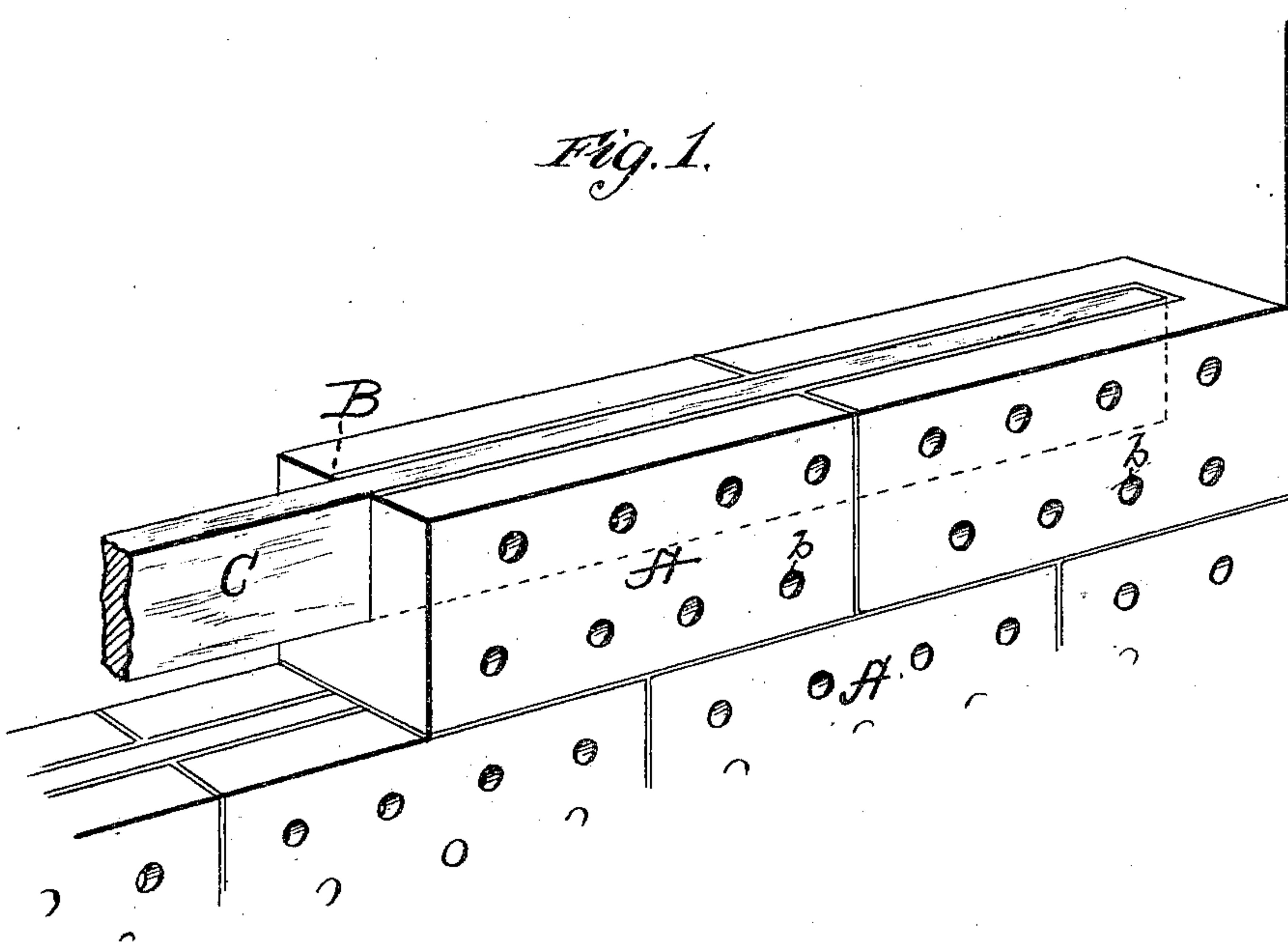
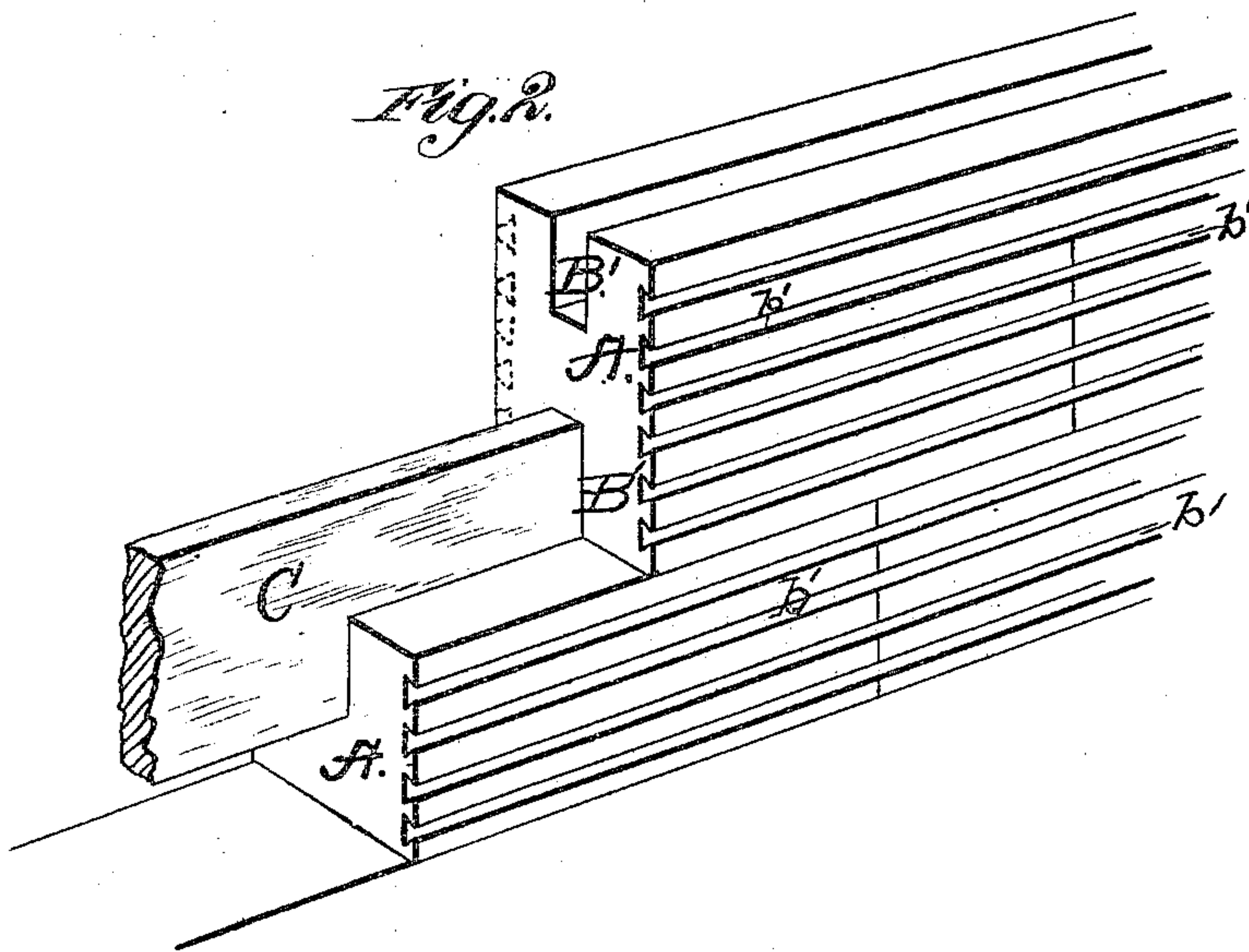


I. MARSH.  
Brick for Constructing Sidings, Partition Walls, &c.  
No. 221,968.      Patented Nov. 25, 1879.

*Fig. 1.*



*Fig. 2.*



WITNESSES

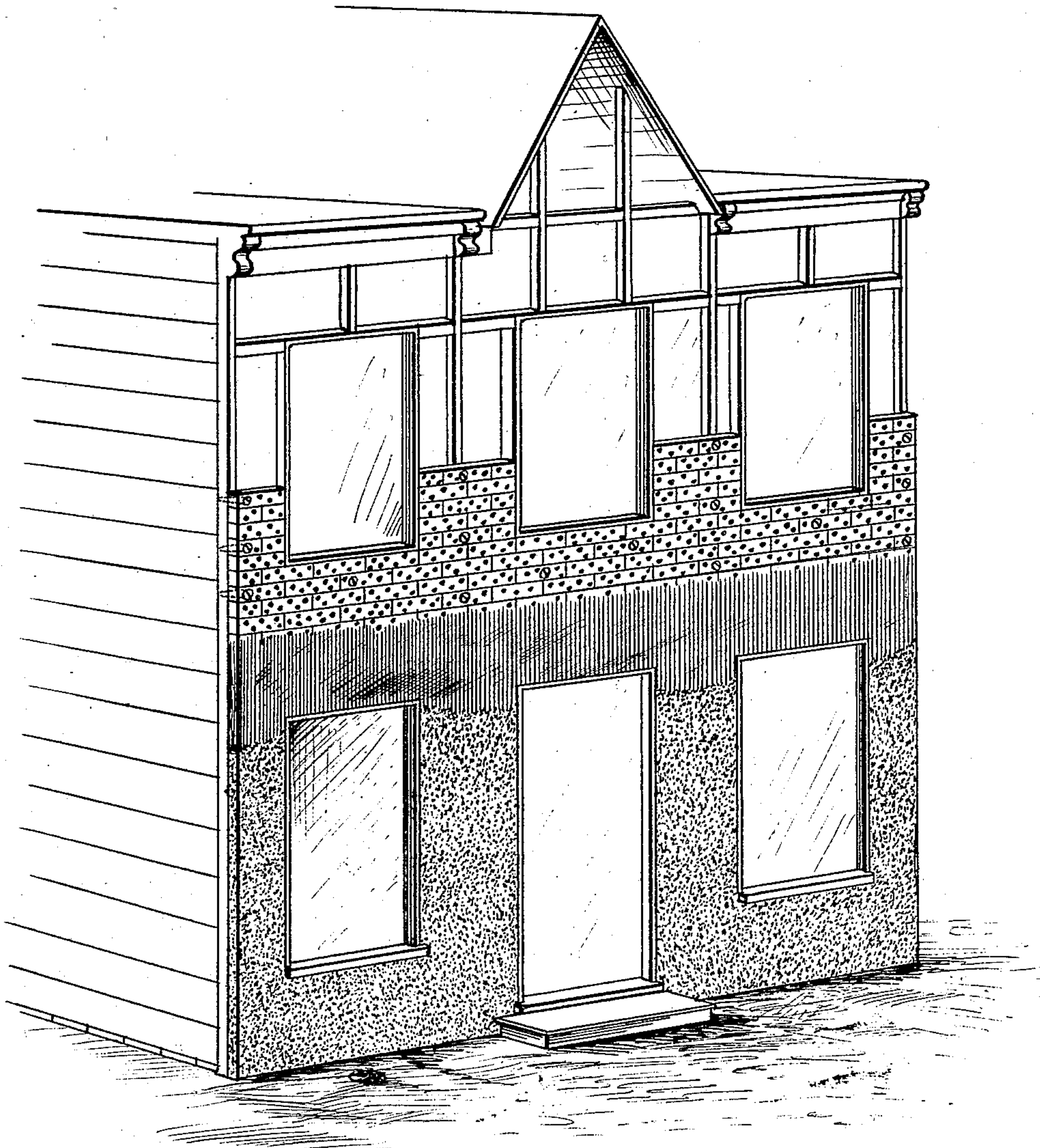
*Robert Everett*  
*J. Tyler Powell*

INVENTOR

*Isaac Marsh*  
*by Heyburn & Kane*  
ATTORNEYS.

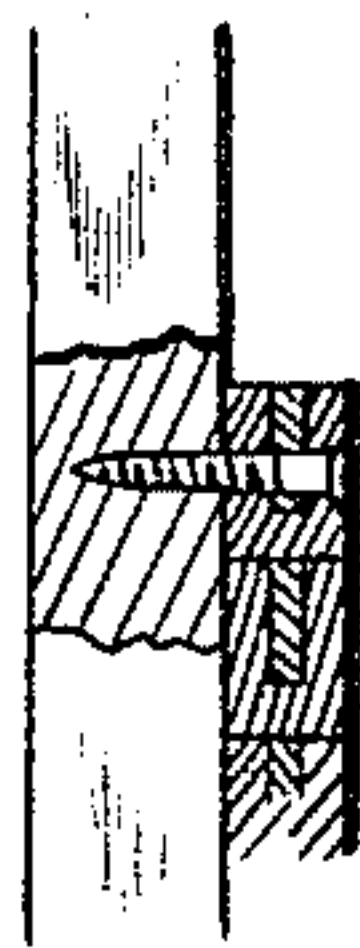
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*Fig. 3.*



*Fig. 4*

WITNESSES  
*Robert Everett*  
*J. Tyler Powell*



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# UNITED STATES PATENT OFFICE.

ISAAC MARSH, OF MILTON, PENNSYLVANIA.

IMPROVEMENT IN BRICKS FOR CONSTRUCTING SIDINGS, PARTITION-WALLS, &c.

Specification forming part of Letters Patent No. **221,968**, dated November 25, 1879; application filed October 7, 1879.

*To all whom it may concern:*

Be it known that I, ISAAC MARSH, of Milton, in the county of Northumberland and State of Pennsylvania, have invented a new and valuable Improvement in Bricks for Constructing Sidings, Partition-Walls, and similar purposes, and the method of connecting the bricks; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of the bricks, showing the longitudinal groove on one edge, with the tie-strip in position. Fig. 2 is a perspective view of the bricks, showing the longitudinal grooves in both edges, and the tie-strip in position, showing the method of connecting two layers. Fig. 3 is an elevation of a building, showing my method of attaching the bricks to a building with the facings. Fig. 4 is a detailed view.

The main object of this invention is to provide bricks of such construction that they can be tied in layers or rows by wooden strips and retain a plaster or its equivalent facing, and, when the bricks are used as siding for buildings and covered with plaster and pebble-wash, will withstand the action of the weather for a long period of time, and without the liability to become detached from the bricks.

The invention consists, first, in the brick having a central channel or groove on one edge extending lengthwise of the brick to receive a wooden tie or connecting-strip, and provided on one or both of the outer sides with a series of perforations, sunken indentations, or grooves; also, in a method of tying or connecting a layer or row of said bricks by means of strips fitting into the longitudinal edge grooves of the bricks, as will be hereinafter more fully set forth and pointed out in the claims.

In the annexed drawings, the letter A represents my improved brick, which, for the purposes of utilization, can be of any dimensions the purposes of the structure may demand. Usually, for partition-walls or for siding on outer walls, they are, preferably, made of smaller dimensions in width and thickness

than common bricks, and may be made of any desired length. These bricks may be grooved lengthwise on one edge, as shown at B in Fig. 1, or on both edges, as shown at B' in Fig. 2 of the drawings, except that the end bricks, base-line bricks, and capping-bricks, when they are used in upright or vertical position, have the groove extending only partly their length, the end being solid. The object of this or these grooves is to afford means to receive a strip of wood or other suitable material, forming a connecting or tie-strip, C. The outer faces or sides of the bricks are provided with a number of holes, *b*, made into the material, and of such depth and diameter as may be suitable for the security of the plaster to be put on as facing. Preferably, these holes incline downwardly to better secure the facing in position. In lieu of the holes dovetail grooves *b'*, as shown in Fig. 2, may be substituted to serve the same object. The grooves and side holes, or their equivalents, are formed in the bricks at the time of manufacture.

It will be observed, by reference to Fig. 1 of the drawings, that the bricks shown are provided with the groove on one edge only, to receive the connecting or tie-strip, in which case only one row of bricks is held in position. Subsequent or succeeding layers of this class of bricks are treated in the same way and held in position by the cohesive properties of plaster or cement, applied as usual in the course of building.

In Fig. 2 of the drawings the different rows or layers of bricks are connected together by the tie-strips passing into the grooves of the lower and upper layers, and so on in each succeeding layer of bricks until the whole forms a solid wall.

As to the siding of a frame building, the bricks hereinbefore described are placed upon a proper foundation extended in the direction desired, each brick being fixed against its fellow on the same line or column. At the proper time the connecting-strip is adjusted in its groove, cement or plaster being applied to hold it firmly in position. Layer upon layer, or column upon column, are thus carried up, screws or other fastening means, reaching into the studding of the frame, being used to secure the wall against the building, substantially as shown in Fig. 3 of the drawings.



Thus the process of structure is carried on until the wall is completed. After the completion of the wall the plaster or plastering is applied to the outer surface in the usual manner, care being taken to get the plastering well in the holes or dovetail grooves. After this the pebble-wash is put on, completing the facing.

If bricks of the class shown in Fig. 1 are used, the different layers or columns are held together by cement or plaster, in the usual way; but the wall is prevented from displacement by means of the tie-strips in each layer or column, in connection with the cement or plaster used.

If it is desirable to use the bricks for a facing of the inside of the outer frame of the building, the same process of structure hereinbefore described will apply, the plastering being put on as usual in inside walls.

For partition-walls in buildings the bricks, perforated or grooved on both sides, are laid on the sill or other suitable support, extending in the direction desired to form the bottom layer or row, the upper edges presenting the grooves into which the connecting-strip of wood or other suitable material is placed to securely fasten the layer. Layer upon layer are carried up in this manner until the wall is completed, the whole being securely held in position by means of the connecting-strips and cement or plaster.

If it be desirable to dispense with the plastering the bricks may be made with smooth surfaces, so as to receive such finish as may be selected.

These connected bricks may be used to advantage in building walls where strength is desired, and where the usual weight is necessary to be dispensed with, and over spaces or places where no foundation is laid.

When the walls, &c., are formed from bricks grooved or channeled on both edges, the connecting or tie strips fitting into the adjacent rows or layers, cement or plaster is not absolutely necessary. These bricks may be laid in layers running horizontally, or in columns running vertically.

The advantages of a wall of this construction are, first, that it occupies less space than ordinary walls; second, its durability and great strength; third, safety against fire and rats.

Broadly considered, a brick with longitudinal edge grooves, also a brick with one face provided with downward and inwardly inclined indentations, have heretofore been constructed.

I am also aware that a metal-clad ceiling, consisting of sections composed of a core of wood covered with sheet metal, said sections being grooved on the longitudinal edges to receive connecting-strips, has been used; but

What I claim as my invention is—

1. A brick for a partition-wall or a siding-wall, having a longitudinal groove on one or both of its edges and a series of holes, or their equivalents, on one or both of its faces, substantially as described.

2. The combination of a plurality of bricks for a partition-wall or a siding-wall, having a continuous groove on one edge and a series of holes, or their described equivalents, on one or both of its faces, a connecting or tie strip secured within the groove, substantially as described.

3. The method hereinbefore described of connecting a layer of bricks having longitudinal edge grooves, which consists in tying the layer of bricks by means of a strip fitting into the longitudinal grooves of the bricks, and securing said strip in position by plaster or its equivalent, substantially as described.

4. In the method of tying layers or rows of bricks by strips, securing the strips in position to the bricks by plaster or its equivalent, substantially as described.

In testimony whereof I have hereunto subscribed my name.

ISAAC MARSH.

Witnesses:

JOS. AUGSTADT,  
H. E. AUGSTADT.