

J. H. SCHLAFLY.
 CULVERT.
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1,072,173.

Patented Sept. 2, 1913.

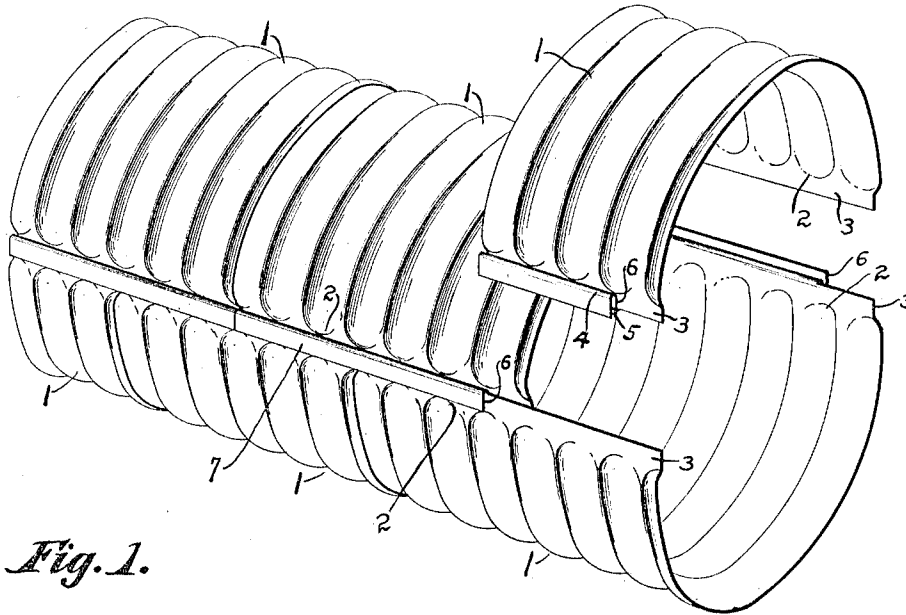


Fig. 1.

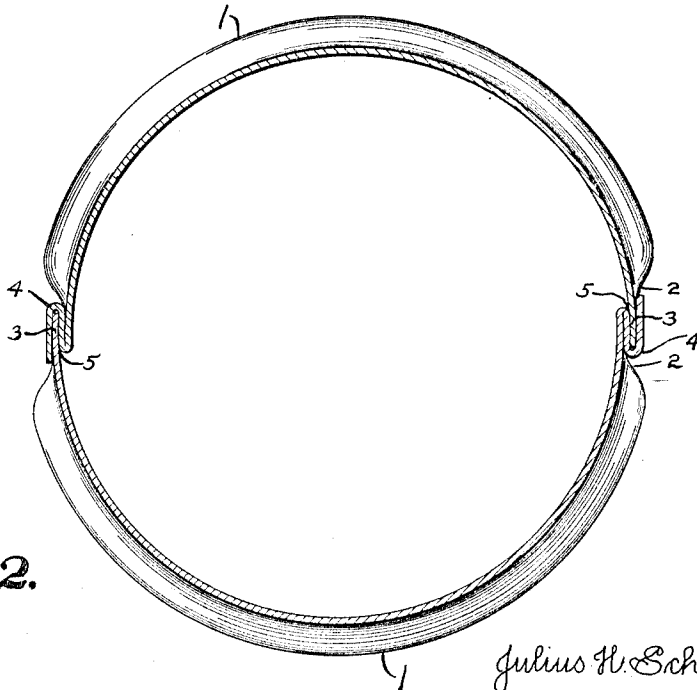


Fig. 2.

Witnesses

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CULVERT.

1,072,173.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JULIUS H. SCHLAFLY, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented a new and useful Culvert, of which the following is a specification.

My invention relates to improvements in corrugated sheet metal culverts and has to do particularly with culverts of the sectional or knock-down variety and to the method of fastening together the sections composing the same.

The object of my improvement is to provide a sectional or knock-down culvert wherein the parts composing the same may be nested together for shipment and may also be readily assembled at the place where used and when so assembled will prove to be of strong and satisfactory construction, and I attain this object, together with other objects apparent to those skilled in the art, by the construction illustrated in the accompanying drawing, in which—

Figure 1 is a perspective view of a culvert composed of six sections embodying my invention one of the sections being removed or raised from its appropriate position in order to more fully disclose the details of construction. Fig. 2 is a transverse sectional view through two complementary sections showing their appropriate relation to each other in the assembled culvert.

Throughout the several views similar numerals of reference indicate similar parts.

The numeral 1 indicates a semi-cylindrical section made of sheet metal and provided with circumferential corrugations adapted to strengthen and uphold said section against crushing and flattening under the weight which the culvert is intended to support. The said corrugations in each section, as shown in the drawing, do not extend entirely to the edge of the said section but terminate at the point 2 leaving an edge of plain sheet metal, 3, which is wholly uncorrugated. The culvert is constructed of upper and lower complementary sections, longitudinally adjacent sections being lapped one upon another at their ends, the end corrugation of one section engaging the over-lapping end corrugation of the next section. In the construction of culverts composed of sections provided with corrugations and plain edges, as described, various means for uniting the

upper and lower or complementary sections to each other may be suggested but the construction herein described is preferable. In this construction, one of the plain edges, 3, of each section is provided with an integral double folded or returned portion, 4, so bent as to produce a longitudinal groove or slot, 5, between the parts thereof. This groove is adapted to engage the plain or uncorrugated edge of the complementary section, as illustrated in Fig. 2. For the purpose of permitting longitudinal sections to over-lap each other at the ends the portion 4 in each section is made to terminate at the point 6, which point is short of one of the ends of said section. This will permit the over-lapping of terminal corrugations of the longitudinally adjacent sections and in the complete culvert will produce the neat and substantial longitudinal seam shown at 7 in Fig. 1, a cross sectional view of which is clearly shown in Fig. 2.

I do not wish to be limited to the means herein described for uniting said sections, as various means might be used in place of the folded portion 4 for fastening together the plain edges of such culvert sections as herein described. One of the desirable features, however, of the means of fastening herein disclosed is that all sections will be alike, in so far as their edges are concerned, and a complete pipe may be constructed of any two of such sections.

I claim:

1. The combination of two complementary culvert sections provided with plain edges and circumferential corrugations, one edge of each section folded upon itself, producing a longitudinal groove, and adapted to engage the plain edge of the complementary section.

2. A culvert composed of sections, all of which are alike, each section having a plain seam edge and circumferential corrugations extending between said edges.

3. A culvert composed of sections all of which are alike, each section provided with circumferential corrugations, integral plain edges beyond the termination of said corrugations, one plain edge of each section provided with a longitudinal slot and the other plain edge adapted to enter a similar slot of the complementary section.

4. In a culvert of the class described, the combination of sections having plain edges,

integral corrugated portions between said edges, and one of said edges of each section provided with a longitudinal groove adapted to engage the ungrooved plain edge
5 of another section.

5. A culvert consisting of a series of sections, said sections provided with plain edges and with circumferential corrugations formed of a length less than the width of
10 the sections, an integral grooved portion provided on one of the plain edges of each section and the said grooved portion terminating at a point short of one of the ends of said section, whereby the longitudinally
15 adjacent sections may overlap each other at their ends.

6. A sheet metal pipe composed of a series of endwise overlapping corrugated sections having their side edges flattened, one
20 of each opposing side edges being shaped to form a groove in which the other one is entered, the overlapping portions of the side edges being cut away.

7. A sheet metal pipe composed of a series of endwise overlapping corrugated sections having their side edges flattened, one of each
25 opposing side edges being shaped to form a groove in which the other one is entered, the overlapping portions of the grooved edges being cut away.

8. A sheet-metal pipe composed of a series of endwise overlapping sections, one of each
30 opposing side edges being shaped to form a groove in which the other one is entered, the overlapping portions of the side edges being cut away.

9. A sheet-metal pipe composed of a series of endwise overlapping sections, one of each
35 opposing side edges being shaped to form a

groove in which the other one is entered, 40 the overlapping portions of the grooved edges being cut away.

10. A sheet-metal pipe including a series of sections having one of each opposing side edges twice folded to form a groove, be- 45 tween the parts of which the other edge is adapted to be clamped.

11. A transversely curved and annularly corrugated pipe section having one side edge flattened and twice folded to form a groove 50 and the other flattened to form a tongue adapted to be clamped between the parts forming said groove.

12. A transversely-curved and annularly-corrugated pipe section having one side edge flattened and twice folded to form a groove 55 and the other flattened to form a tongue.

13. A transversely-curved and annularly-corrugated pipe section having one side edge flattened and shaped to form a groove and 60 the other flattened to form a tongue adapted to be clamped between the parts forming said groove.

14. A transversely-curved annularly corrugated pipe section having one side edge flattened and shaped to form a groove and 65 the other flattened to form a tongue.

15. A transversely curved annularly-corrugated sheet-metal pipe section having its side edges flattened and one side edge twice 70 folded on itself to form a groove.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

JULIUS H. SCHLAFLY.

Witnesses:

F. A. HELMERTNER,
HARRY G. GELTZ.