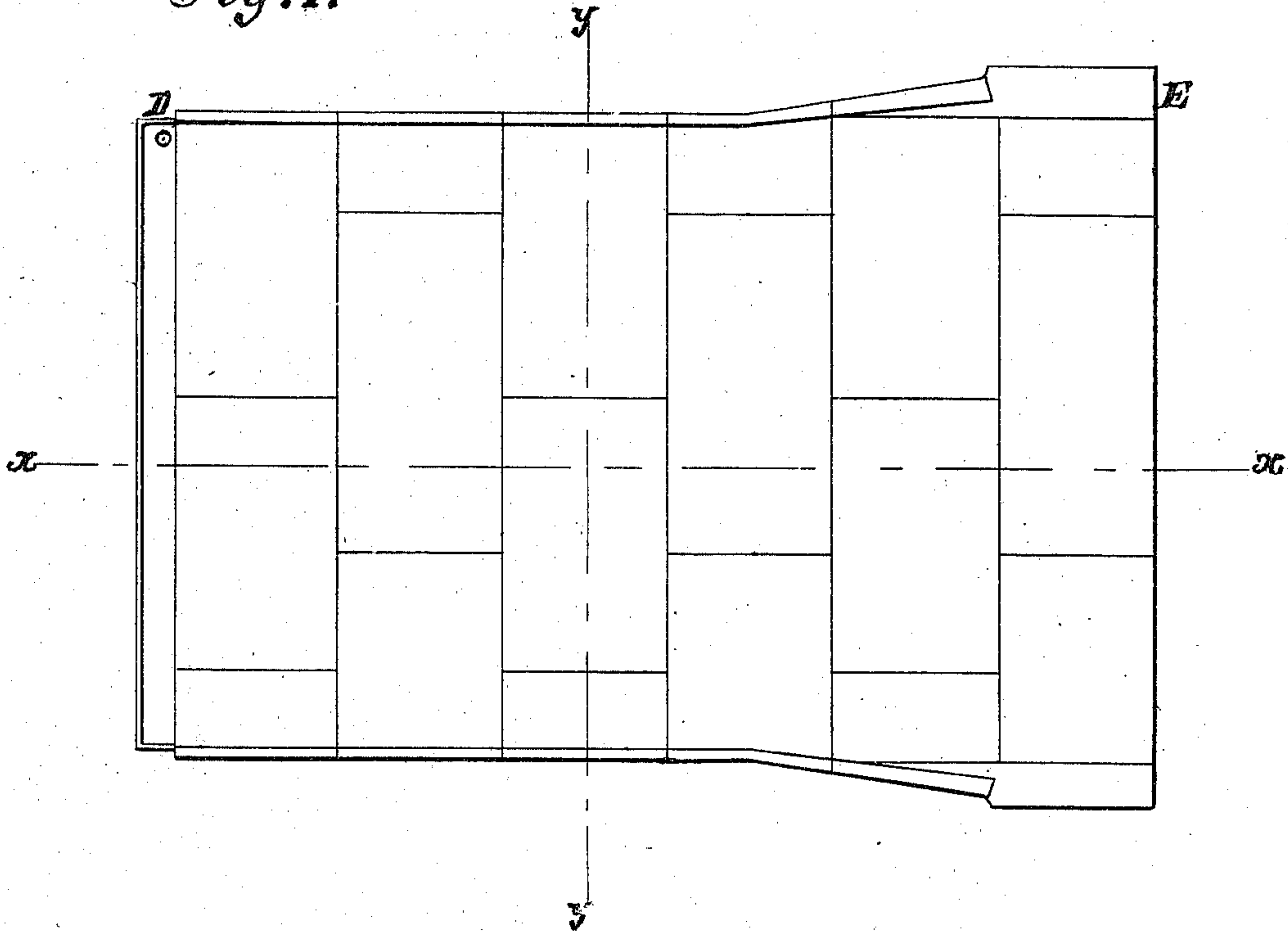


I. S. METTLER.  
Metallic Roofs.

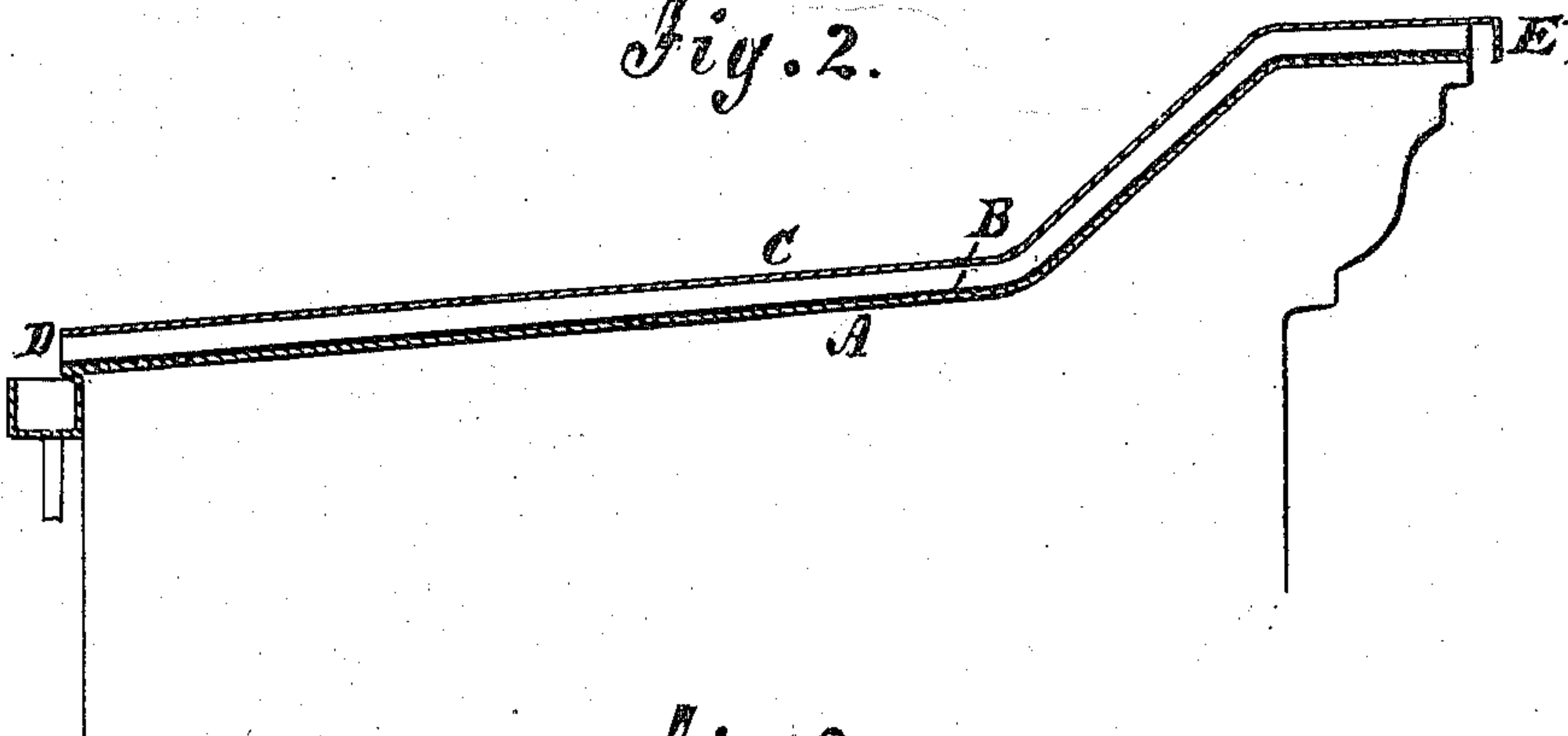
No. 142,641.

Patented September 9, 1873.

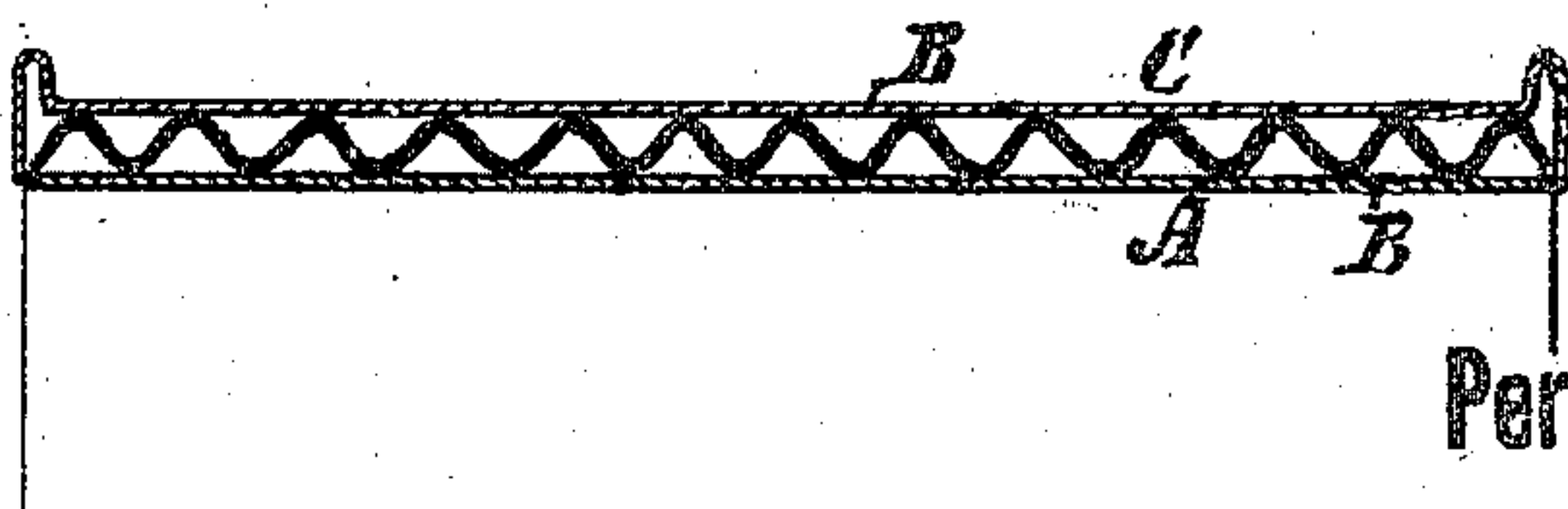
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:

*A. Bennekenhof.*  
*A. Sedgwick*

Inventor:

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*Munn & Co.*  
Attorneys.

Per

# UNITED STATES PATENT OFFICE.

ISAAC S. METTLER, OF JERSEY CITY, NEW JERSEY.

## IMPROVEMENT IN METALLIC ROOFS.

Specification forming part of Letters Patent No. 142,641, dated September 9, 1873; application filed June 21, 1873.

*To all whom it may concern:*

Be it known that I, ISAAC S. METTLER, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Hollow Roofs, of which the following is a specification:

This invention relates to the construction of roofs of buildings; and consists of channels or openings formed beneath the outer covering of the roof, by interposing a layer of corrugated tin, or other sheet metal, between such outer covering and an inner layer, said openings or channels being designed for the passage of currents of air from the eaves of the roof to the ridge or cornice, as hereinafter set forth and described.

In the drawing, Figure 1 is a top view of a roof with my improvement applied. Fig. 2 is a vertical longitudinal section of Fig. 1 taken on the line *x x*. Fig. 3 is a vertical cross-section of Fig. 1 on the line *y y*.

Similar letters of reference indicate corresponding parts.

In this example of my invention I show a tin or metallic roof, composed of three layers above the common wood sheathing or roof boards. First is a covering of tin or other metal, marked A, which is laid upon the roof-boards; second, a layer of corrugated tin, galvanized iron, or other corrugated sheet metal, marked in the drawing B; third, a covering

of tin or other sheet metal, marked C. These three layers are arranged substantially as seen in Fig. 3, and so that the channels formed by the corrugations will extend from the eaves D of the roof to the cornice E, and to be open at each end, so as to allow a circulation of air through the same. This circulation of air is the main feature of the invention, as it will be a safeguard against fire at all times, and will prevent the absorption of heat from the rays of the sun, and keep the upper rooms of a dwelling or building cool in summer—two very important considerations.

The channels or openings formed by the corrugations may be applied to another use. They may be connected with a pipe for admitting and conducting steam for melting snow or ice from the roof in winter, if desired.

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

A roof formed of three metallic sheets, A B C, the middle one corrugated and forming open-ended descending channels, so that the air will pass on both sides of said middle sheet, and against each of the others, in the manner and for the purpose described.

ISAAC S. METTLER.

Witnesses:

T. B. MOSHER,  
C. SEDGWICK.