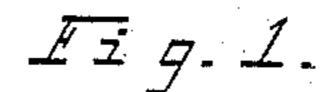
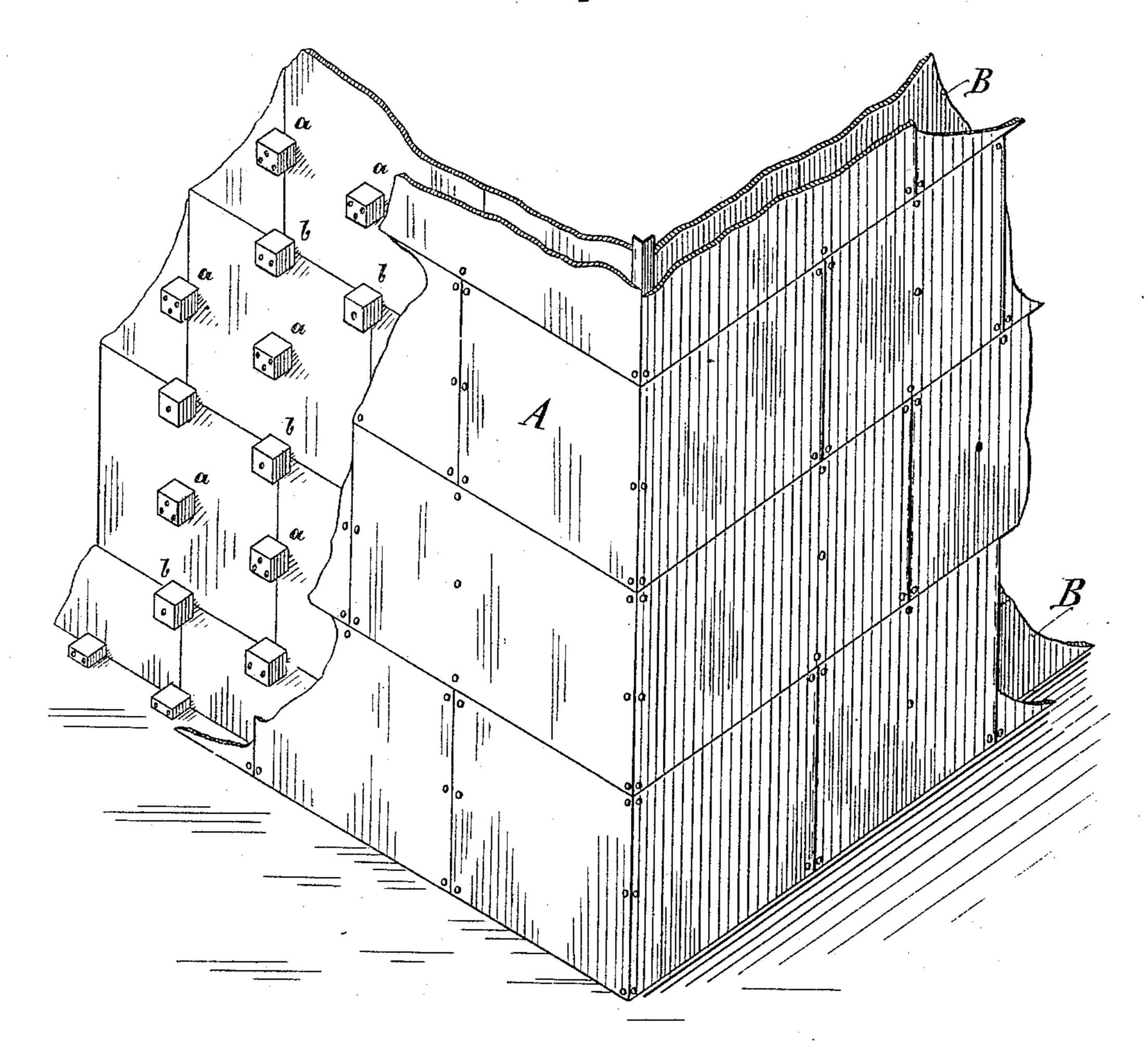
## M. HELLINGER. STRUCTURE OF BUILDINGS.

No. 442,375.

Patented Dec. 9, 1890.





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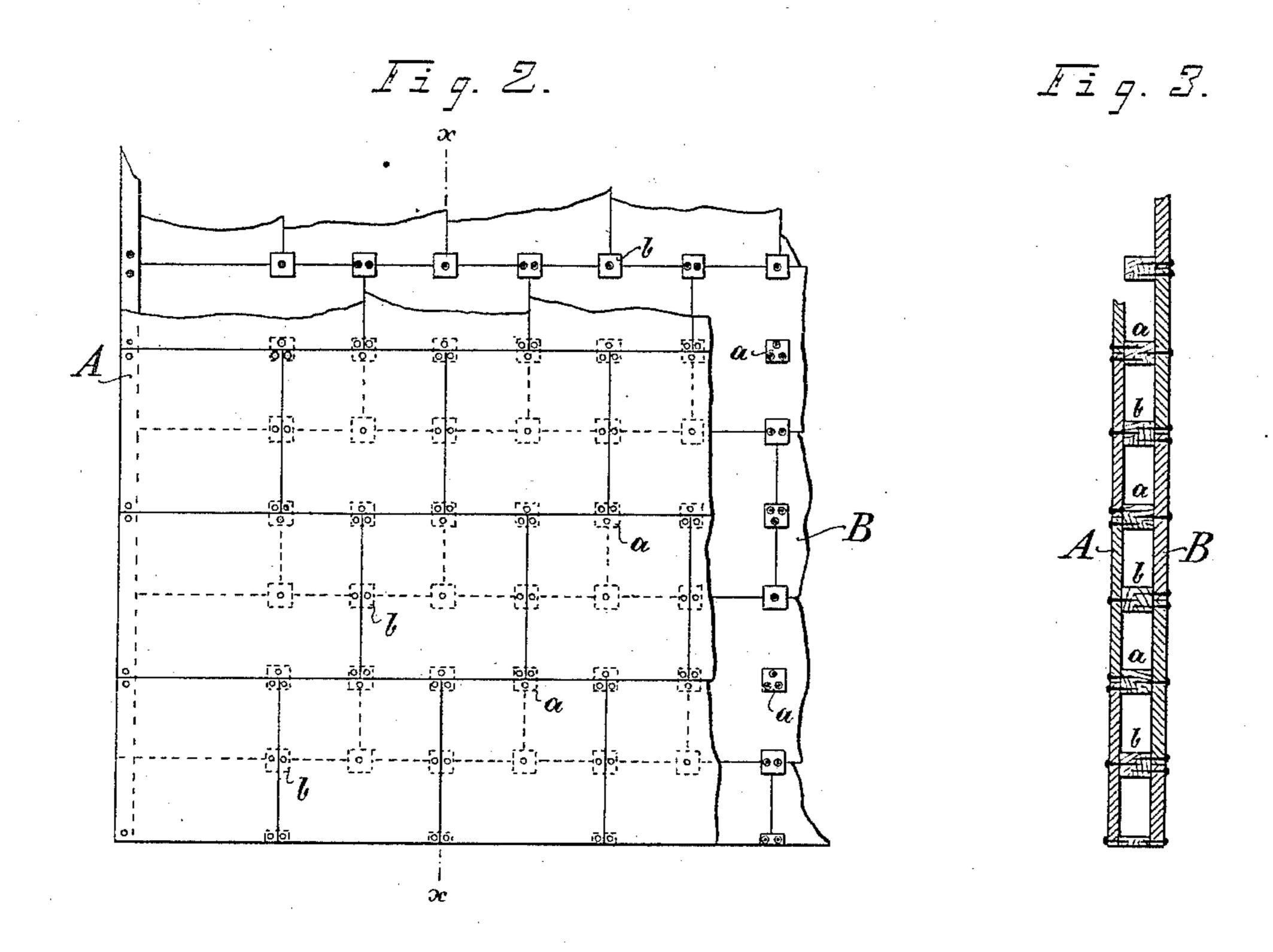
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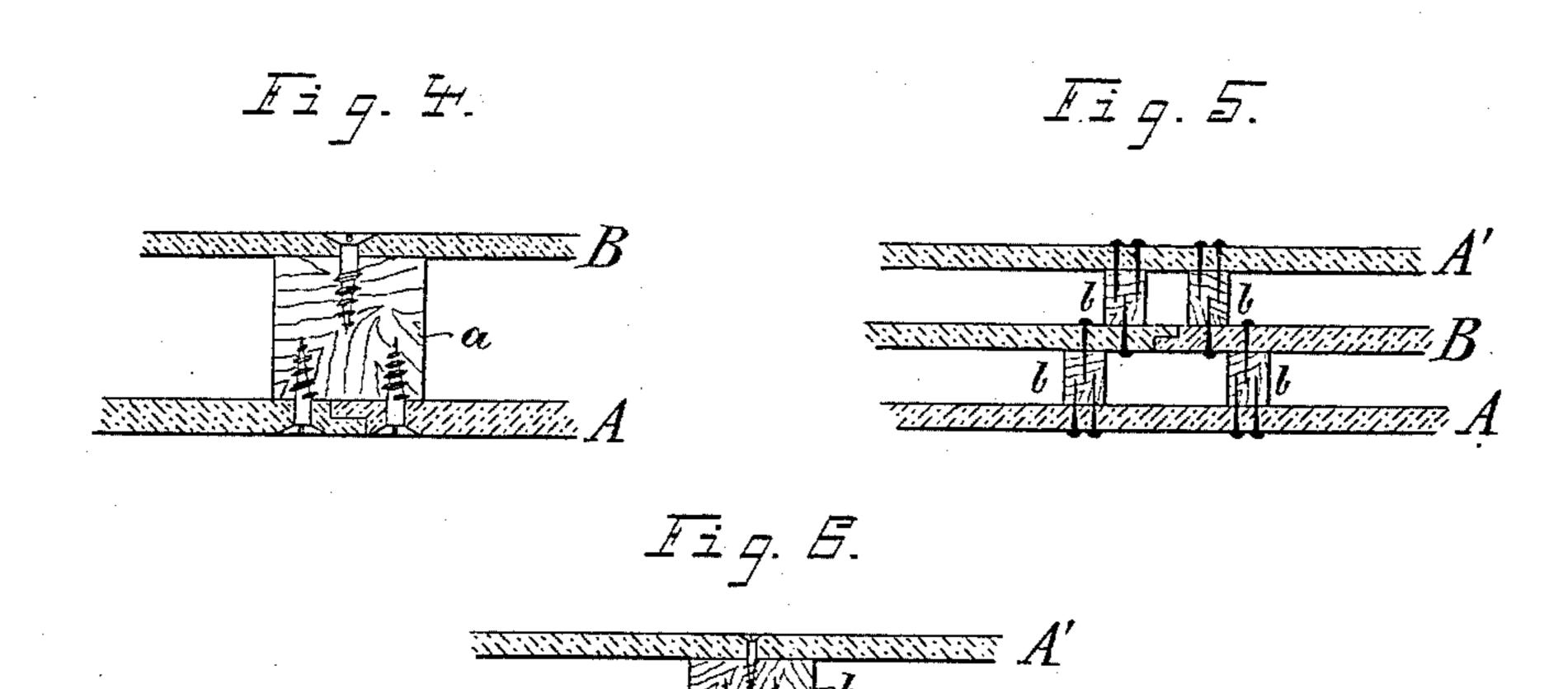
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## M. HELLINGER. STRUCTURE OF BUILDINGS.

No. 442,375.

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Witnesses: Henry Huber Meimherr Nonty Hellinger

Williams Regener

Horneys.

## United States Patent Office.

MORITZ HELLINGER, OF UNTERSACHSENFELD, GERMANY.

## STRUCTURE OF BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 442,375, dated December 9, 1890.

Application filed May 15, 1890. Serial No. 351,899. (No model.)

To all whom it may concern:

Be it known that I, Moritz Hellinger, of the city of Untersachsenfeld, in the Kingdom of Saxony and German Empire, have invented a certain new and useful Improvement in the Structure of Buildings, of which the following is a specification, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to a wall for buildings, composed of plates which are fastened together by means of nails or other similar fastenings and capable of being readily taken

apart, transported, and re-erected.

The objects of this invention are to provide a wall of this character which will afford a rigid self-supporting structure without the use of the frame-work ordinarily employed in this class of buildings, and at the same time to

20 provide air-spaces in the wall.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of double walls partly broken away and constructed in accordance with my present invention. Fig. 2 is a front view of such wall. Fig. 3 is a vertical transverse section of Fig. 2 on the line xx; and Figs. 4, 5, and 6 are detail views illustrating in horizontal section and on an enlarged scale certain modes of connecting the single walls with each other to form the said double or multiple walls. Similar letters of reference indicate corre-

sponding parts in the different figures. This improved wall is what is known as a 35 "double" or "multiple" wall, being composed of two or more single walls A and B or A, B, and A'. These are connected by blocks a b. Each of the single walls is composed of rectangular plates arranged in horizontal series 40 one above the other, the vertical joints of each series being broken by the plates of the adjacent series. The plates of one wall are also so arranged as to break joint with the plates of the other wall. To this end the plates of 45 the lower row or series of one of the single walls, as B, Fig. 1, is about half the height of the other plates. The blocks a are disposed in horizontal series and the blocks b are also disposed in horizontal series in alternation 50 with the series a. Each of the blocks a con-

nects three plates of the wall A, and the inner ends of some of said blocks are opposite the centers of the plates of the inner wall B, and others of said blocks a connect adjacent ends of plates of said inner wall. The blocks b are in a similar manner connected at their inner ends to three plates of the wall B and at their outer ends are connected to one or two plates of the wall A. The plates are preferably composed of magnesian material, and the blocks may be composed of similar or other suitable material, such as wood. The ends of the plates may be rabbeted, so as to interlock.

In the triple wall shown in Fig. 5 the inter- 65 posed blocks between the outermost and middle single walls are disposed opposite spaces between the innermost and middle single

walls, and vice versa.

A triple wall is shown in Fig. 6, in which 70 the interposed blocks are disposed opposite each other. The plates are nailed, screwed, or otherwise similarly fastened to the blocks. The plates used may by preference have a thickness of, say, one-half to one inch, a length 75 of three to five feet, and a width of about three feet; but these dimensions may be changed according to circumstances and play no essential part.

Buildings constructed with this improved 80 wall containing insulated air-spaces will be relatively fire-proof as compared with wooden or other similar buildings heretofore constructed with a view to permit a ready construction and disconnection of parts.

I claim as my invention—

A wall composed of two or more single walls and blocks interposed between them, each of said single walls being composed of plates fastened to said blocks and arranged to break 90 joint with the plates of the same wall and the plates of the adjacent wall, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of 95 two subscribing witnesses.

MORITZ HELLINGER.

Witnesses:

ROBERT R. SCHMIDT, ERNST SEIPEL.