

J. A. SANDERS.
METAL CULVERT.

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1,005,656.

Patented Oct. 10, 1911.

Fig. 1.

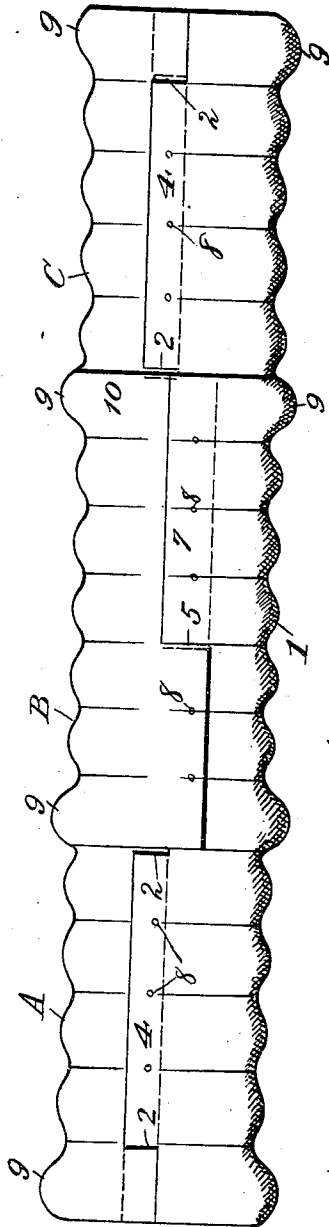


Fig. 2.

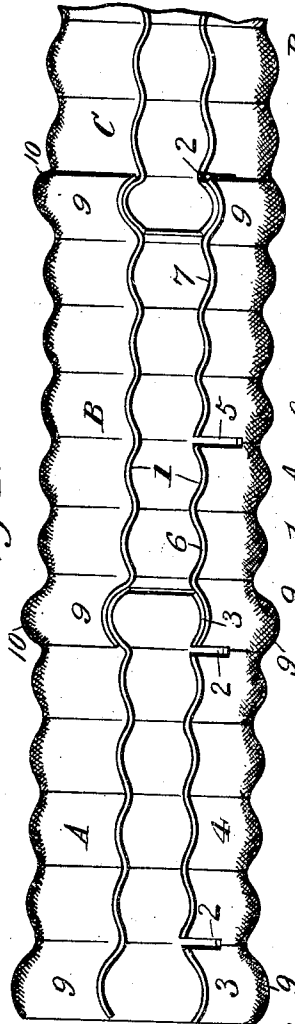


Fig. 4.

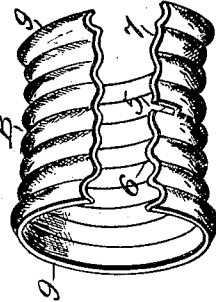
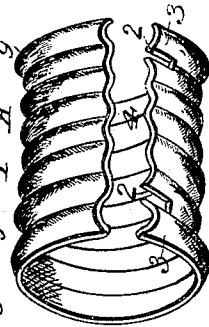


Fig. 3.



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METAL CULVERT.

1,005,656.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH A. SANDERS, a citizen of the United States, residing at Cayuga, in the county of Vermilion and State of Indiana, have invented certain new and useful Improvements in Metal Culverts, of which the following is a specification.

My invention relates to a new and useful improvement in metal culverts, and has for its object the provision of novel means for coupling the sections of the culverts together, and also for securing the longitudinal edges of the various sections together.

It has for its further object means for strengthening the culvert sections which will be hereinafter more fully described and pointed out in the claims.

With these and other objects in view my invention consists of various details of construction and combinations of parts as will be more fully understood from the following specification and drawings, in which—

Figure 1 is a view in side elevation showing the parts assembled, and Fig. 2 is a view in side elevation showing the parts about to be assembled. Figs. 3 and 4 are views in perspective of sections A and B.

In the drawings the letters A, B, and C represent the sections of my improved culvert, which are preferably corrugated as clearly shown at 1. The sections A and C are slit along one edge near the ends as shown at 2, thus forming the two end tongues 3 and the central tongue 4. When the edges of the sections A and C are brought together the tongue 4 overlies the opposite edge of the section, whereas the tongues 3 go beneath the opposite edge.

The section B, which is known as the coupling section is provided with only one slit along one edge, as shown at 5, and this slit is preferably in the center of the section, thus forming two tongues 6 and 7, the tongue 6 adapted to go beneath the opposite edge of the section, whereas the tongue 7 overlies the edge. When the edges of the sections have been brought together as shown in Fig. 1, they are riveted together along the edge as indicated at 8. All of the sections are provided at the ends with the beading 9, the purpose of which is to provide a tight joint when the sections are assembled. After the edges of each of the sections A and C have been riveted together for forming the cylindrical tubing, the coupling B is then applied

for connecting the two sections together. During the rolling process, for rolling the sheets of sections into tubular form, all of the sections being made from the same width of metal, the sections A and C are rolled to a uniform size, while the outside or connecting section B is rolled smaller than the sections A and C, so that section B when rolled would present a smaller diameter than the sections A and C. The object of this is to permit the ends of the section B to be sprung around the ends of sections A and C, whereby a bead at each end of section B will engage and hug or draw tightly upon a bead at an end of each of the sections A and C. In this way a very tight joint is provided. After section B has been sprung upon sections A and C, the edges of the connecting sections B are drawn tightly together, and then riveted.

From the foregoing it is thought that the construction of the several parts and the manner of connecting the same will be clearly understood.

In practice the edges of the sections A and C can be riveted before laying the same, and the coupling member B can then be applied and the edges of this member riveted. When the sections are assembled the beading 9 on the various ends will interlock, and in this way the sections cannot pull apart, and it will not be necessary to rivet the sections together, although I may use the rivets if desired. As before stated, by having the coupling sections rolled slightly less in diameter than the rest of the sections the ends of the coupling section will very tightly bind around the ends of the other sections.

When the sections are assembled as shown in Fig. 1, it will be impossible for them to collapse along the edges, as a part of one edge overlies the opposite edge at one point and beneath the opposite edge at the other point, and it will thus be seen that the sections cannot collapse along the edges without the entire section collapsing, and as the sections are made of metals of suitable strength to withstand great pressure or strain, it will be seen that the sections of my improvement will have no tendency whatsoever to collapse and will retain their original shape.

The advantages of my culvert over those ordinarily in use can readily be appreciated. It has ordinarily been the custom to simply

roll the metal bringing the edges together and then riveting the same, but by doing this when any heavy load was placed upon the culvert the same would collapse along the edge, thus destroying the usefulness thereof. 5 It has also ordinarily been the custom to rivet the several sections together, but this is not necessary with my improved culvert. Another great advantage in my culvert over 10 those at present in use lies in the fact that some of the sections may be completed before laying and then coupled together by the coupling section.

It is evident that more or less slight 15 changes might be made in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to be limited to the exact construction herein 20 set forth, but:—

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A sheet metal culvert section made 25 from a single piece of material and having two longitudinal edges, one of said edges being provided with one or more slits for engaging the opposite edge, whereby when the edges are brought together a portion of 30 one overlaps and a portion underlaps.

2. A sheet metal culvert section made from a single piece of material and having two longitudinal edges adapted to be riveted 35 together, one of said edges being provided with one or more slits for engaging the opposite edge whereby a portion of each edge

will overlap the other and a portion will underlap.

3. A sheet metal culvert section having two longitudinal edges, one of said edges 40 being provided with one or more slits, and the ends of the culvert sections being provided with a beading.

4. A sheet metal culvert section made from a single piece transversely corrugated, 45 one edge having at least one transverse slit therein adapted to receive the opposite edge whereby a portion of the latter overlaps and the remaining portion underlaps the slit edge, said edges being securely fastened to- 50 gether.

5. A sheet metal culvert comprising a plurality of corrugated pipe sections and coupling sections made from the same width of material, the pipe sections adapted to be 55 rolled into tubular form, means for connecting the edges of each section together, the coupling sections adapted to be rolled into tubular form, the diameter of which is less than the diameter of the pipe sections, 60 whereby the coupling sections can be sprung upon the ends of the adjoining pipe sections for forming a tight connection upon the ends of the pipe sections, and means for fastening the edges of each coupling section 65 together.

In testimony whereof I affix my signature, in the presence of two witnesses.

JOSEPH A. SANDERS.

Witnesses:

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ANDREW M. HUNT.