

No. 770,237.

PATENTED SEPT. 13, 1904.

A. LAURIDTZEN.
CULVERT.

APPLICATION FILED OCT. 31, 1903.

NO MODEL.

Fig. 1.

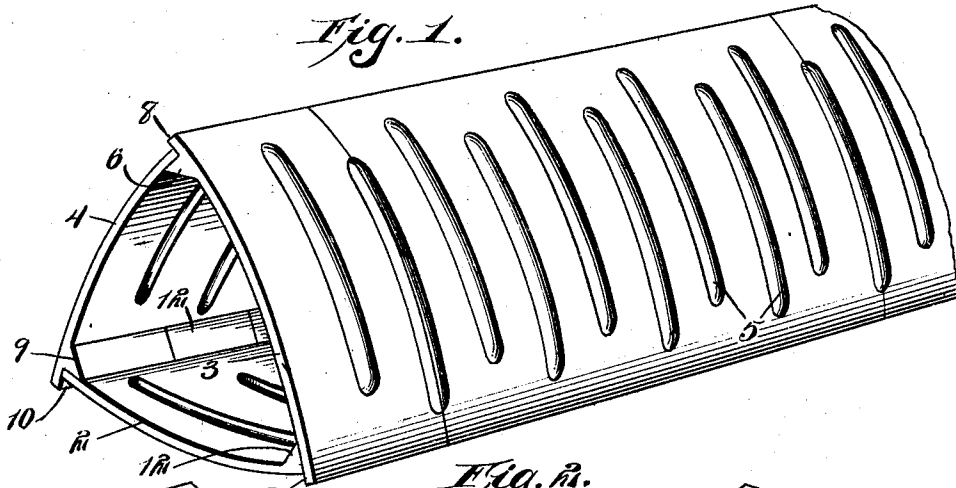


Fig. 2.

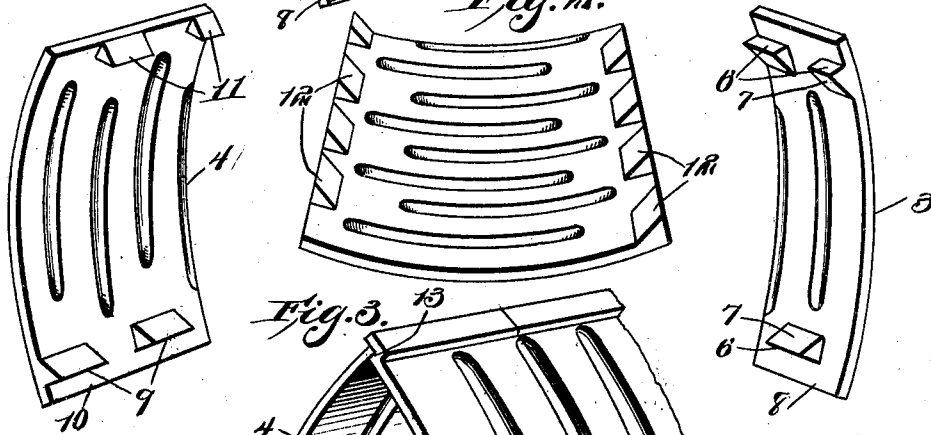


Fig. 3.

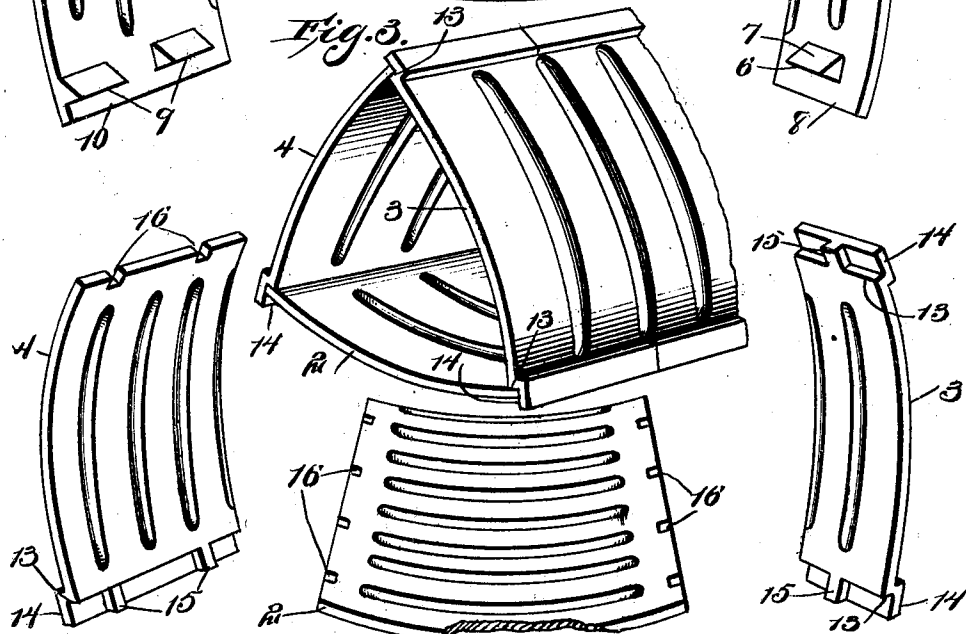


Fig. 4. Albert Lauritzen, Inventor.

Witnesses
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UNITED STATES PATENT OFFICE.

ALBERT LAURIDTZEN, OF LYONS, MICHIGAN.

CULVERT.

SPECIFICATION forming part of Letters Patent No. 770,237, dated September 13, 1904.

Original application filed April 18, 1903, Serial No. 153,285. Divided and this application filed October 31, 1903. Serial No. 179,359. (No model.)

To all whom it may concern:

Be it known that I, ALBERT LAURIDTZEN, a citizen of the United States, residing at Lyons, in the county of Ionia and State of Michigan, have invented a new and useful Culvert, of which the following is a specification.

This invention relates to certain improvements in culverts of that general type illustrated in an application for Letters Patent of the United States filed by me on the 18th day of April, 1903, under Serial No. 153,285 and of which the present application is a division.

The object of the invention is to provide a simple, inexpensive, and efficient device of this character adapted for use beneath railway-tracks, roadways, and the like or in the construction of sewers, conduits, and similar structures.

A further object of the invention is to produce a culvert formed in two or more sections provided with interlocking faces, the relative disposition of the several parts being such as to effectually prevent independent longitudinal movement of said sections when assembled.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

In the accompanying drawings, Figure 1 is a perspective view of a culvert constructed in accordance with my invention. Fig. 2 is a detail perspective view of the several sections or plates comprising the culvert detached. Fig. 3 is a perspective view of a modified form of culvert, and Fig. 4 is a detail perspective view of the sections or plates of Fig. 3 detached.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The culvert, which is preferably triangular in cross-section, comprises a base-plate 2 and sectional side plates 3 and 4. The plates are

made in suitable lengths, abutting at their opposite ends and arranged to break joint at their longitudinal junctions, as clearly shown in Fig. 1 of the drawings. The base-plate 2 and side plates are preferably formed of metal, being slightly curved in cross-section, and formed with a series of ribs or corrugations 5, varying in number and distance apart according to the size of the plates and strength required for the culvert. The side plate 3 is provided on its opposite edges with inwardly-spaced locking-lugs 6, having inclined faces 7 and defining seating-flanges 8, one of said flanges being adapted to receive the adjacent edge of the plate 4 and the other the base 2. The side plate 4 is also provided with locking-lugs 9, spaced inwardly from one edge thereof to form a flange 10, the opposite edge of said plate being provided with terminal lugs 11, adapted to engage the lugs 6 on the side plate 3. The base 2 is disposed between the flanges 8 and 10, being provided with a series of marginal locking-lugs 12, arranged out of alinement with or in staggered relation to the lugs on the lower edge of the side plates, so that when said plates are assembled the lugs will intermesh and prevent independent longitudinal movement of said sections, as clearly shown in Fig. 1 of the drawings. The base and side pieces being formed of metal will have a tendency to give or yield slightly when subjected to any great external strain or pressure incident to the expansion of the earth surrounding the culvert, thereby preventing said plates from being broken or otherwise injured.

In laying the culvert a ditch is first dug where the culvert is to be formed and a number of base-plates laid end to end at the bottom of the ditch. The culvert is then formed from one end by placing a one-fourth plate on one side and a one-half plate on the other, the locking-lugs intermeshing and interlocking said plates with the base and with each other. Long plates are then placed in position on each side to any length desired and the culvert finished with a one-fourth plate on one side and a one-half plate on the bottom, after which the ditch is filled in, covering and protecting the culvert.

The seating-flange of each plate or section extends from the edge of the plate to the inner line of the lugs, so that between the outer line of the lugs and the edge of the plate there is a continuous seat for the edge of an adjacent plate, and the spaces between the lugs form an interrupted seat for the lugs of said adjacent plate.

In Figs. 3 and 4 I have shown a modification in which the side plates 3 and 4 instead of being provided with flanges extending in the same plane with the plates are provided with shoulders or offsets 13, the flanges 14 formed thereby being provided with locking-lugs 15, adapted to engage notches or recesses 16 in the base-plate and upper portion of the side plate 4.

From the foregoing description it will be seen I have provided a sectional culvert the several parts of which may be readily assembled to form a rigid and durable structure and which is also capable of being easily knocked down for shipment or transportation.

Having thus described the invention, what is claimed is—

1. A sectional culvert comprising a plurality of sections, two of which are provided with marginal seating-flanges and the third with terminal locking members adapted to engage said flanges.

2. A culvert formed of a plurality of plates, all of which are provided with interlocking lugs, two of said plates having continuous seating-flanges, and the lugs of the third plate being disposed at the edges thereof to form an interrupted seating-flange.

3. A sectional culvert comprising three plates arranged in triangular form and all of which have interlocking lugs, two of said plates being provided with marginal seating-flanges, and the lugs of the third plate being disposed at the opposite edges thereof and engaging said flanges.

4. A sectional culvert comprising a plurality of plates, two of which are provided at one edge with locking-lugs defining seating-flanges and the third with corresponding marginal lugs adapted to engage the flanges and lugs on the adjacent plates.

5. A sectional culvert composed of three corrugated plates arranged in triangular form, and comprising a base and side plates adapted to interlock with each other, the side plates being provided with seating-flanges for the reception of the opposite edges of the base.

6. A sectional culvert comprising a base-plate and side plates arranged in triangular form and provided with interlocking faces, the base-plate being disposed between the side pieces and having its side edges arranged in contact therewith.

7. A sectional culvert comprising a base-plate and side plates arranged in triangular form and provided with interlocking members, the upper edge of one side plate extending beyond the other, and the lower edge of both side plates extending below the base-plate and serving to confine said plate within the lines of the side plates.

8. A sectional culvert comprising base and side plates arranged in triangular form, each side plate being provided with a series of locking-lugs having inclined faces and spaced inwardly from the edge thereof to form a seating-flange adapted to receive the base-plate, said base-plate being provided with corresponding terminal lugs for engagement with the lugs on the side plates.

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

ALBERT LAURIDTZEN.

Witnesses:

FITCH H. BEACH,
W. L. KELLEY.