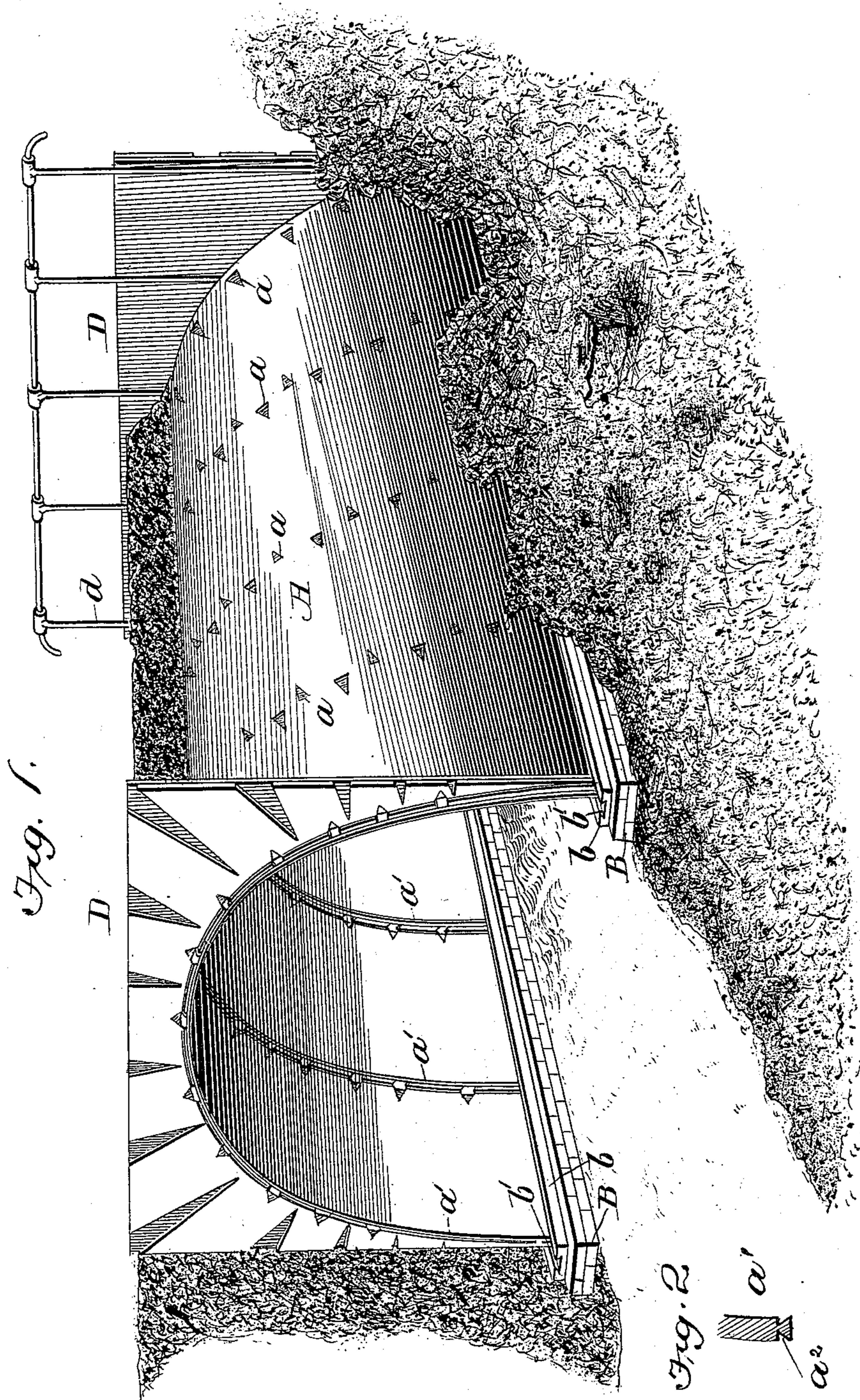


(No Model.)

E. D. LEWIS.
METALLIC CULVERT.

No. 494,576.

Patented Apr. 4, 1893.



Witnesses
J. M. Fowler Jr.
H. L. Davis

Inventor
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UNITED STATES PATENT OFFICE.

EDWARD D. LEWIS, OF SAVONA, NEW YORK, ASSIGNOR TO EMMONS T. TRUMBULL, MORICE C. TRUMBULL, AND JAMES B. DISBROW, OF SAME PLACE.

METALLIC CULVERT.

SPECIFICATION forming part of Letters Patent No. 494,576, dated April 4, 1893.

Application filed December 1, 1892. Serial No. 453,787. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. LEWIS, a citizen of the United States, residing at Savona, in the county of Steuben and State of New York, have invented certain new, useful, and valuable Improvements in Metallic Culverts, of which the following is a full, clear, and exact description.

My invention has relation to metallic culverts and it consists in the novel arrangement and construction of its parts.

In the accompanying drawings, Figure 1 represents a perspective view of my invention showing it set in place over a stream. Fig. 2 is a detail of the ends of the braces.

My invention is described as follows:—It consists of the semi-cylindrical arch of galvanized sheet iron A, having cut in it at suitable intervals the rows of angles *a*. The points of the said angles *a*, are bent down and clinched around the braces *a*, on the under side of the arch. To the foundations B, B, I secure the metallic strips *b*, *b*, said strips are provided in their upper faces with the grooves *b'*, *b'*, having the inclined sides or edges as shown. The ends of the braces *a'*, are provided with suitable notches so that said braces can be slipped into the said strips from the ends but they cannot be raised out

perpendicularly. Thus I secure my arch in a very secure and effective way to its foundation. The ends of the arch are provided with the double faced flanges D, D, and if desirable I may secure a hand rail *d*. Over the top of the arch gravel is thrown, and will pack and assume the shape of the exterior of said arch. Thus it will be seen that the arch is just as strong and it is a great deal cheaper and neater than the ordinary stone arch.

Having thus described my invention, what I claim is—

1. A culvert consisting of a sheet-iron arch having iron braces provided at their ends with suitable notches, and the strips *b*, *b*, having the grooves *b'*, with converging sides, adapted to catch in the notches of said braces, substantially as described.

2. A culvert consisting of a sheet-iron arch having the angles *a*, cut therein; braces *a'*, clinched by the points of said angles, substantially as described.

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

EDWARD D. LEWIS.

Witnesses:

J. R. KINGSLEY,
WILLARD S. REED.