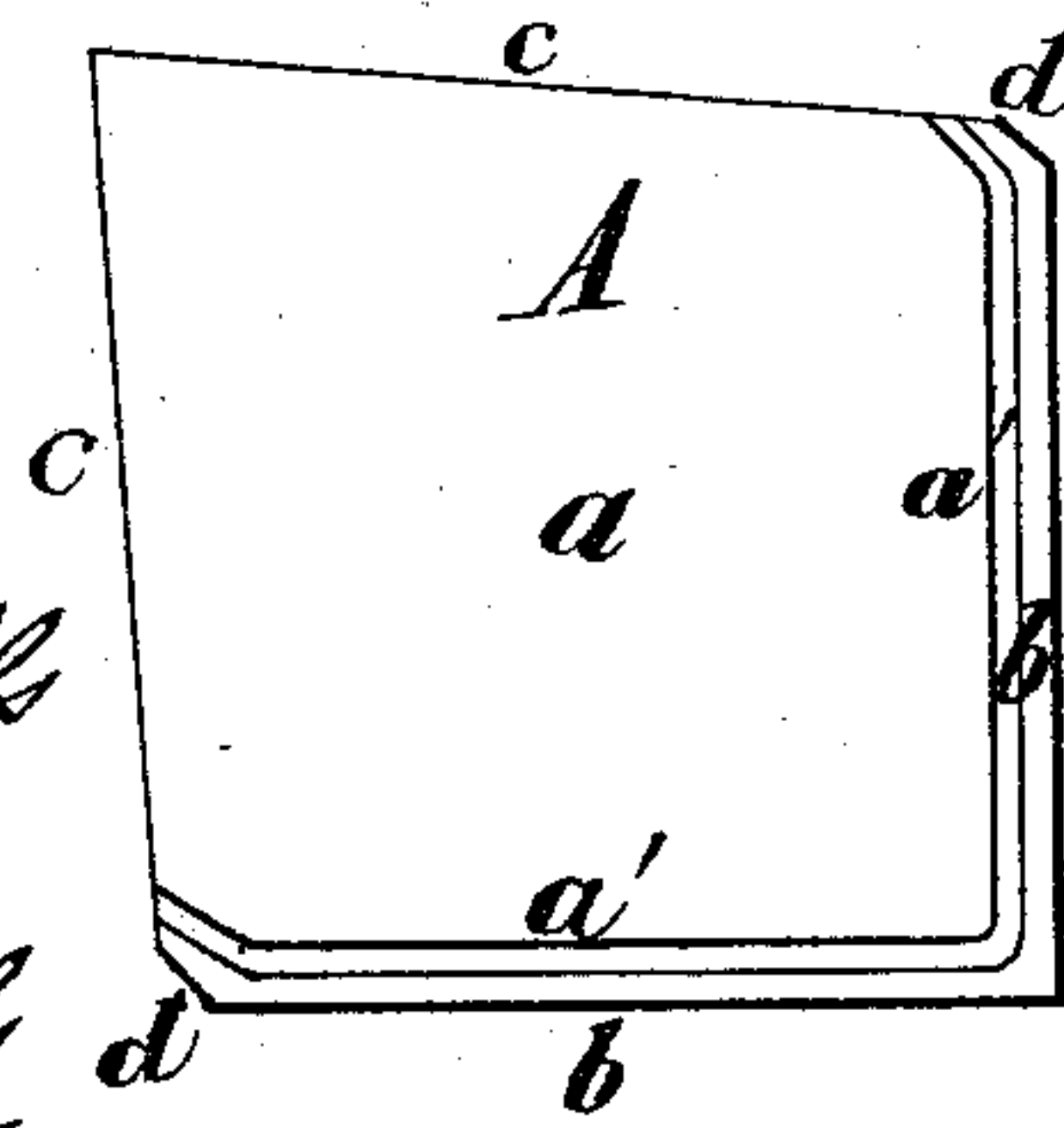
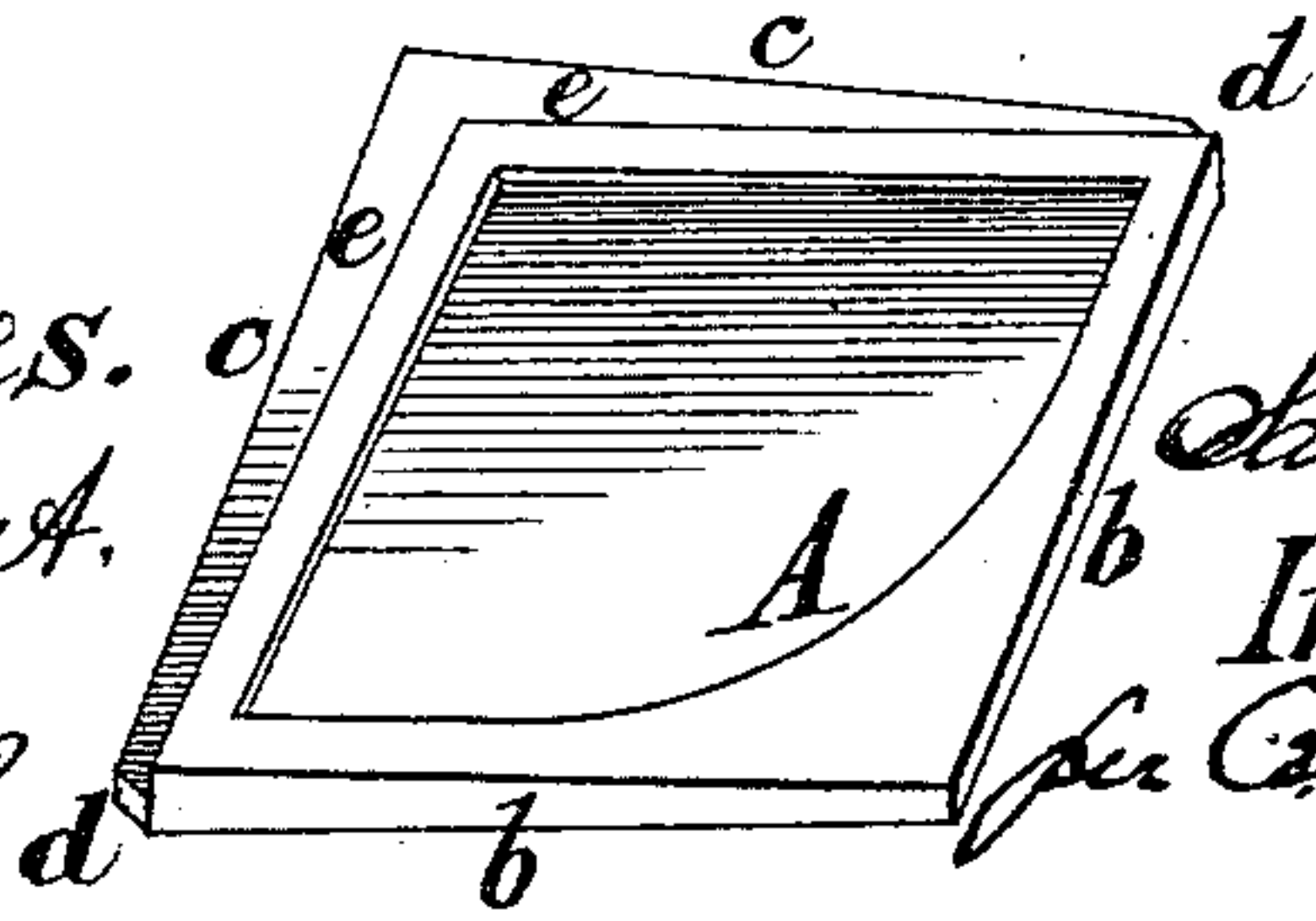
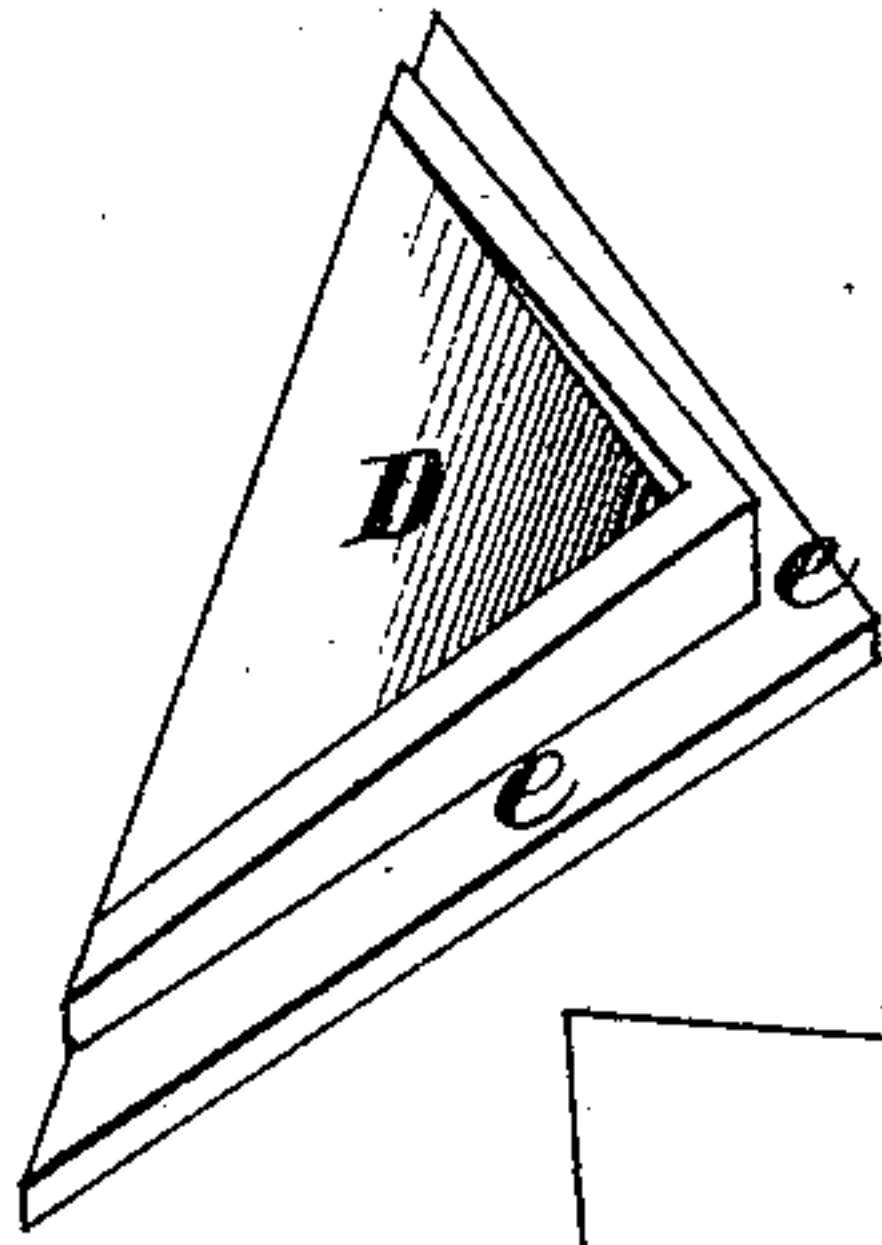
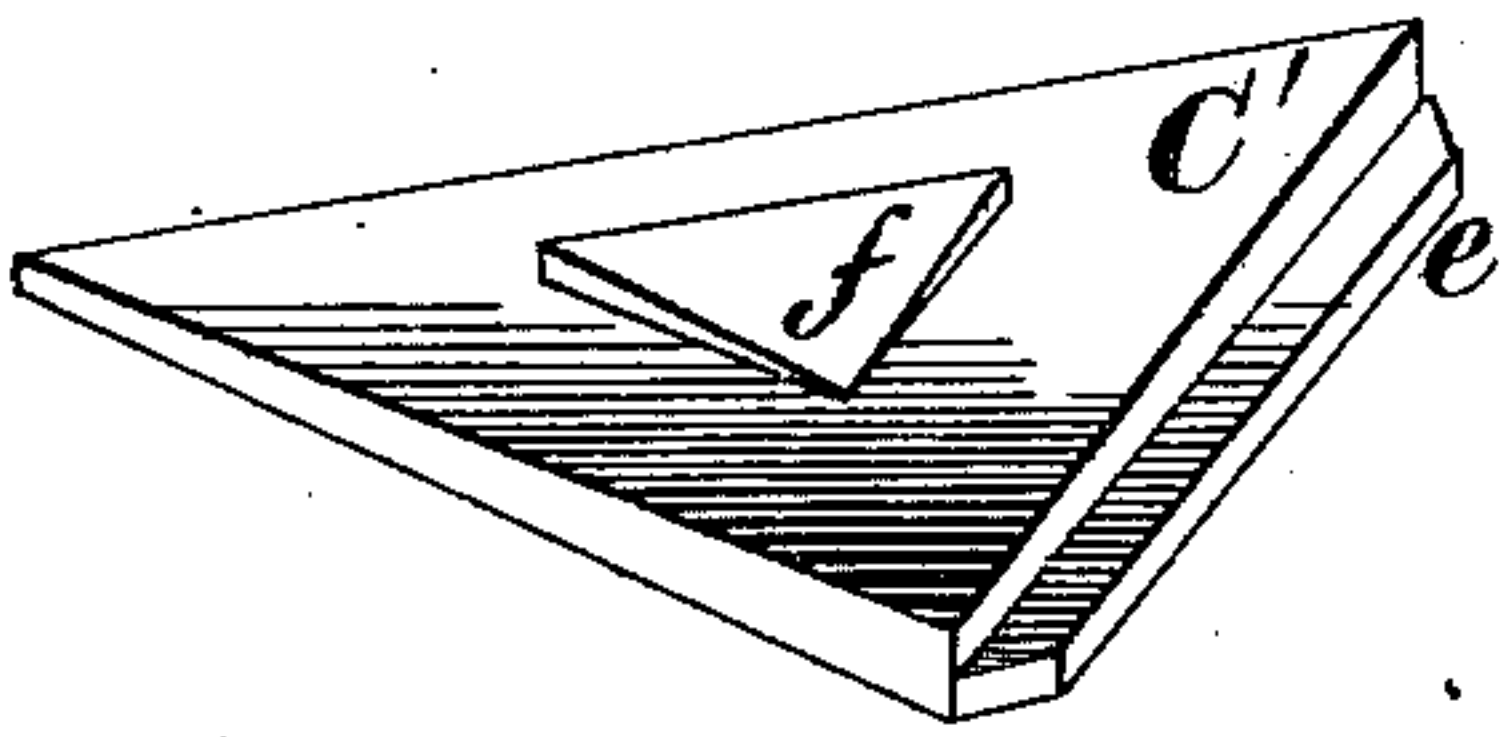
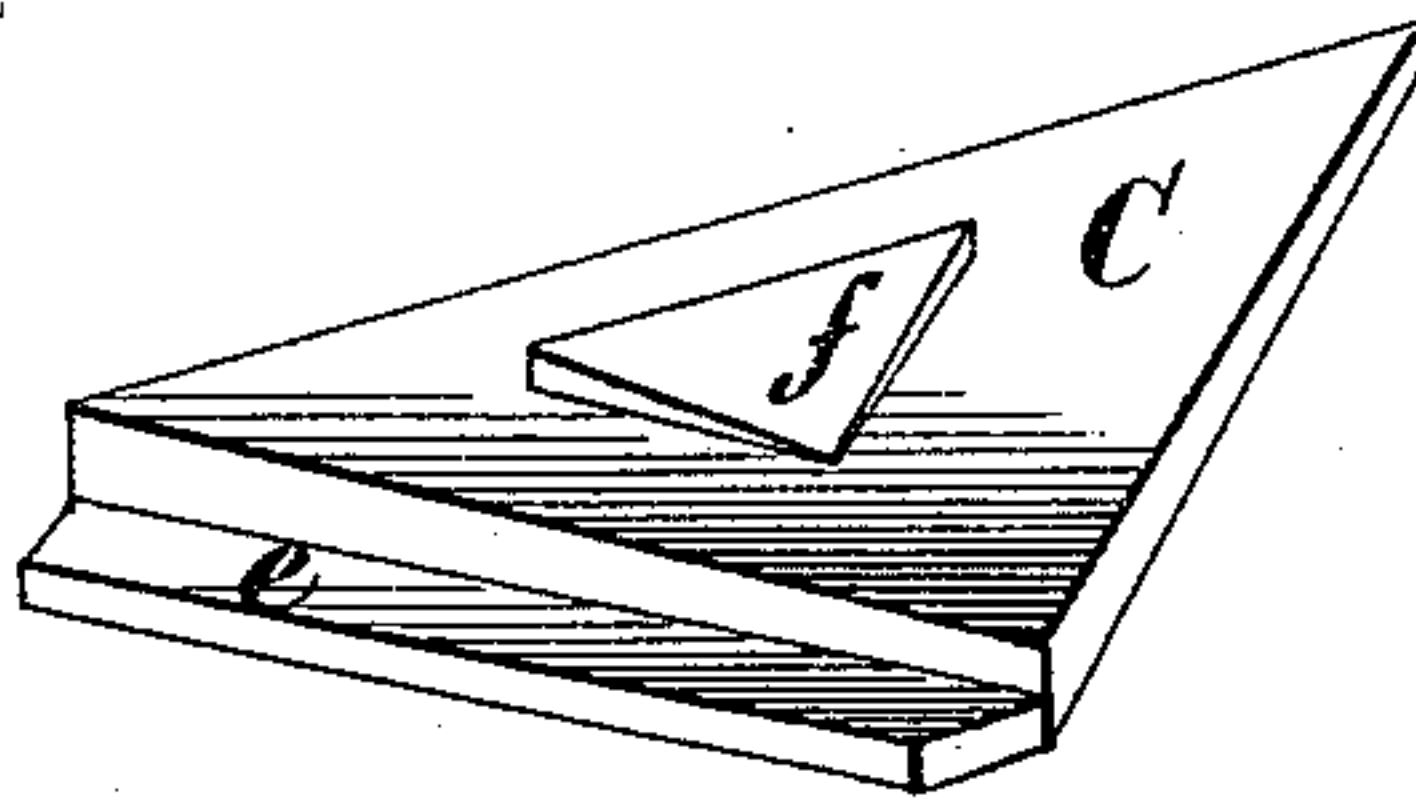
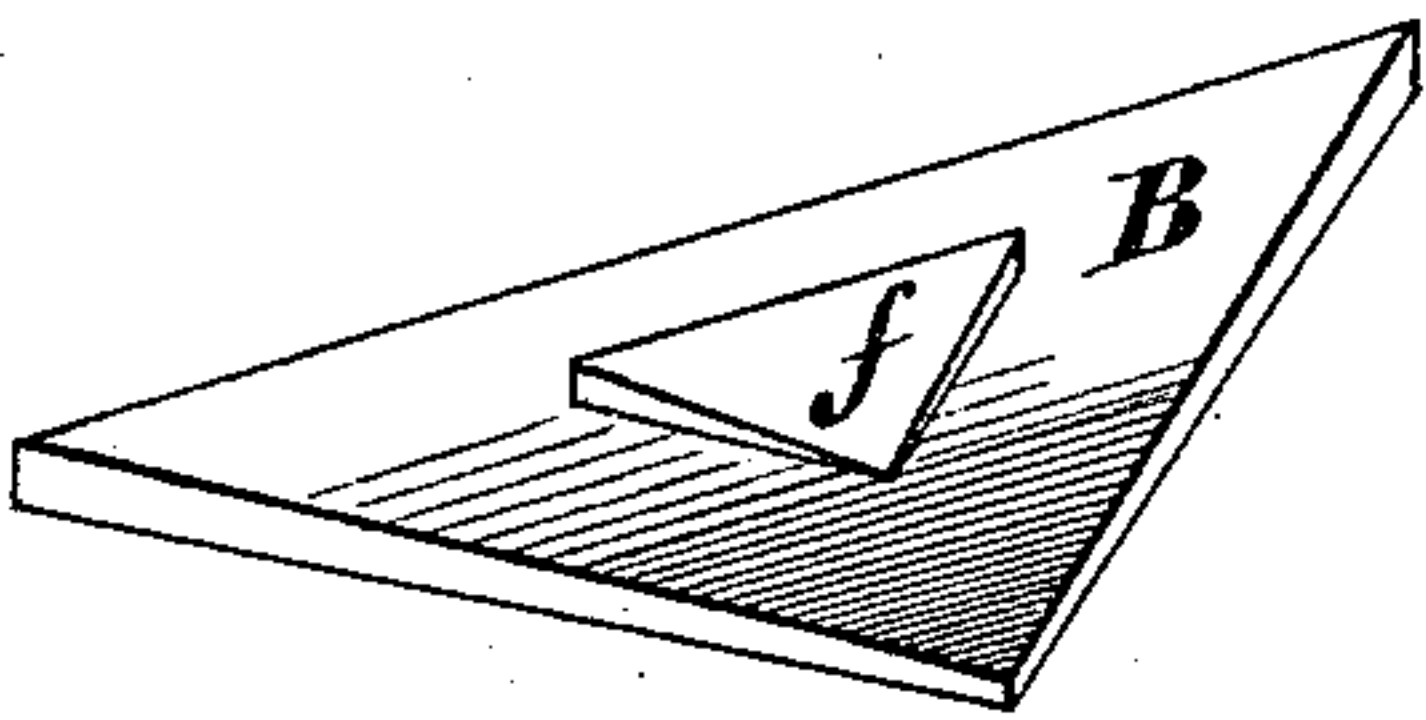
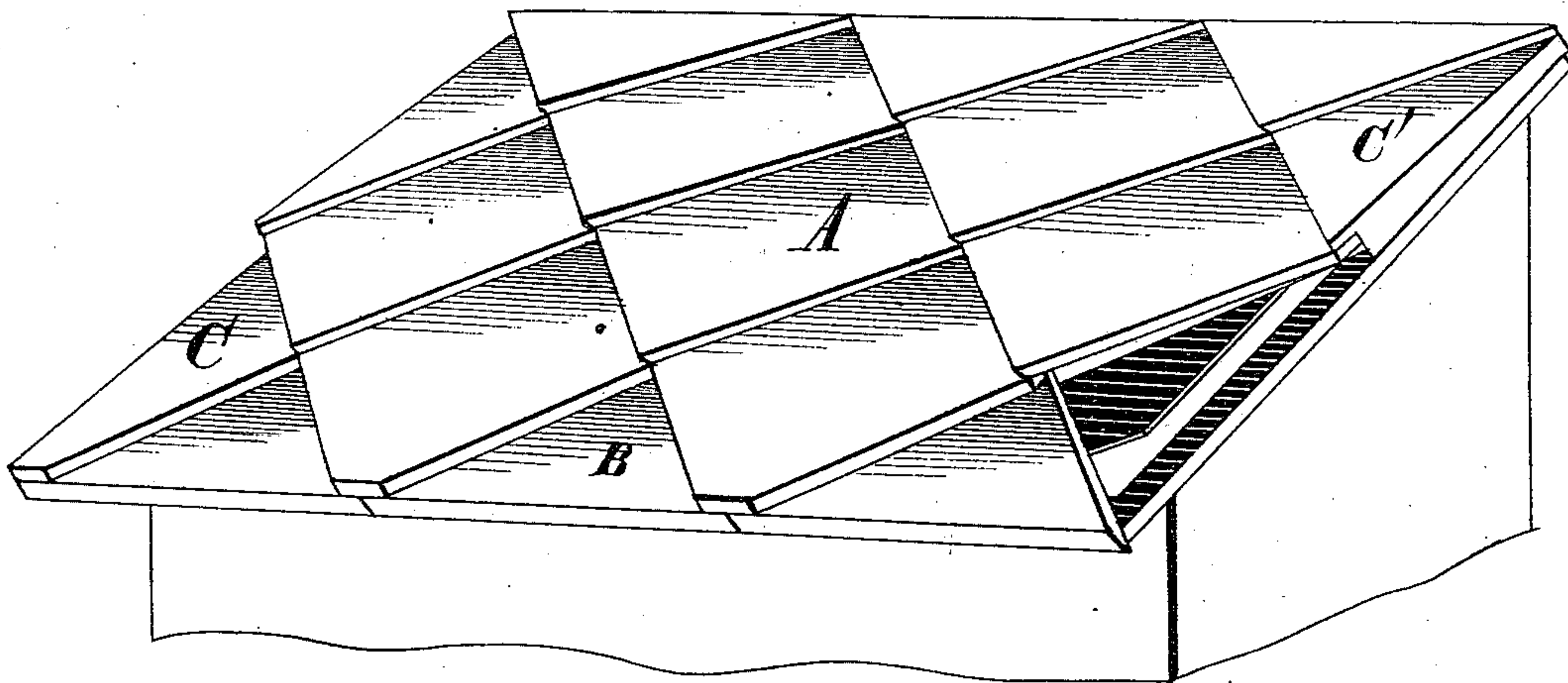


S. MILLS.
Roofing-Tiles.

No. 161,538.

Patented March 30, 1875.

Fig. 1.



Witnesses.

A. Ruppert.

H. E. Lanning

Saml. Mills
Inventor,

per Chas. J. E. B. his atty

UNITED STATES PATENT OFFICE.

SAMUEL MILLS, OF NEW CASTLE, OHIO.

IMPROVEMENT IN ROOFING-TILES.

Specification forming part of Letters Patent No. **161,538**, dated March 30, 1875; application filed February 8, 1875.

To all whom it may concern:

Be it known that I, SAMUEL MILLS, of New Castle, in the county of Coshocton and State of Ohio, have invented a certain Improvement in Roofing-Tiles, of which the following is a specification:

This invention relates to quadrilateral roofing-tiles of the kind intended to be laid lozenge-fashion on the sheathing of the roof, and which are suitably rabbeted to form flanges for overlapping the joints.

My improvement consists in making the major tiles of increasing thickness from the upper to the lower angle, and forming rabbets in the under surface along the lower sides only, the lower sides being also made somewhat longer than the upper rectangular sides, so that, by giving the non-rabbeted portion of the tile the form of a true square on the under side, the rabbets will gradually increase in width toward the lower angle, and thus give greater lap, and thereby provide for the making of good joints at the points where it is naturally the most difficult to make them tight. Grooves may also be formed in the top surface of the tile along the upper sides, to provide key-seats for the cement to be used for making the joints tight.

In the annexed drawings, Figure 1 is a perspective view of a roof provided with my improved tiles.

The other illustrations are perspective views of the different forms of tiles required for the construction of a complete roof, and will be designated hereinafter by letters of reference, a plan view of one of the major tiles being also shown.

The top surface *a* of the major tiles *A* is made flat, without any break, except narrow grooves *a'* along the upper sides *b b*, which meet at a right angle. The lower sides *c c*, being somewhat longer than the upper sides, meet at an acute angle, so that the surface of the tile below a straight line, uniting the side

angles, will be of somewhat greater area than the surface above such line. The angles between the sides *b* and *c* are cut off to form short straight edges *d d* at the points where the tiles in the same longitudinal row come in contact with one another, which will aid in giving solidity to the roof. Rabbets *e e* are formed in the bottom surface of the major tiles along the lower sides only, gradually increasing in width toward the lower angle, for the purpose already stated.

The main body of the major tiles is made of increasing thickness from the upper toward the lower angle, in such a way that at the upper angle, where they are not rabbeted, they will be of the same thickness about as at the lower angle, where they are rabbeted. These tiles are usually made solid on the under side, but they may be hollowed out, leaving a ridge only along the rabbets to save material.

The eaves-tiles *B* are of triangular form without rabbets, but provided with a boss, *f*, on the under side for holding them in position on the sheathing. The side tiles *C* and *C'* are also triangular, and bossed in like manner, besides having each a rabbet, *e*, along reverse edges. The crest-tiles *D*, likewise triangular, are rabbeted along both the rectangular sides or edges, as required.

What I claim as my invention, and desire to secure by Letters Patent, is—

A quadrilateral roofing-tile, *A*, increasing in thickness from the upper to the lower angle, and having rabbets *e* in the bottom surface along the two lower sides only, increasing in width toward their junction, substantially as and for the purpose specified.

In testimony whereof I have signed my name to the foregoing specification in the presence of two subscribing witnesses.

SAMUEL MILLS.

Witnesses:

NATHANIEL B. MILLS,
C. E. JOHNSON.