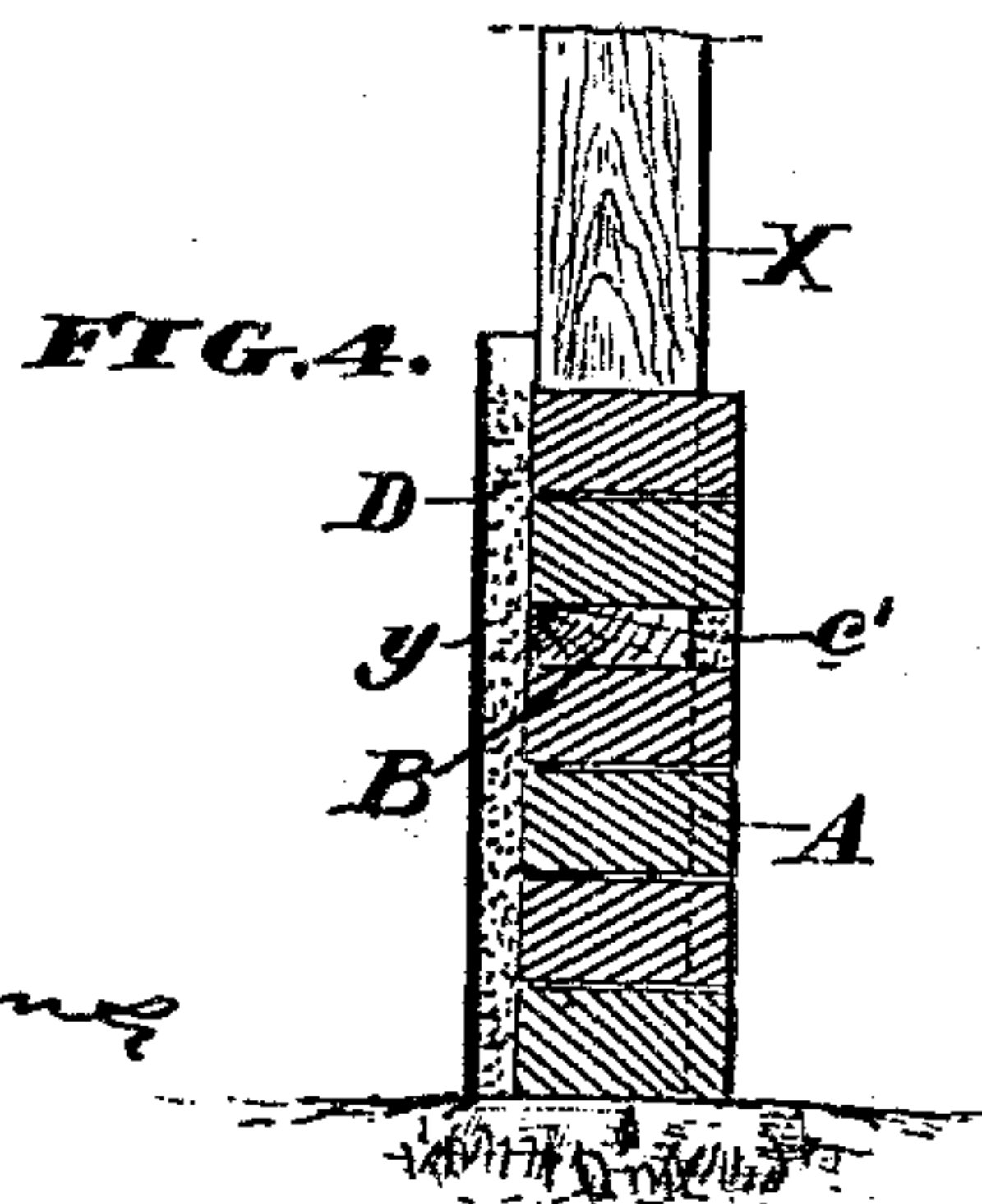
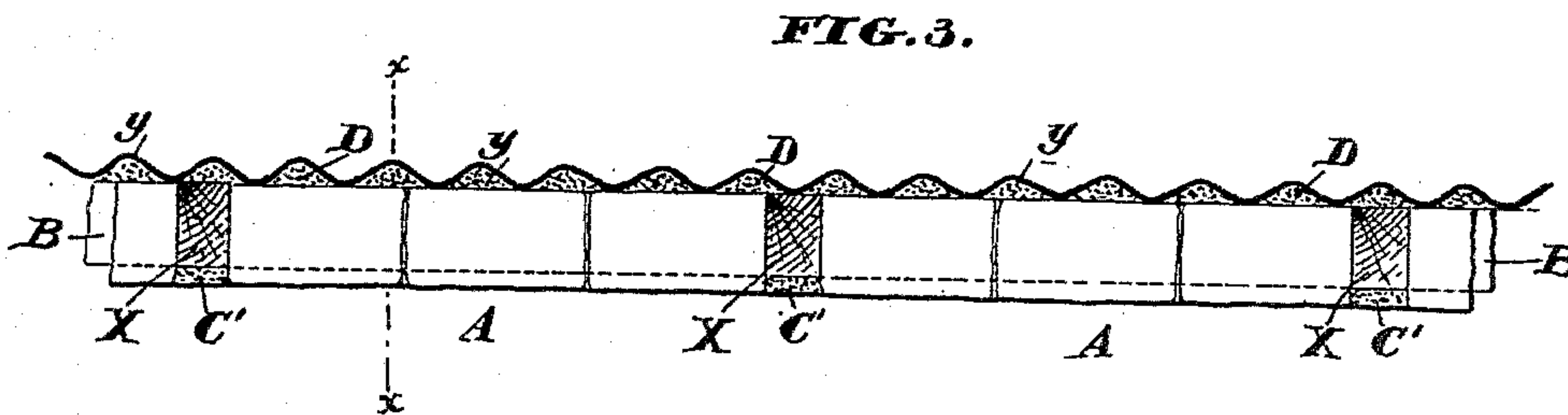
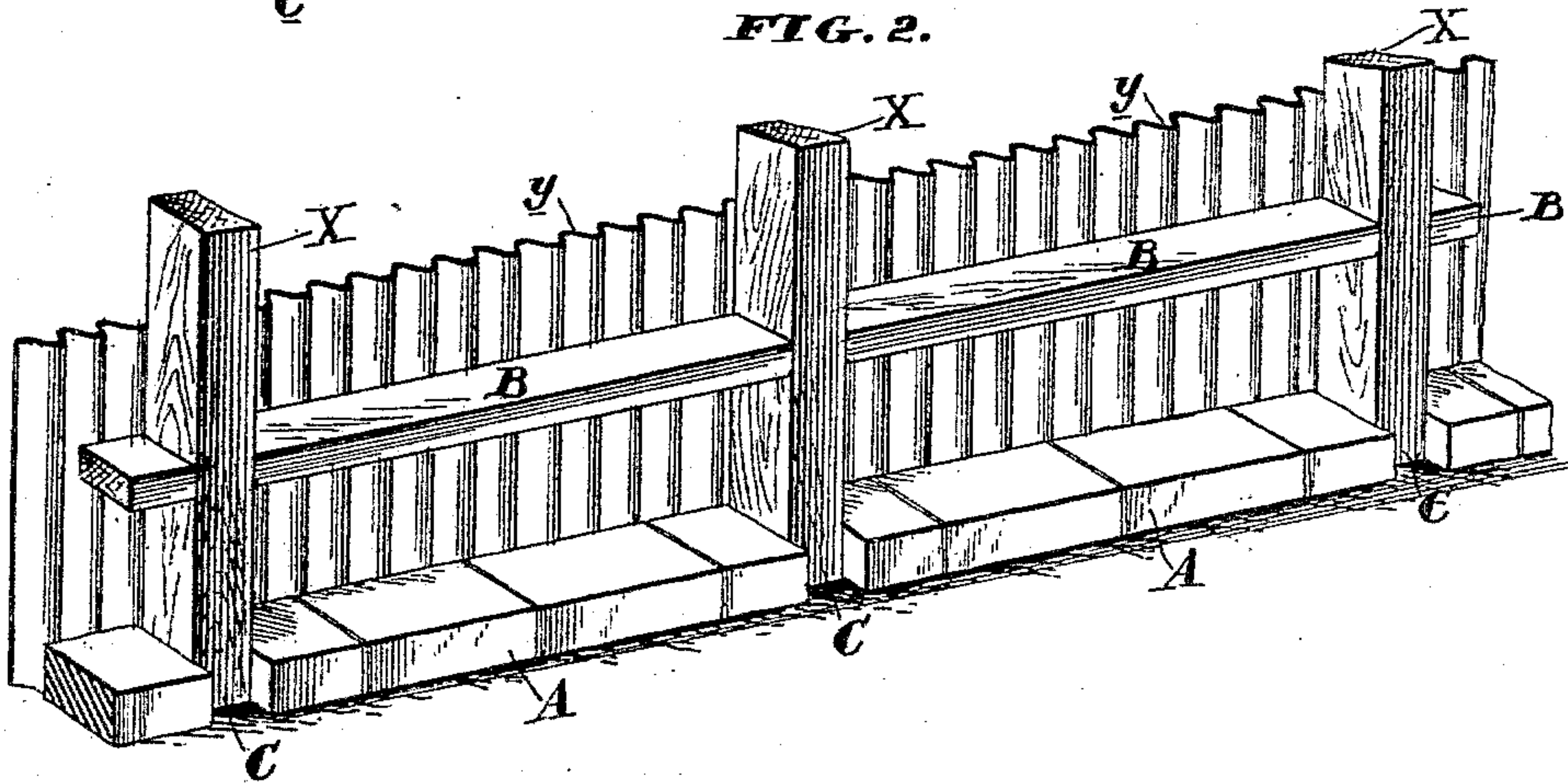
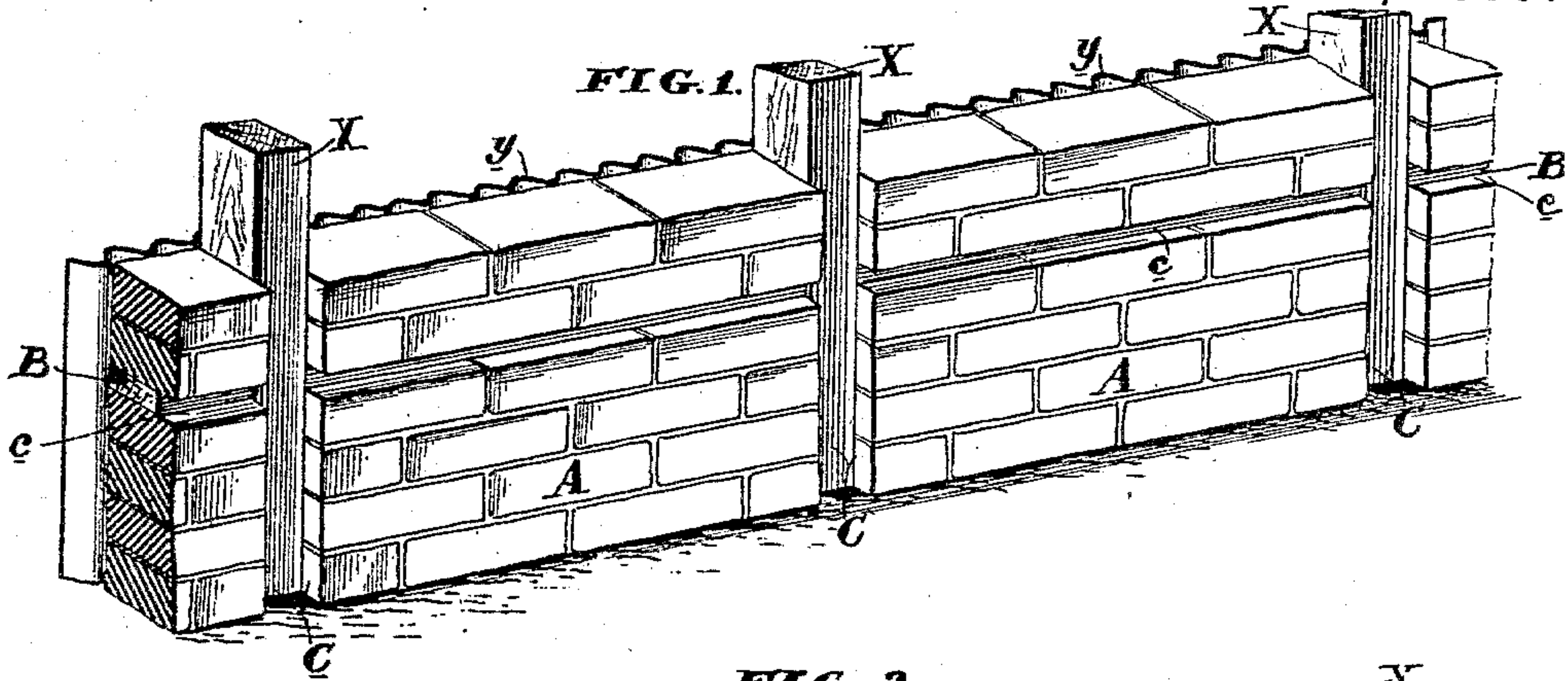


(No Model.)

G. H. BURT.
CONSTRUCTION OF FIRE PROOF BUILDINGS.

No. 411,781.

Patented Oct. 1, 1889.



WITNESSES:

David S. Williams
John T. Lewis

INVENTOR:

George Holmes Burt
by his atty
G. H. Burt

UNITED STATES PATENT OFFICE.

GEORGE HOLMES BURT, OF PHILADELPHIA, PENNSYLVANIA.

CONSTRUCTION OF FIRE-PROOF BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 411,781, dated October 1, 1889.

Application filed June 20, 1889. Serial No. 314,978. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HOLMES BURT, a citizen of the United States, and a resident of the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in the Construction of Fire-Proof Buildings, of which the following is a true and exact description, due reference being had to the drawings which accompany and form part of this specification, and in which similar letters denote similar parts.

My invention has for its object the construction of a cheap and durable building which shall have all the advantages, as far as being unaffected by the weather, and shall also have the further advantage that it shall be fire-proof or practically so.

In carrying out my invention I construct a building essentially in the following manner: A balloon-framing is first constructed, and to the exterior of this frame I secure a series of corrugated-iron plates, which form the face or outside covering for the building. Between the scantlings forming the balloon-frame of the building and within the outer iron face I construct a wall of brick or other material. This material may be clay or adobe or the ordinary burnt brick of the cheapest character, or I can use concrete or any other material which when laid up will form an inner wall. As this wall is constructed, I prefer to erect at different portions of its height stretchers, which are secured to the scantlings and rest upon the surface of the brick, thus forming a solid support for the brick and strengthening the structure, and also forming a surface against which the corrugated-iron plates or front portion can be more securely fastened than if it were fastened to the scantling alone. The wall is so erected that it shall project inward beyond the inward surface of the scantlings and stretchers, and these spaces at the point of the stretchers and scantlings are filled up with mortar or any other desired material which will harden. As the wall is laid up, if corrugated iron is used for the front surface of the building, I fill in the spaces formed by the corrugations in the iron with mortar, cement, concrete, or any other material which will harden. This prevents the transmission of any sound from the exterior of the building to the inte-

rior of the building, which might be carried if the iron were exposed directly to the bricks. By this construction I am enabled to form a building in which all the wood-work of the frame of the building shall be protected against the action of fire, and the main walls shall be formed of a fire-proof or practically fire-proof material. In the construction of the inner wall, as hereinbefore set out, the cheapest character of brick or other material may be used, and the wall may be readily laid by a common laborer, insomuch as the scantlings and front plates form an absolute line in the construction of the wall.

In the drawings, Figure 1 represents a perspective view of my improved wall looking from the interior toward the exterior, showing the scantlings and stretchers before the spaces formed by said scantlings and stretchers have been filled in. Fig. 2 is the same view with a portion of the wall removed. Fig. 3 is a plan view. Fig. 4 is a section on the line *x x*, Fig. 3.

X represents the scantlings.

y represents the corrugated metallic framing, which is secured to the scantlings.

A represents the brick or other material used for the interior of wall.

B represents the stretchers.

C represents the cavities formed in the wall by the scantling, and *c* the cavities formed in the wall by the stretchers.

C' represents the mortar or other material which is used to fill up the cavities formed by the scantling, and *c'* represents the mortar or other material which is used to fill up the spaces formed by the stretchers.

D represents the material which is filled in between the interior wall of brick or other material and the exterior wall of iron.

If desired, iron plates may be used instead of the sheet-iron; or other metal plates may be used in place of the corrugated iron, and any desired ornament may be placed upon the front of the iron plates forming the face or exterior of the building—such, for instance, as metallic shingles or other designs of that character.

Having now fully described my invention, what I claim, and desire to protect by Letters Patent, is—

1. In a fire-proof wall, in combination, scant-

lings, an exterior metallic surface secured to said scantlings, an inner wall of brick or other suitable material, said wall projecting beyond said scantlings, and mortar or other suitable material filled in the space in the wall formed by said scantlings.

2. In a fire-proof wall, in combination, scantlings, an exterior metallic surface secured to said scantlings, an inner wall of brick or other suitable materials, stretchers placed between said scantlings at intervals in said wall and to which the exterior metallic surface may be secured, the wall projecting beyond said scantlings and stretchers, and mortar or other suitable material filled in the space in the wall formed by said scantlings and stretchers.

3. In a fire-proof wall, in combination, an exterior corrugated metallic surface secured to said scantlings, an inner wall of brick or other suitable material, said wall projecting beyond said scantlings, and mortar or other suitable material interposed between the in-

ner wall and the corrugated metallic exterior surface, and mortar or other suitable material filled in the spaces in the interior wall formed by said scantlings.

4. In a fire-proof wall, in combination, scantlings, an exterior corrugated metallic surface secured to said scantlings, an inner wall of brick or other suitable material, stretchers placed between said scantlings at intervals in said wall and to which the exterior metallic surface may be secured, the wall projecting beyond said scantlings and stretchers, and mortar or other suitable material filled in between the interior wall and the corrugated metallic exterior surface and in the spaces in the interior wall formed by said scantlings.

In witness whereof I have hereunto set my hand this 15th day of June, 1889.

GEORGE HOLMES BURT.

Witnesses:

ABNER J. DAVIS,
JOHN GIBSON.