

No. 785,539.

PATENTED MAR. 21, 1905.

E. E. BENNER.
BUILDING BLOCK.
APPLICATION FILED NOV. 7, 1904.

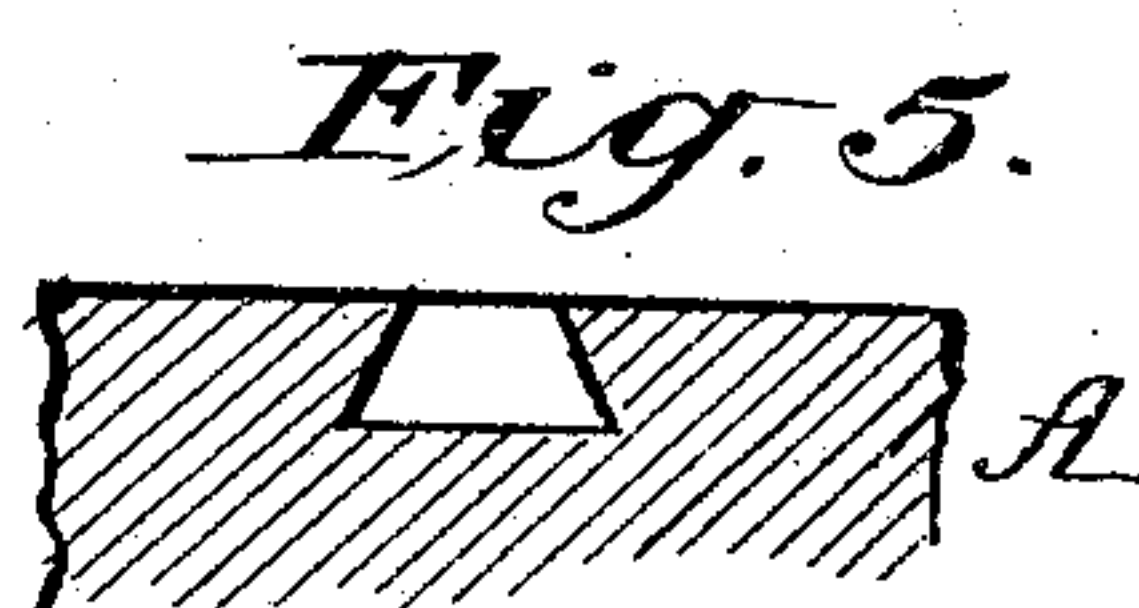
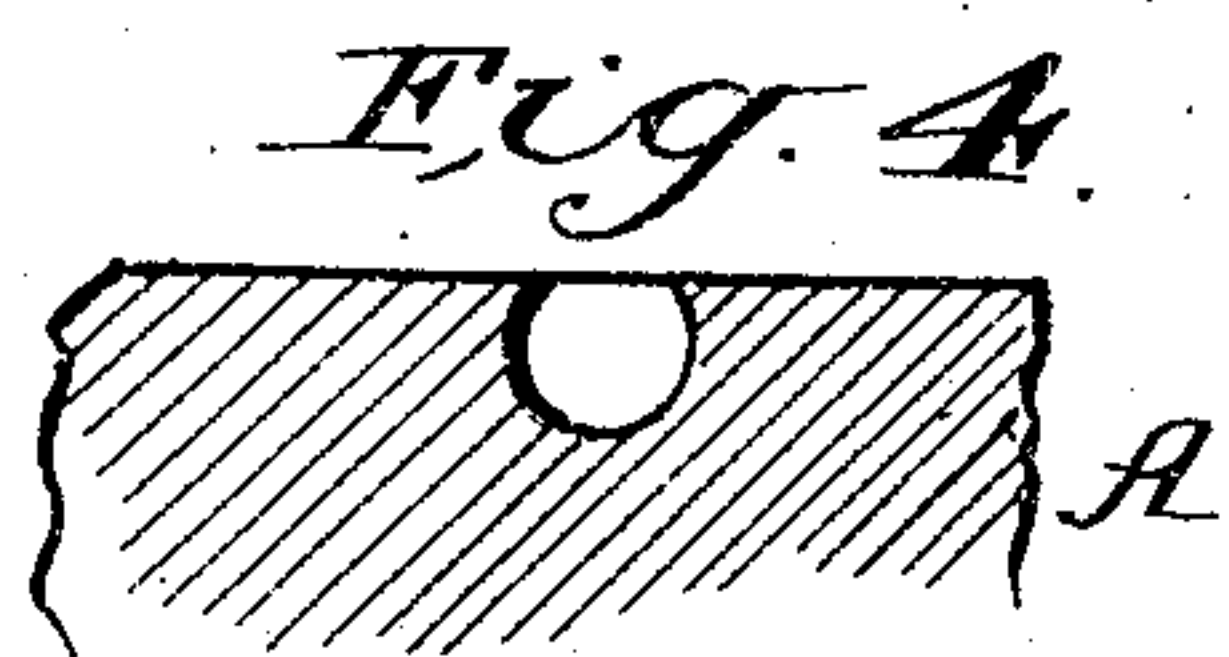
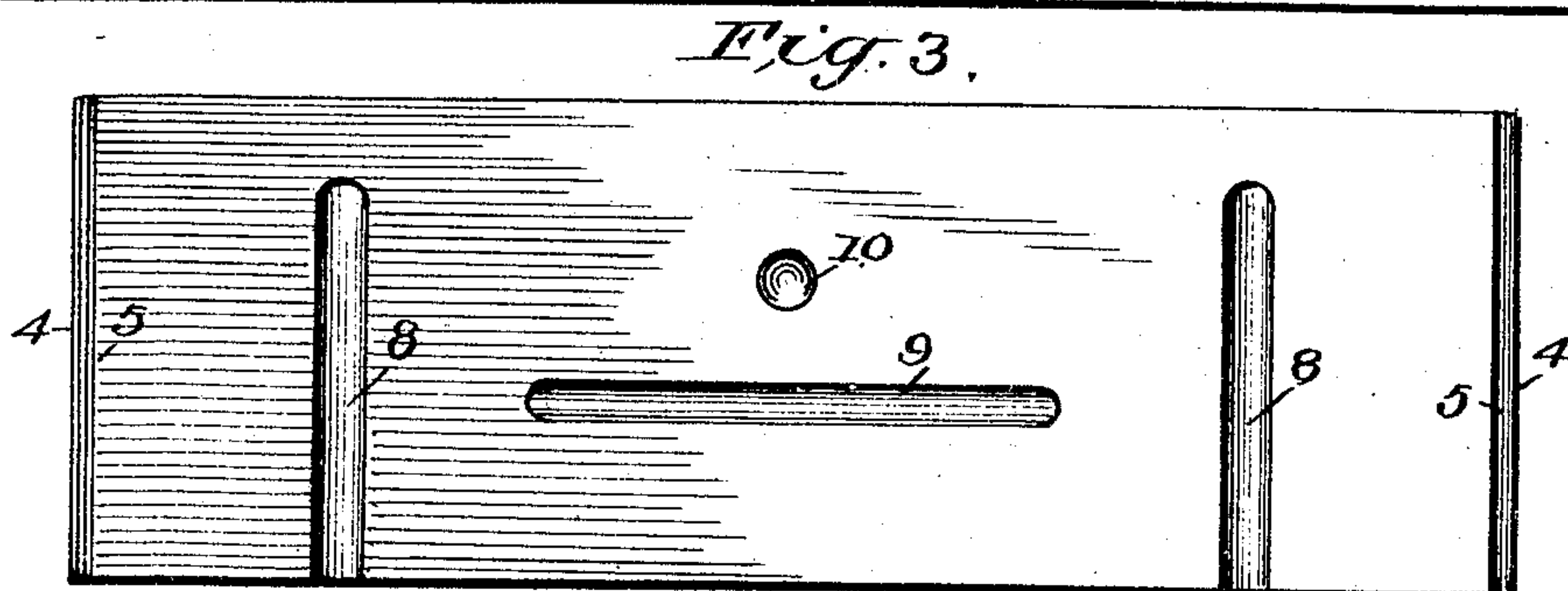
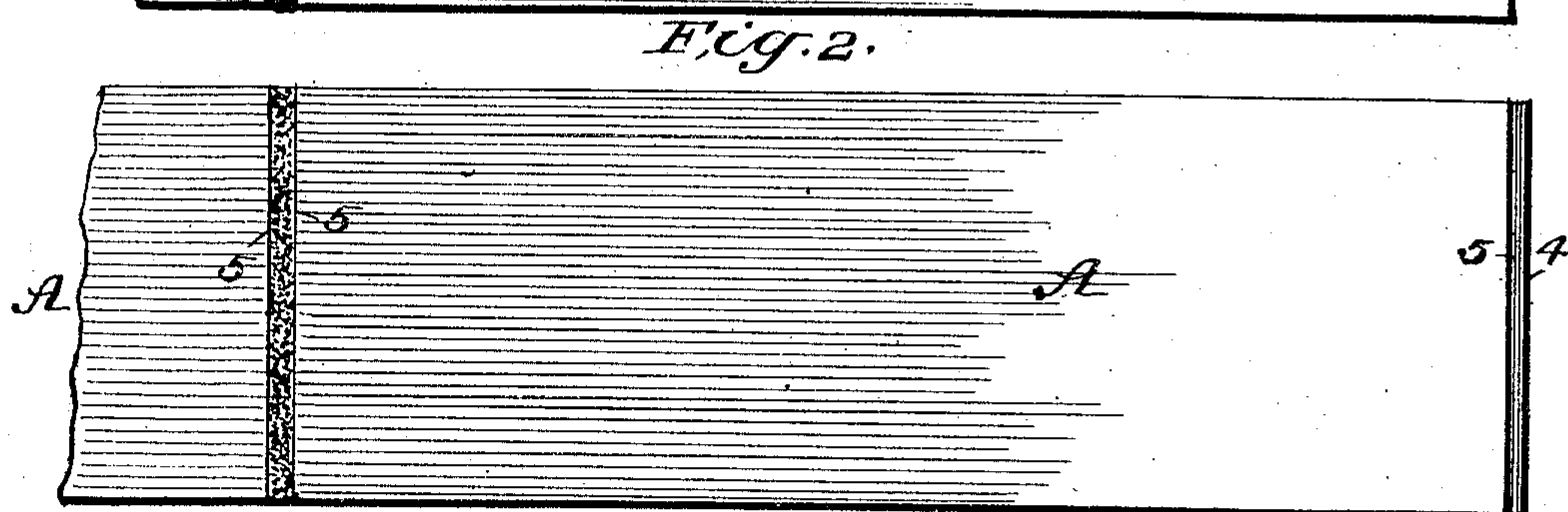
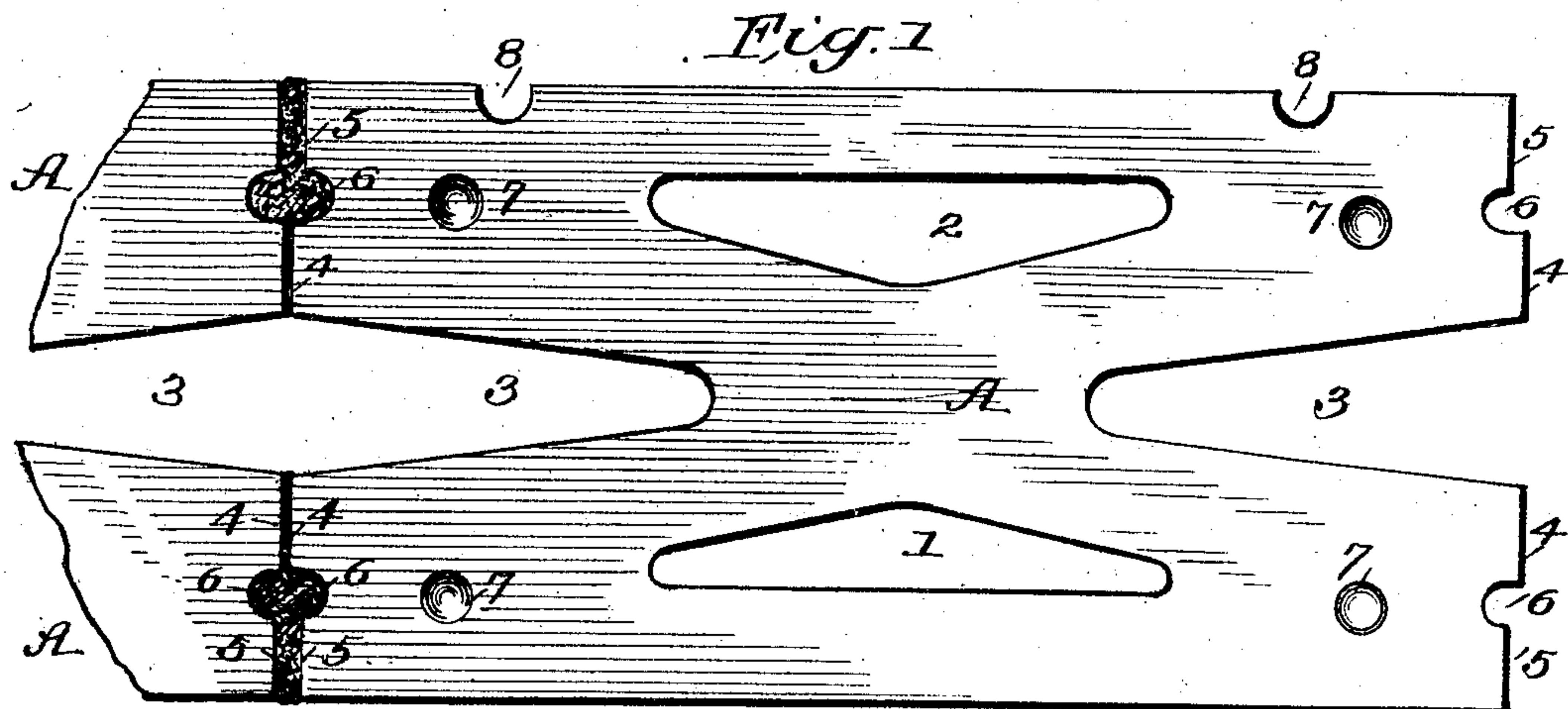


Fig. 6

WITNESSES:
Jos. A. Ryan
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A		1		A
A		1		A

INVENTOR
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ELWOOD E. BENNER, OF SARGENT, NEBRASKA.

BUILDING-BLOCK.

SPECIFICATION forming part of Letters Patent No. 785,539, dated March 21, 1905.

Application filed November 7, 1904. Serial No. 231,767.

To all whom it may concern:

Be it known that I, ELWOOD E. BENNER, a citizen of the United States, and a resident of Sargent, in the county of Custer and State of Nebraska, have invented an Improved Building-Block, of which the following is a specification.

It is the object of my invention to provide an improved building-block adapted to form a wall which shall be strong, firm, durable, and provided with cavities or chambers constituting vertical air-passages whereby the radiation of heat is prevented, fire and frost resisted, and material saved.

The details of the building-block are as hereinafter described, reference being had to the accompanying drawings, in which—

Figure 1 is a bottom plan view of an entire block and a portion of another joined thereto as in practice. Fig. 2 is a face view of parts shown in Fig. 1. Fig. 3 is an elevation of the inner side of the building-block. Figs. 4 and 5 are horizontal sections illustrating modifications in the form of grooves for holding plaster on the back of the block. Fig. 6 is a face view of a series of blocks laid one upon the other so as to form a continuous air space or chamber.

The block A is practically rectangular and oblong. Equidistant from its end portions it is provided with vertical openings or passages 1 and 2, the same being arranged on opposite sides of the longitudinal middle, 1 being near the front edge of the block and 2 being near the back of the same. It will be noted that the space 1 is smaller than 2, so that the portion of the block intervening it and the face thereof is thicker than the portion of the block which intervenes the space 2 and the back. This is for the purpose of securing greater strength in the face portion of the block. In each end centrally of the block is formed a V-shaped opening 3, which extends inward to points intermediate of the ends of the two passages or spaces 1 and 2. It is apparent that when two or more of such blocks are laid one upon the other, as indicated in Fig. 6, the several spaces or passages 1 2 3 3 will correspond or coincide and that thereby so many vertical air spaces or cham-

bers will extend through the entire wall. It will be further seen that as the several blocks in any horizontal layer are laid end to end the V-shaped spaces or passages 3 of adjacent blocks coincide, and thus form a large space or chamber which is double the capacity of a single space 3. In other words, the juxtaposition of the openings 3 of adjacent blocks provides a very large air-space, which extends vertically through the entire wall, and in conjunction with the spaces 1 and 2, formed in the body of the block, a wall is produced, which, while it may be comparatively thin or narrow, is capable of resisting the radiation of heat to a high degree and is thus practically fire and frost proof. It will be further seen that this formation of the spaces 1, 2, and 3, as described, saves material and lightens the blocks without seriously affecting their capacity to resist vertical pressure. The extension of the end space 3 inward between the spaces 1 2 prevents the radiation of heat diametrically through the block.

In order to duly lock one block with another, the under side of the same is provided with a series of countersinks 7, (see Fig. 1,) which will receive and hold mortar in a well-understood way. Further, I provide mortar-locks at the ends, as will be seen by reference to Fig. 1—that is to say, the portion of the block on each side of the space 3 is provided with a part 4 which projects farther than the outer part 5, and a groove 6 intervenes them. Thus when two blocks are laid together endwise, as shown in Fig. 1, the coincident grooves 6 provide a relatively large space adapted to receive a mortar-lock, which holds the block against lateral movement, and the space between the juxtaposed parts 5 is sufficiently large to allow the mortar when pressed into the cavities 6 to flow outward into the wide grooves or spaces, and thus fill the same from the inside outward, which affords a considerable advantage over the old practice of filling or pointing from the outside alone. On the back or inner side of the block I provide vertical grooves 8, (see Fig. 3,) also horizontal grooves 9 and in some cases countersinks 10, for receiving and holding plastering material, which may be applied directly to the

blocks. In Figs. 4 and 5 I illustrate variations in the form or cross-section of grooves provided for this purpose, Fig. 4 showing a cylindrical groove and Fig. 5 a dovetail form.

5 It will be understood that the block is formed of any suitable material, such as burnt clay or cement.

What I claim is—

10 1. The improved building-block having a substantially rectangular form and provided at its ends with an open air-space and on opposite sides thereof with vertical grooves, the portion exterior to the grooves being cut
15 away or made shorter than the portion which intervenes said grooves and the end air-space, as described.

2. A wall composed of building-blocks each having a substantially rectangular form and provided with open air-spaces in the ends,
20 and a mortar-lock formed by coincident

grooves, the juxtaposed portions of the blocks exterior to said grooves being separated so that mortar introduced into the grooves will flow outward substantially as described.

3. A wall composed of a series of blocks 25 having a substantially rectangular form and provided with body air-spaces 1 2 and end air-spaces 3, the blocks being laid one directly upon the other so that the several openings coincide and form so many vertical air cham- 30
bers or passages extending through an entire wall, the end spaces 3 coinciding and forming a double air-space, and a mortar-lock applied at the ends of the blocks in the manner described.

ELWOOD E. BENNER.

Witnesses:

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LEILA HARRIS.