

No. 770,616.

PATENTED SEPT. 20, 1904.

G. B. WAITE.
WALL STRUCTURE.

APPLICATION FILED MAY 12, 1904.

NO MODEL.

Fig. 1.

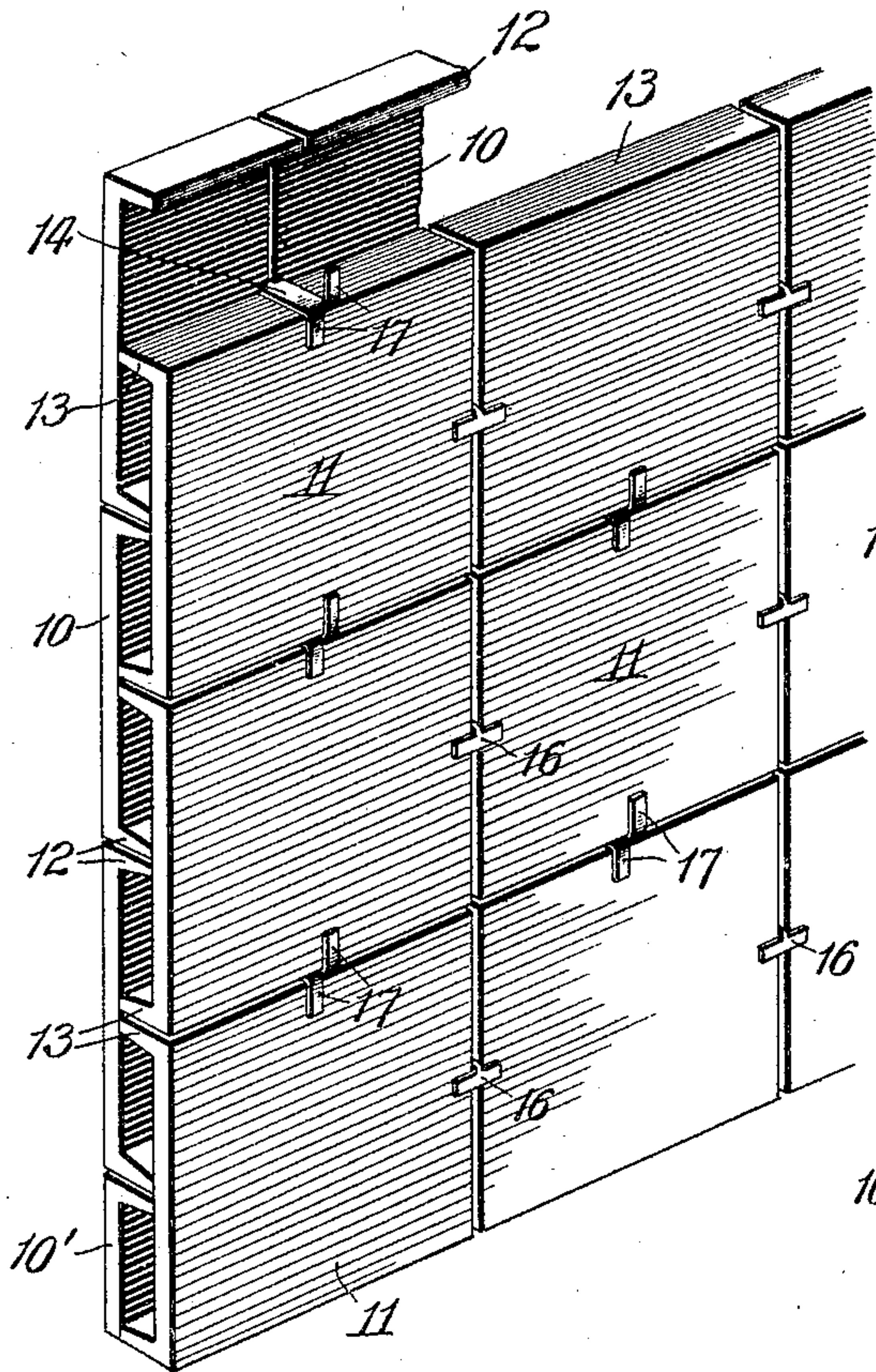


Fig. 2.

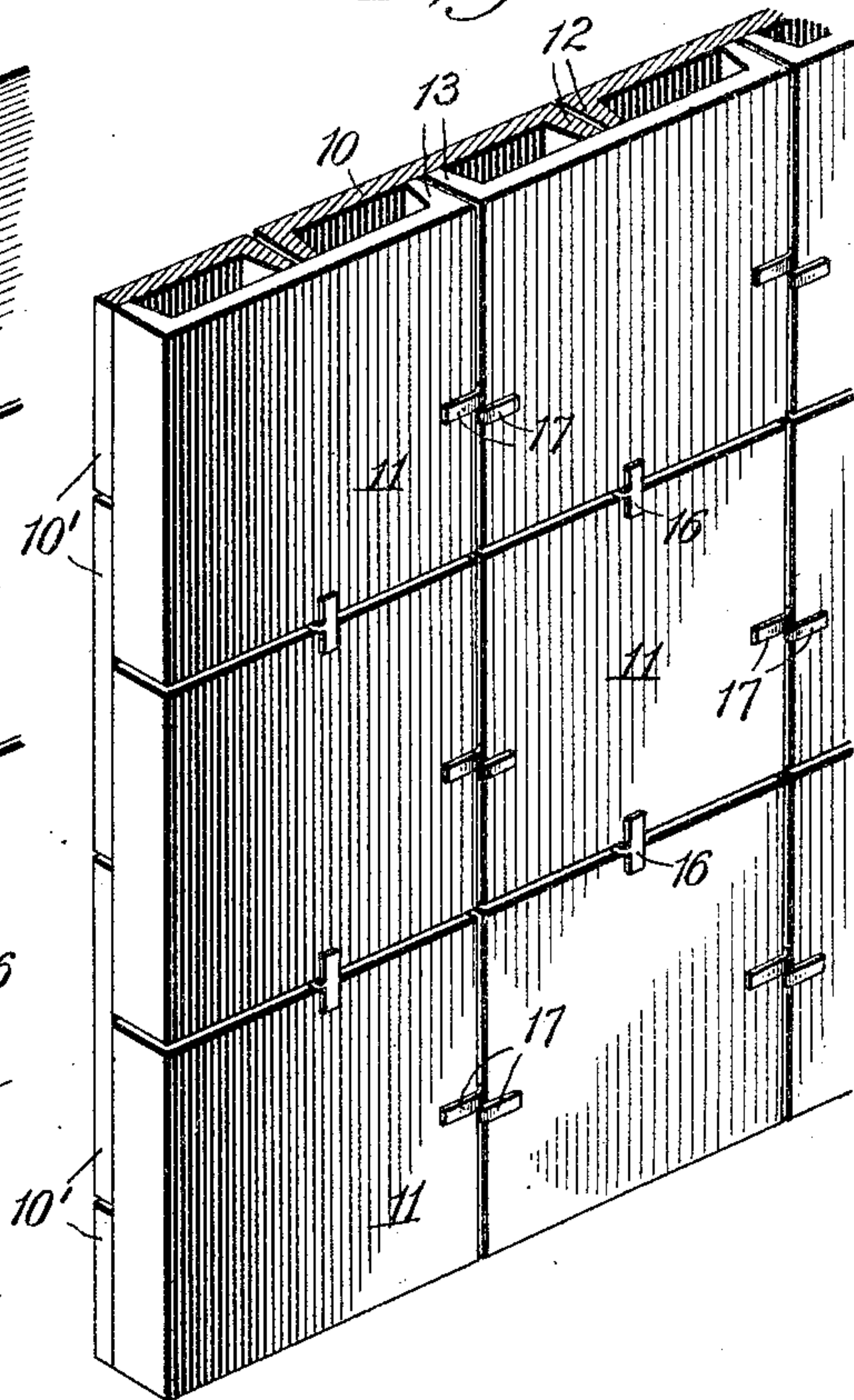


Fig. 3.

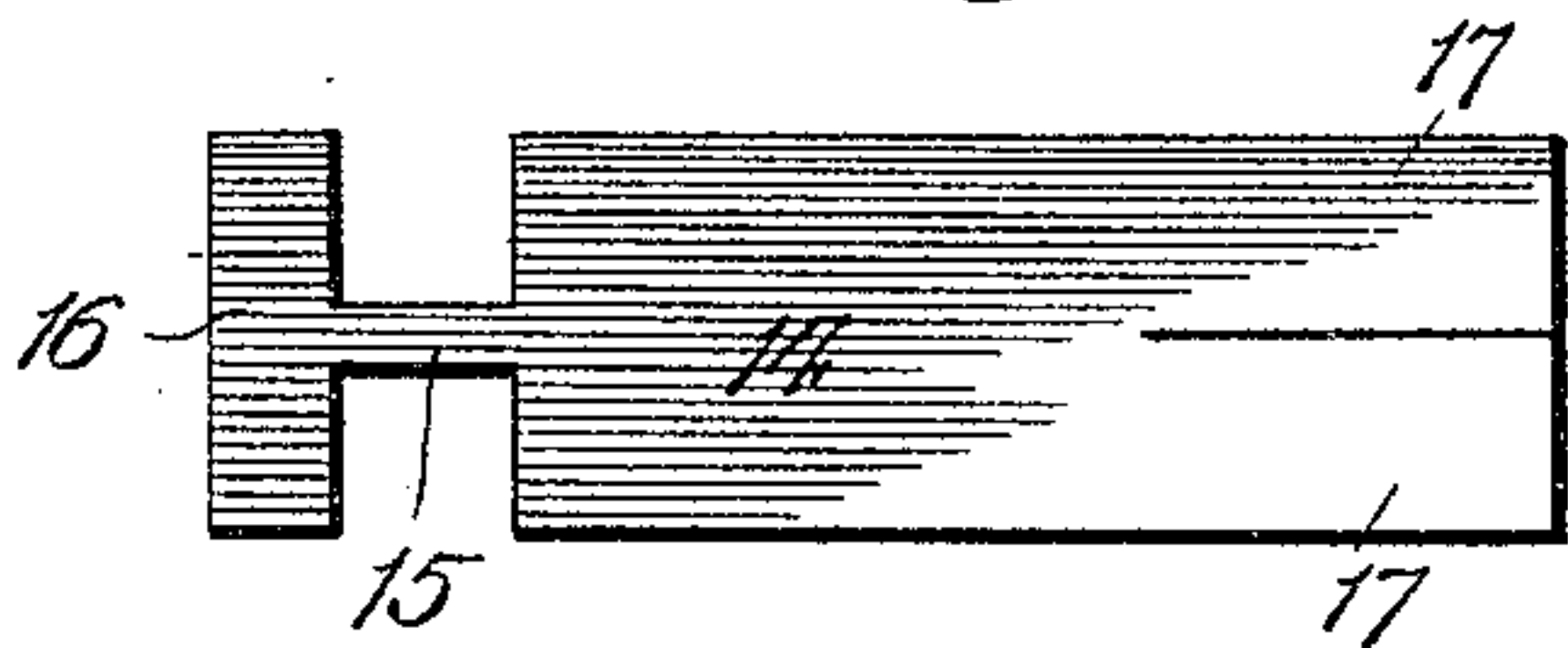


Fig. 4.

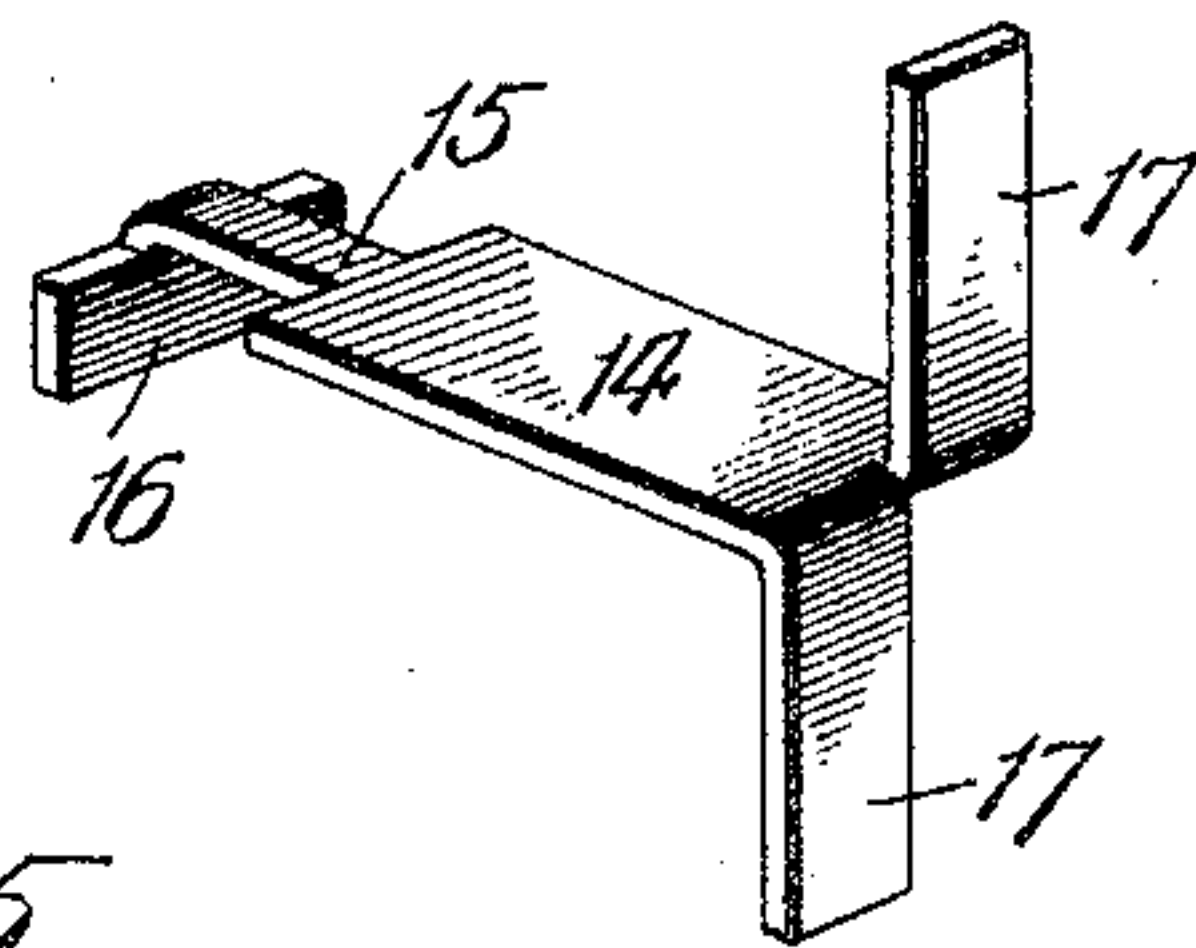
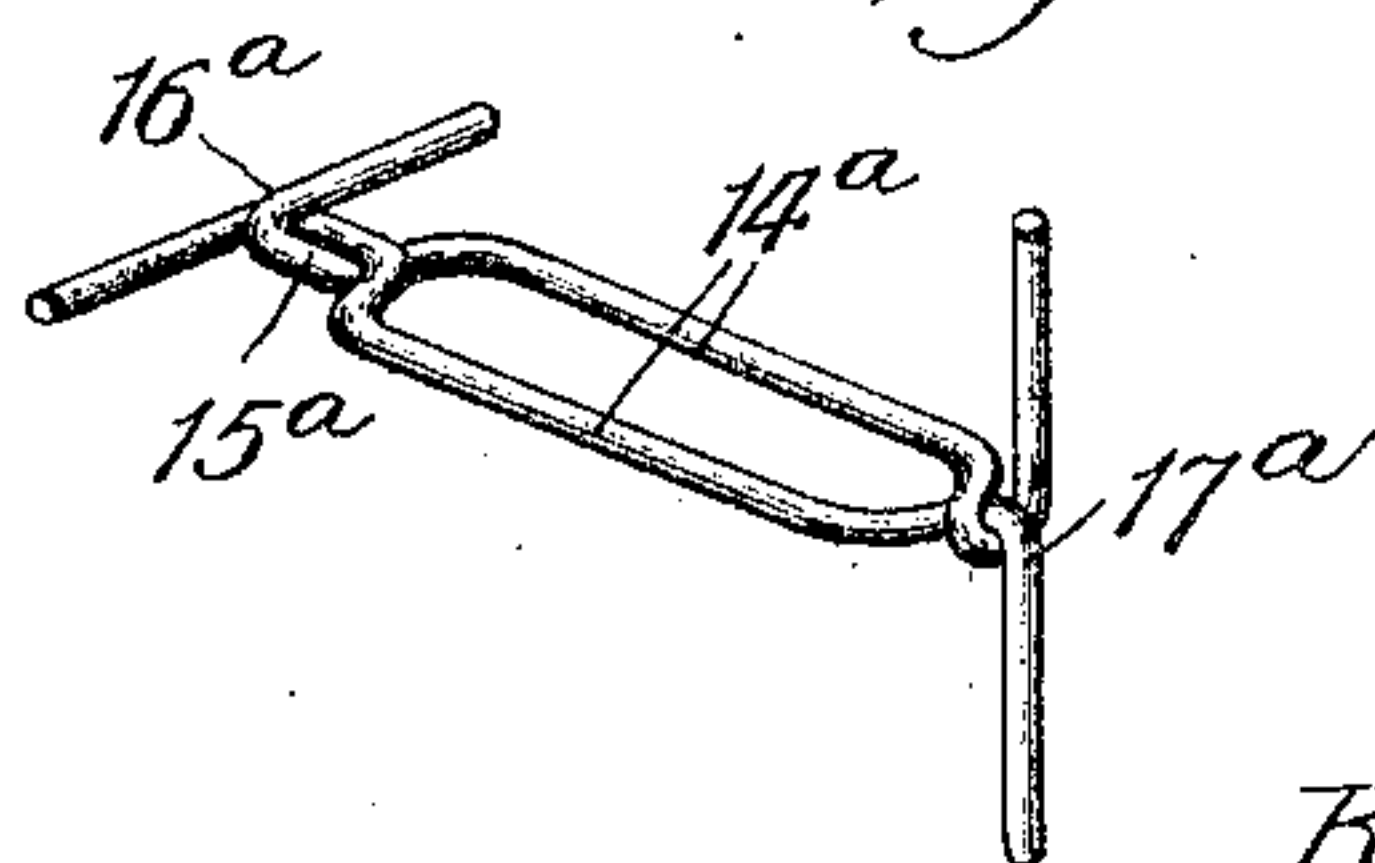


Fig. 5.



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UNITED STATES PATENT OFFICE.

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WALL STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 770,616, dated September 20, 1904.

Application filed May 12, 1904. Serial No. 207,645. (No model.)

To all whom it may concern:

Be it known that I, GUY B. WAITE, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Wall Structures, of which the following is a specification.

My invention relates to wall constructions, and has reference more particularly to a new and improved wall construction of that type or class which employs two series of superposed building-blocks so disposed that the vertical and horizontal joints on one side "break joints" with the corresponding joints on the other side.

The object of my invention is to provide an improved wall of this class capable of economical and rapid construction which shall be securely braced and bonded transversely and which shall be capable of receiving a plaster covering on one or both sides without the necessity of applying thereto lathing or other plaster-anchoring means.

To this end my invention resides in a novel wall construction comprising, essentially, two series of superposed rectangular blocks arranged side by side with the joints on one side disposed in different transverse planes from the joints on the other side and transversely bonded by tie members passed through the wall at the points where the horizontal and vertical joints on the opposite sides respectively intersect.

The principal, although not exclusive, intended application of my invention is in partition-wall constructions, and in the accompanying drawings I have illustrated such an embodiment wherein channel-shaped blocks having their channeled sides facing each other and disposed inwardly of the wall are employed for the sake of greater lightness, strength, economy, and sound-proof qualities.

In the drawings, Figure 1 is a perspective view of a portion of a partition or other wall embodying my invention wherein the flanges of the channel-blocks are disposed horizontally. Fig. 2 is a similar view wherein the blocks are so disposed as to make their flanges lie vertically of the wall. Fig. 3 is a plan view of a blank from which is formed my

preferred construction of tie-clip for bonding the wall transversely. Fig. 4 is a perspective view of the finished clip detached, and Fig. 5 is a similar view of a modified form of clip made from bent wire.

In the drawings, 10 and 11 designate two series of rectangular channel-shaped building-blocks composing, respectively, the two sides or halves of a partition or other wall structure. The blocks of one series are identical in construction with the blocks of the other series, the blocks 10 having flanges 12 on their opposite parallel edges and the blocks 11 having similar flanges 13 similarly located. In the wall shown in Fig. 1 the blocks 10 and 11 of the two series are arranged with their channeled sides facing inwardly and the flanges of each series of blocks disposed horizontally and abutting against the solid intermediate sides of the blocks of the other series, and thus breaking joints horizontally, for which purpose the series 10 begin with a series of part-blocks 10' at the bottom. The blocks forming the two sides of the wall are also relatively offset horizontally, so as to break joints vertically, as shown. In order to tie together the two sides of the wall thus constructed, I employ a series of clips or like tie members which are passed through the wall at the points where the vertical and horizontal joints on each side intersect the horizontal and vertical joints, respectively, on the other. These clips may in the broader aspect of my invention be of any form, material, or construction which adapts them to serve as transverse tie members; but in the drawings I have shown two forms both well adapted to perform this office. Figs. 3 and 4 show the preferred form of clip, Fig. 3 showing a blank longitudinally split and transversely notched from thin plate or sheet metal and Fig. 4 showing the clip bent up into finished form. This clip has an intermediate flat body portion 14, a neck 15, a transversely-extended head 16 at the end of said neck, and oppositely-extended right-angle projections 17 together forming a retaining-head at the other end of the clip, the parts being all formed from a flat blank by notching, splitting, and bending the same in a manner obvious from the illustration in

Figs. 3 and 4. When the clip is inserted in the wall, the body 14 lies between adjacent flanges of the blocks, the neck 15 lies between adjacent end edges of the blocks, the head 16 lies across the marginal portions of the outer faces of the blocks which form the vertical joints, Fig. 1, and the head 17 engages the corresponding portions of the blocks forming the horizontal joints, Fig. 1.

Fig. 2 shows a wall constructed of the same blocks united by the same tie members and in the same way as Fig. 1 except that the blocks are arranged with their channels and flanges vertical instead of horizontal. Both this arrangement and that of Fig. 1 produce walls having a desirable combination of lightness, rigidity, stability, and sound and fire proof qualities. The flanges afford a comparatively broad base and engaging, as they do, the intermediate solid portions of the blocks of the opposite side of the wall resist any tendency toward relative movement or displacement of the individual blocks.

Fig. 5 shows a tie member or clip made from a couple of wires suitably interlinked and bent to form a flat body 14^a, a narrow neck 15^a, and heads 16^a and 17^a, disposed at right angles to each other and engaging the blocks of the wall in the same manner as the flat metal clip already described.

Obviously the particular form and construction of clip employed is immaterial in the general combination of parts making up the wall structure, it being essential only that the clip shall have heads engaging the opposite outer sides of the wall-blocks on both sides of the joints and a connecting body or stem.

The described construction and manner of assembling and uniting the blocks leaves narrow openings at the joints in which a surface covering of plaster can anchor itself, or in case the partition is not to be plastered these joints can be filled or "pointed" after erection.

In the wall as herein shown the vertical and horizontal joints on one side are disposed centrally between and alternating with the corresponding joints on the other side; but this particular arrangement while preferred is obviously not of the essence of the invention and may be varied, so long as said joints are disposed in different transverse planes, so that the joints of one side are held by the clips against the solid part of the opposite blocks. The joints may also lie otherwise than horizontally and vertically, according to the form or configuration of the blocks employed; but the rectangular blocks are preferred. It is also obvious that the partition may be constructed in the same manner with plain solid or plain hollow blocks, the channel-blocks being preferable on account of their lightness.

I claim—

1. A wall structure comprising two series of building-blocks laid up side by side and so disposed as to break joints both vertically and

horizontally, and tie-clips passed through the points where the joints on one side intersect the joints on the other, substantially as described.

2. A wall structure comprising two series of building-blocks laid up side by side and so disposed as to break joints both vertically and horizontally, and headed clips passed through the points where the joints on one side intersect the joints on the other, the heads of said clips engaging the outer faces of the blocks on either side of the joints, substantially as described.

3. A wall structure comprising two series of channel-blocks laid up side by side with their channel sides inwardly of the wall and with the joints on one side opposite the solid intermediate parts of the blocks on the other side, and tie-clips passed through the intersections of the joints on the opposite sides of the wall, substantially as described.

4. A wall structure comprising two series of channel-blocks having parallel marginal flanges laid up side by side with their channel sides inwardly of the wall and with the adjacent flanges of adjacent blocks disposed opposite and in contact with the solid intermediate portions of opposite blocks, and tie-clips passed through the points where the joints on one side intersect the joints on the other, substantially as described.

5. A wall structure comprising two series of rectangular channel-blocks having parallel marginal flanges laid up side by side with their channel sides inwardly of the wall and with the adjacent flanges of adjacent blocks disposed opposite and abutting against the solid intermediate portions of opposite blocks, and headed clips passed through the points where the joints on one side intersect the joints on the other, the heads of said clips extending transversely of the joints engaged thereby on the outer sides of the blocks, substantially as described.

6. A wall structure comprising two series of rectangular channel-blocks having parallel marginal flanges laid up side by side with their channel sides inwardly of the wall and with the adjacent flanges of adjacent blocks disposed opposite and abutting against the solid intermediate portions of opposite blocks, and clips inserted through intersecting joints of the two sides of the wall and bonding the latter together, each of said clips comprising a relatively thin wide body portion disposed between adjacent flanges of the blocks, a narrow neck disposed between adjacent end edges of the blocks, and heads overlying the margins of the outer sides of the blocks on either side of the joints, substantially as described.

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