

L. R. SHALLENBERGER.
METAL CULVERT.
APPLICATION FILED JAN. 26, 1920.

1,381,244.

Patented June 14, 1921.

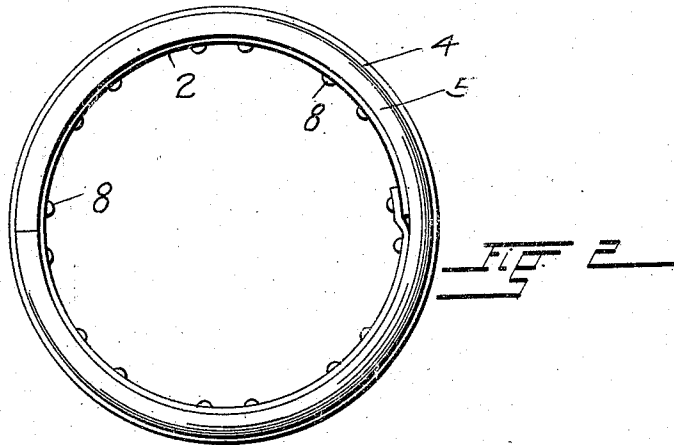
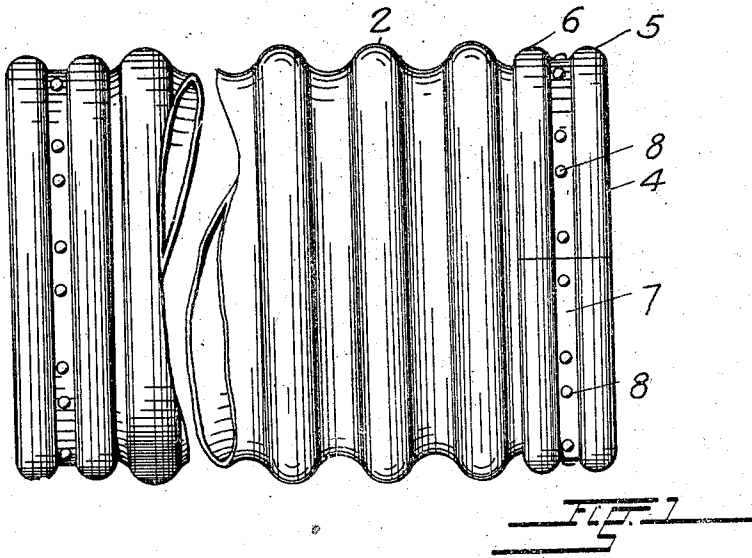
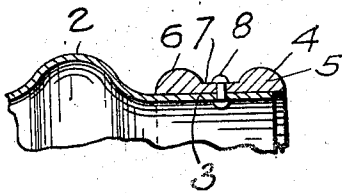


FIG. 3.



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METAL CULVERT.

1,381,244.

Specification of Letters Patent. Patented June 14, 1921.

Application filed January 26, 1920. Serial No. 354,078.

To all whom it may concern:

Be it known that I, LOUIS R. SHALLENBERGER, a citizen of the United States, residing at Pueblo, in the county of Pueblo and State of Colorado, have invented certain new and useful Improvements in Metal Culverts, of which the following is a specification.

This invention relates to improvements in reinforced metal culverts and its primary object is to provide a reinforcement for the ends of a metal culvert, in which simplicity of construction is combined with superior strength and durability.

Still another object of the invention is to provide in a galvanized metal culvert a reinforcement for the ends thereof which is applied without bending of the material of which the culvert is composed, and still another object is to provide the culvert ends with reinforcements so placed as to thoroughly protect their edges.

With the above and other objects in view, all of which will fully appear in the course of the following description, my invention consists in the construction and arrangement of parts shown in the accompanying drawings in the various views of which like parts are similarly designated and in which—

Figure 1 is a side elevation of a reinforced metal culvert of the improved construction the middle portion of which is broken away; Fig. 2, an end view of the culvert shown in Fig. 1, and

Fig. 3, an enlarged fragmentary section of one of the reinforced ends of the culvert.

Referring to the drawings, the reference character 2 designates a metal, circumferentially corrugated culvert the end portions 3 of which are cylindrical for the application of circular metal reinforcing band 4.

The bands consist of two circular members or bands 5 and 6, preferably of semi-circular section, which are connected by a web 7 of lesser thickness extending flush with the inner circumferential surface of the same, and they are securely fastened upon the smooth end portions of the culverts by rivets 8 passing through the web.

The bands are placed on the culvert so as to project slightly beyond the ends thereof for the purpose of protecting the edges of the metal of which the culvert is composed.

In comparing my invention with other reinforced culverts of known construction, it will be observed that the present reinforcement

is applied without bending the metal of the culvert, which is objectionable in that it weakens the ends of the culverts, and in that the breaking and flaking of the galvanized coating of the same exposes the raw material to the corrosive influence of moisture.

The reinforcement formed as shown and described provides a heavy strengthening band at the very edge of the culvert, which is held in place and augmented by a second band with which it is integrally connected.

The web between the two members of the band 4 enlarges the bearing surface and provides a sunken seat for the rivet heads which thereby are protected against wear and breakage, and by projecting the reinforcing bands over the ends of the culvert the edges thereof are shielded against damage and against breakage of their galvanized coating.

My invention thus provides two reinforcements respectively positioned at an end of the culvert and at a distance from said end, which have a common cylindrical bearing surface, which are secured by a single row of rivets in a depression between them and which cooperate to strengthen and protect the terminal portions of a culvert to which they are applied.

Having thus described my invention what I claim and desire to secure by Letters Patent is:

1. The combination of a metal culvert having a cylindrical end-portion, and a metal reinforcement fastened upon said portion and consisting of two bands integrally connected by a web of lesser thickness and having a common bearing surface with said web.

2. The combination of a metal culvert having a cylindrical end-portion, and a metal reinforcement fastened upon said portion and projecting beyond the edge thereof, said reinforcement consisting of two bands integrally connected by a web of lesser thickness and having a common bearing surface with said web.

3. The combination of a metal culvert having a cylindrical end-portion, and a metal reinforcement fastened upon said portion and consisting of two bands of segmental section, integrally connected by a web of lesser thickness and having a common bearing surface with said web.

4. The combination of a metal culvert having a cylindrical end-portion, and a metal

reinforcement fastened upon said portion and consisting of two bands of semi-circular section integrally connected by a web of lesser thickness and having a common bearing surface with said web.

5 5. The combination of a metal culvert having a cylindrical end-portion and a metal reinforcement fastened upon said portion,

consisting of two bands respectively positioned at the edge of said portion and at a distance from said edge, and integrally connected by a web of reduced thickness with which they have a common bearing surface. 10

In testimony whereof I have affixed my signature.

LOUIS R. SHALLENBERGER.