

J. P. DOLAN.
 CULVERT.
 APPLICATION FILED MAY 15, 1911.

1,002,653.

Patented Sept. 5, 1911.

Fig. 1.

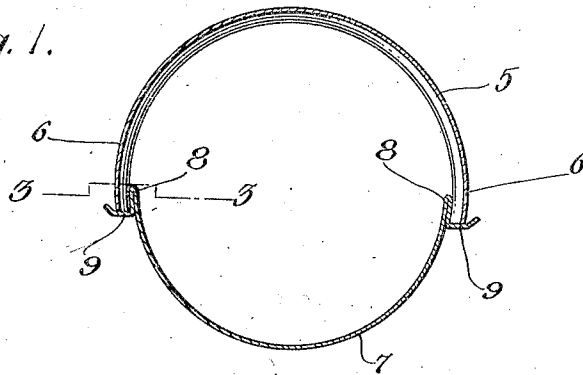


Fig. 2.

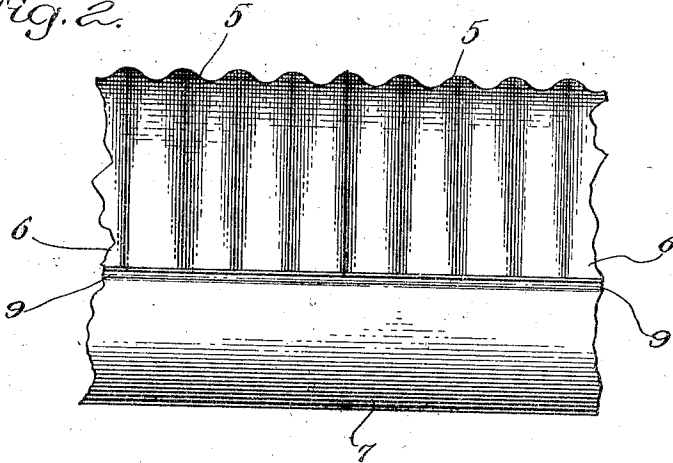


Fig. 3.

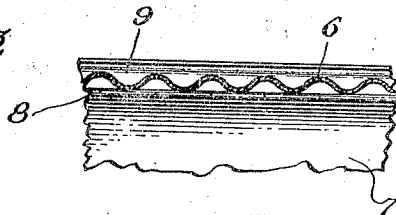
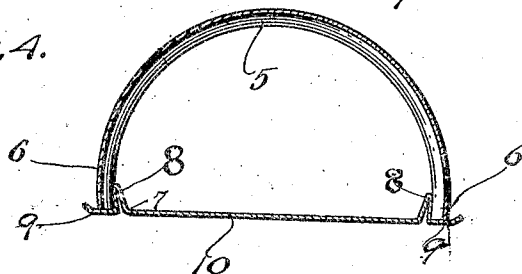


Fig. 4.



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UNITED STATES PATENT OFFICE.

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CULVERT.

1,002,653.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES P. DOLAN, of Revere, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Culverts, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

This invention has reference to improvements in culverts and particularly to improvements in culverts constructed of sheet metal.

One object of the invention is to so construct a sheet metal culvert that the assembling together of its parts or members is facilitated.

Another object of the invention is to improve the construction of sheet metal culverts having bottom members furnished with smooth channels.

Other objects of the invention will appear from the following description.

The invention consists in the sheet metal culvert hereinafter described and claimed.

Figure 1. represents a sectional view of a sheet metal culvert of this improved construction having a concave bottom section. Fig. 2 represents a side elevation of the improved culvert. Fig. 3. represents a sectional view along the culvert taken on line 3—3 Fig. 1. Fig. 4. represents a sectional view of a culvert showing a modified form of the improvement.

Similar numerals of reference designate corresponding parts throughout.

In carrying this invention into practice one of the important objects sought to be accomplished is to protect the channel of the culvert from clogging by the inward washing of earth or gravel and another object is to facilitate the shipment of the culverts and the assembling of their parts or members at the place at which the culverts are to be erected. To this end I provide a sheet metal culvert having two members or sections 5 and 7 of which the member 5 is segmental in cross section and has the inwardly curved lower edge portions 6, 6 while the material of this member is transversely corrugated to increase its strength. The member 7 is preferably segmental in cross section and has its edge portions bent back upon themselves to form the outwardly inclined flanges 8, 8 and

then again outward to form the abutments or lips 9, 9 for the edges of the member 6. 55

The construction shown in Fig. 4 is similar to that above described except that the lower or channel member has the flat bottom 10.

The space between the edges 6, 6 of the culvert section 5 is preferably such that these edges 6—6 frictionally engage the flanges 8, 8 of lower section 7 when said section 7 is slid lengthwise between said edges 6, 6 whereby said culvert sections are sufficiently secured together for installation. As such assembling of the culvert sections does not require the use of tools, the culvert sections 5 and 7 may be shipped as separate packages and may be readily assembled at the place of installation as described above. 60 65 70

In the manufacture of culverts from sheet metal, particularly when the upper section is transversely corrugated it is usually preferable for reasons of economical manufacture and shipment to make such corrugated sections of comparatively short length and, where the upper and lower culvert sections are permanently secured together the length of the upper section determines the length of the lower section in which, of course, joints are objectionable. In this improved construction the lower sections may be manufactured in any suitable lengths and, as indicated in Fig. 2 of the drawing, said lower sections may be long enough to accommodate more than one top section. Several of the lower sections 7, 7 may be nested together for shipment whereby shipment thereof is facilitated while the several sections 7, 7 so packed protect one another from injury. 75 80 85 90

Where it is desired to prepare and ship the culvert entire it is of course obvious that the culvert sections may be permanently secured together by any well known fastening means which is not herein shown as such fastening means forms no part of the present invention. 95

It is obvious that when the space between the ends 6, 6 is sufficiently wide, relative to the distance between the outer surfaces of the flanges 8, 8 of the section 7 the ends 6, 6 will not frictionally engage such flanges 8, 8 but said ends 6, 6 will be supported on the lips 9, 9 of section 7 and the flanges 8, 8 will 100 105

extend upward within the ends 6, 6 and form a channel.

Having thus described my invention, I claim as new and desire to secure by Letters
5 Patent—

1. A culvert comprising two sections of which one is segmental having inwardly extending edges, the other of said sections having outwardly inclined flanges extending
10 within said first section and longitudinal lips extending along the edges of said first section.

2. A culvert comprising two sheet metal

sections, of which the segmental section is transversely corrugated and has inwardly 15 extending edges, the lower section having a central channel and sides bent upon themselves and forming outwardly inclined flanges and lips extending outward from the lower portions of said flanges, said flanges 20 located between the edges of said upper section, substantially as described.

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