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W. ISHAM & F. E. MILLER.

ROAD CULVERT.

APPLICATION FILED DEC. 15, 1904.

Fig. 1.

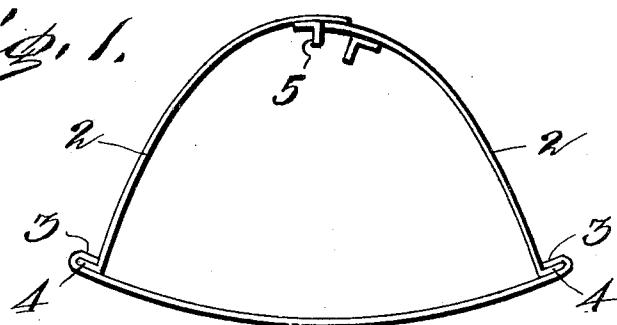


Fig. 3.

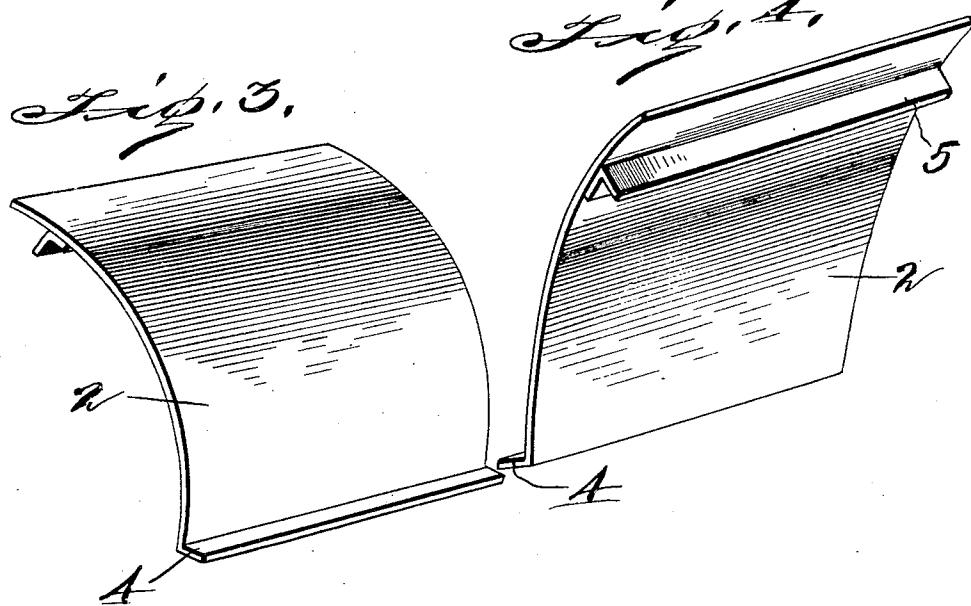
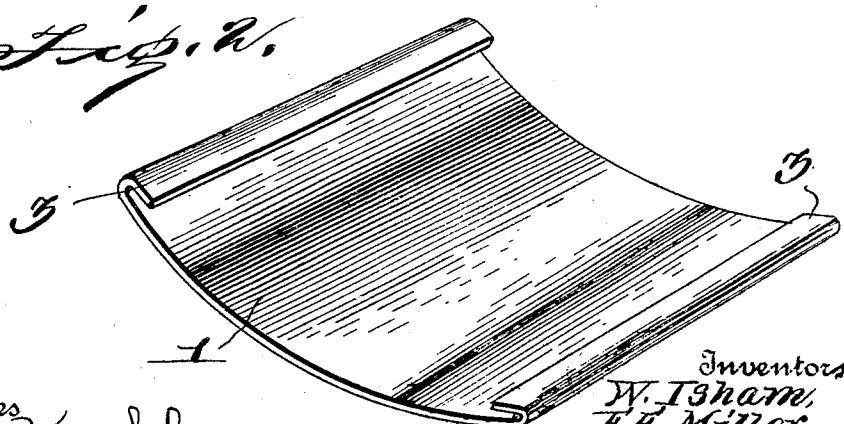


Fig. 2.



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WILLIAM ISHAM AND FRANK E. MILLER, OF IONIA, MICHIGAN.

ROAD-CULVERT.

No. 809,304.

Specification of Letters Patent.

Patented Jan. 9, 1906.

Application filed December 15, 1904. Serial No. 237,001.

To all whom it may concern:

Be it known that we, WILLIAM ISHAM and FRANK E. MILLER, citizens of the United States, residing at Ionia, in the county of Ionia and State of Michigan, have invented 5 certain new and useful Improvements in Road-Culverts; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention is an improved road-culvert; and it consists in the construction, combination, and arrangement of devices 15 hereinafter described and claimed.

The object of our invention is to provide an improved culvert which is made of separable sections, which is adapted to be readily set up, and which when in use is capable of 20 expanding and contracting under the action of frost without becoming injured.

In the accompanying drawings, Figure 1 is an end elevation of a culvert embodying our improvements, showing the same set up. 25 Fig. 2 is a detail perspective view of the base-section. Figs. 3 and 4 are similar views of the side sections.

Our improved culvert comprises a base-section 1 and a side section 2. The base-section is 30 preferably slightly curved from end to end and is formed at its end on its upper side with inturned flanges 3. The side sections 2 are curved and are duplicates and are interchangeable, and each is provided at its lower 35 edge with an outstanding base - flange 4, adapted to engage one of the flanges 3 of the base - sections. Near their upper ends on their inner sides the respective side sections are provided with transverse stop-ribs 5, 40 each of said side sections having one of the said stop-ribs. The side sections when assembled on the base-section form an arch over the base-section, and their upper ends overlap, so that the upper end of one of the 45 side sections bears against the stop-flange 5 of the other side section, as shown in Fig. 1. The side sections of the culvert are thus slidably connected together at their upper

sides, and the culvert is thus enabled to expand and contract under the action of frost 50 without danger of injury to the culvert. By providing each of the side sections with a stop-rib 5 the side sections are rendered interchangeable.

The sections of our improved culvert are 55 preferably made of cast-iron; but they may be made of any other suitable material, and we do not desire to limit ourselves in this particular.

From the foregoing description, taken in 60 connection with the accompanying drawings, the construction and operation of our invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, 65 and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described our invention, what 70 we claim as new, and desire to secure by Letters Patent, is—

1. A culvert comprising a base-section having inturned flanges at its side edges on its upper side, and side sections having out-turned flanges at their lower sides to engage 75 said inturned flanges of the base-section.

2. A culvert comprising a base-section and side sections, said base and side sections having coengaging devices to lock the said sections to the base-section and prevent the lower portions of the side sections from moving outwardly on the base-section, said side sections being further provided with means to secure their upper portions together and 85 permit lateral movement of said upper portions.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

WILLIAM ISHAM.
FRANK E. MILLER.

Witnesses:

J. F. ISHAM,
ISAAC GEORGE.