert.

In carrying out my present invention, I form the bottom of the culvert of a sheet metal plate 1 which is transversely corrugated but which is flat when viewed transversely.

The body of the culvert consists of a sheet metal plate 2 which is also transversely corrugated which is bent into a semi-circular or arch form having vertical side portions 3 and horizontal flanges 4 extending outward from the lower ends of the said vertical side portions. These horizontal flanges are provided at intervals with openings adapted to register with similar openings in the edges of the base portion 1 and suitable securing bolts 5 are inserted through the said openings to secure the members of the culvert together.

The culvert is formed in sections which may be shipped in a knock-down or nested

condition and assembled at the place where the culvert is to be located. In assembling the parts, the horizontal flanges on the sides of the body 2 are placed on the upper face of the base portion and bolted rigidly to the same, the meeting ends of sections of the body portion overlapping so that there will be no open joints formed in the finished culvert through which dirt might filter or leak into the culvert to obstruct the passage through the same.

By constructing the culvert of corrugated sheet metal ample provision is made for expansion and contraction under changes in temperature while the peculiar manner of connecting the sections employed by me effectually resists any tendency of the body of the culvert to spread and thereby separate from the base. The flat corrugated bottom provides a very stiff base and prevents sinking of the edges of the arched shaped body under the weight placed upon the same while the provision of the horizontal flanges on the sides of the said bottom increases the bearing surface and prevents the expanding or spreading out of the bottom of the body.

Having thus described my invention, what I claim is:

A sheet metal culvert comprising a flat bottom, and an arched body having vertical side walls, and horizontal flanges at the lower ends of the said walls rigidly secured to the upper side of the flat bottom, the bottom and body being transversely corrugated and made in sections.

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

JAMES B. JARMIN.

Witnesses:

W. W. HINDMAN,
FRED R. WRIGHT.