

No. 786,370.

PATENTED APR. 4, 1905.

W. L. MARCHAND.  
WALL CONSTRUCTION.

APPLICATION FILED AUG. 27, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

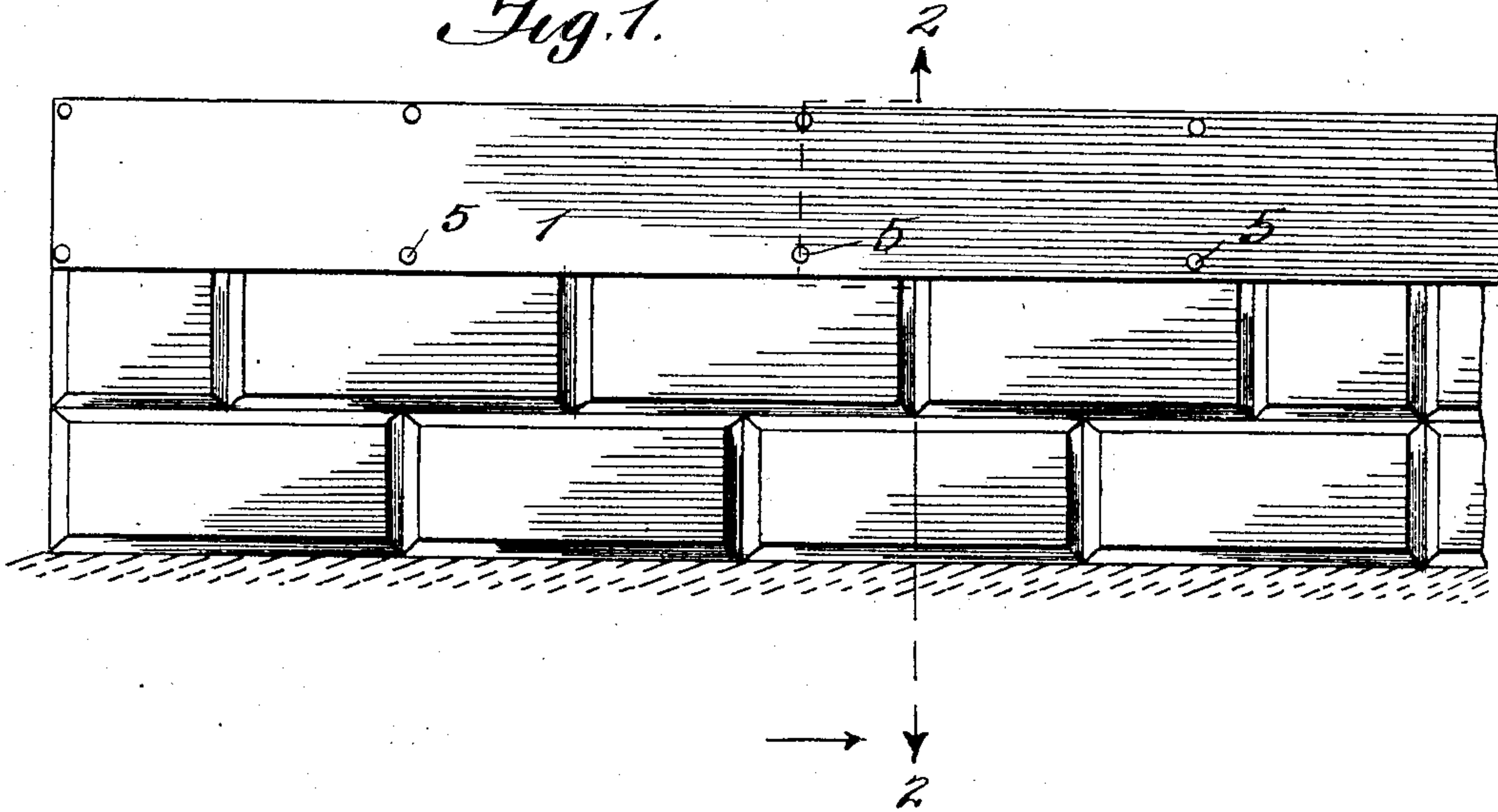


Fig. 2.

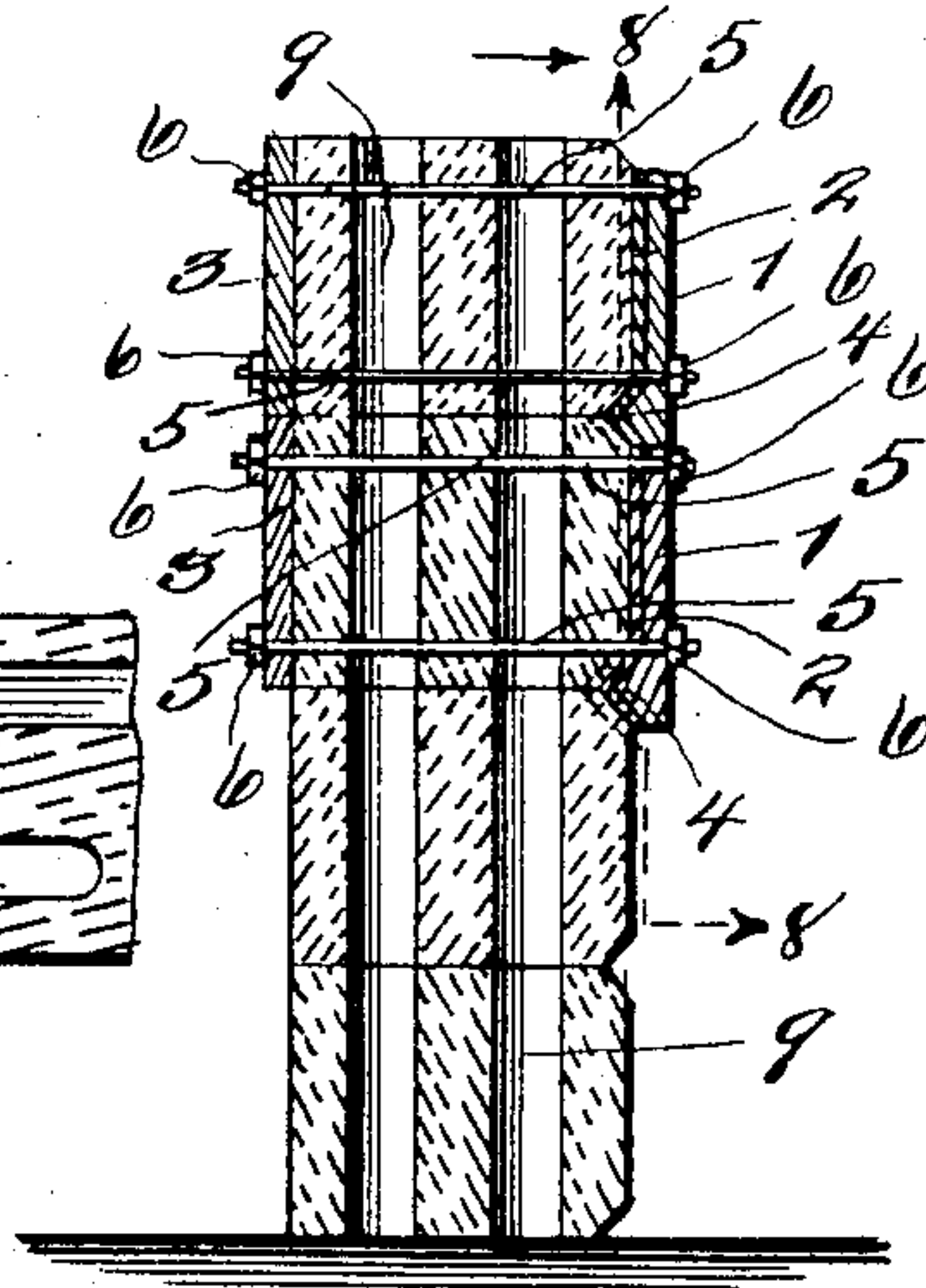


Fig. 3.

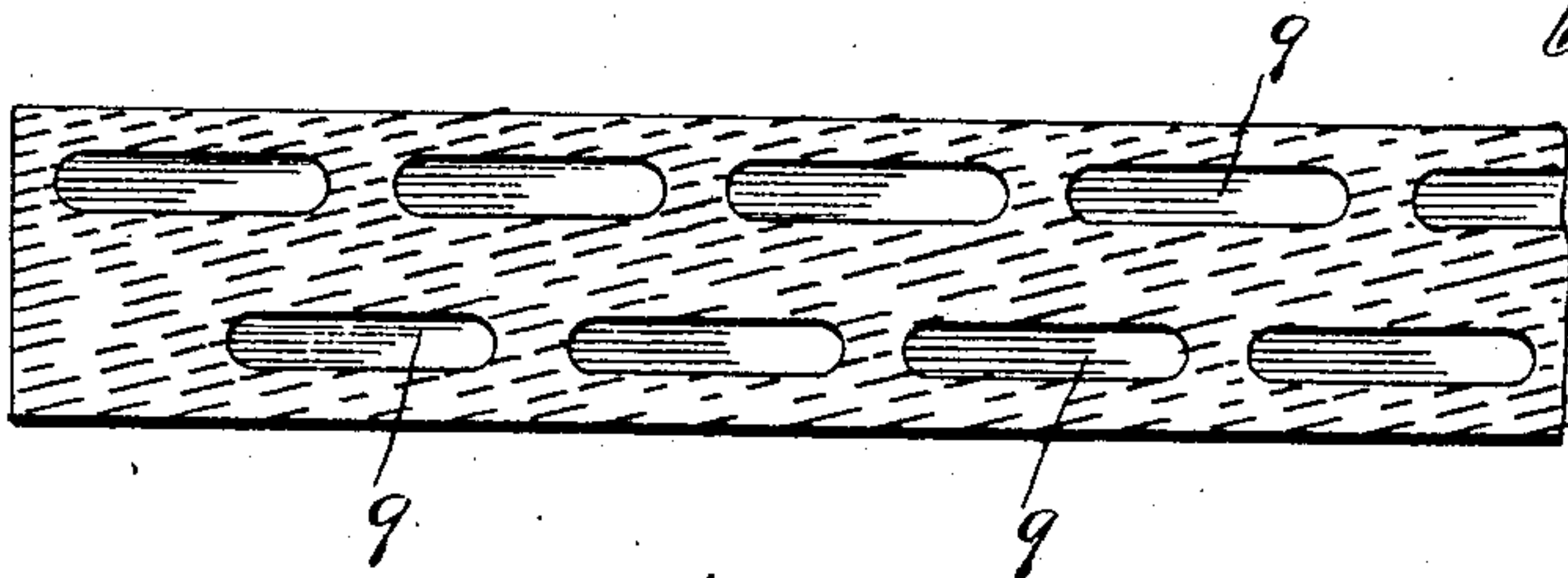
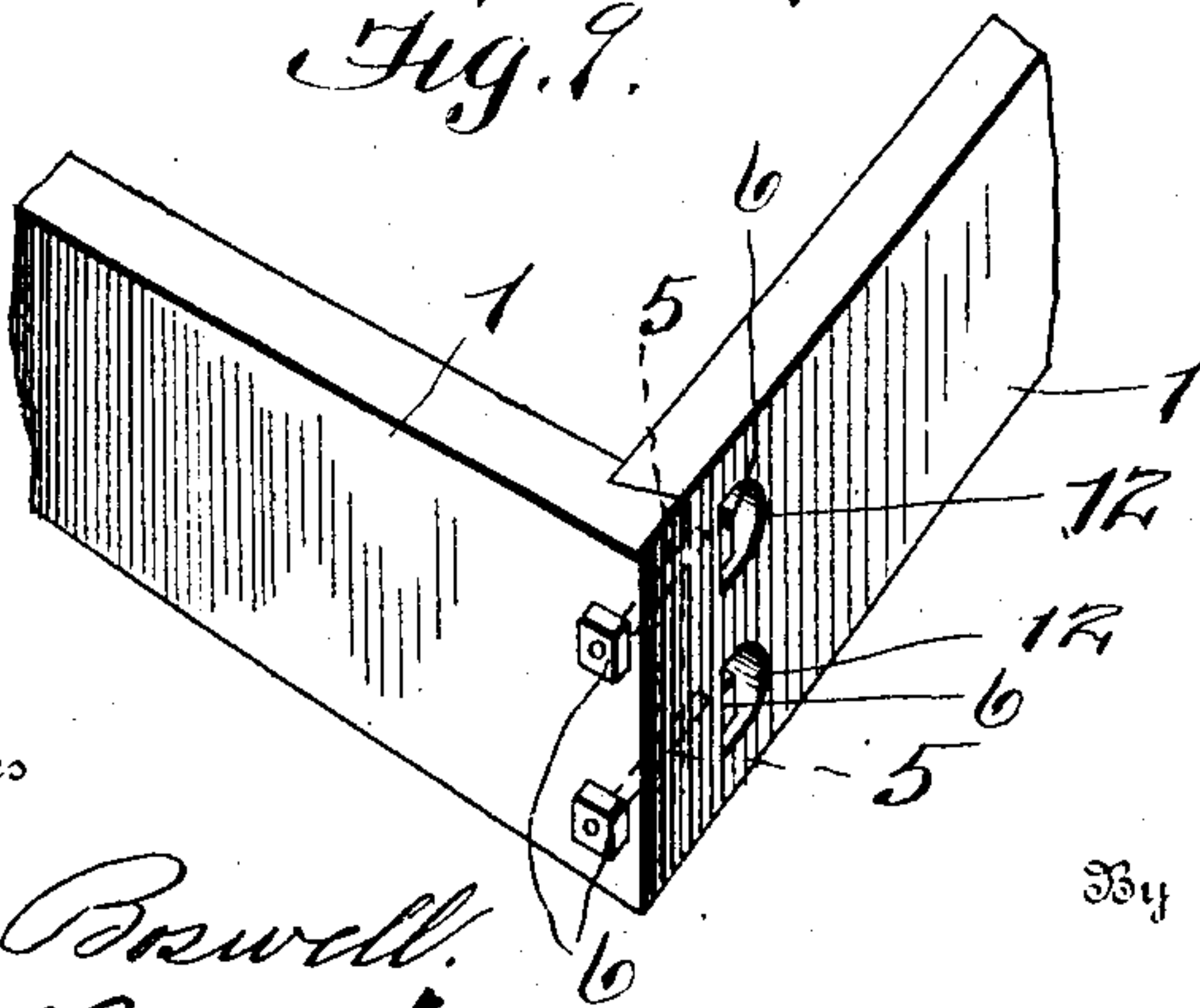


Fig. 4.



Witnesses

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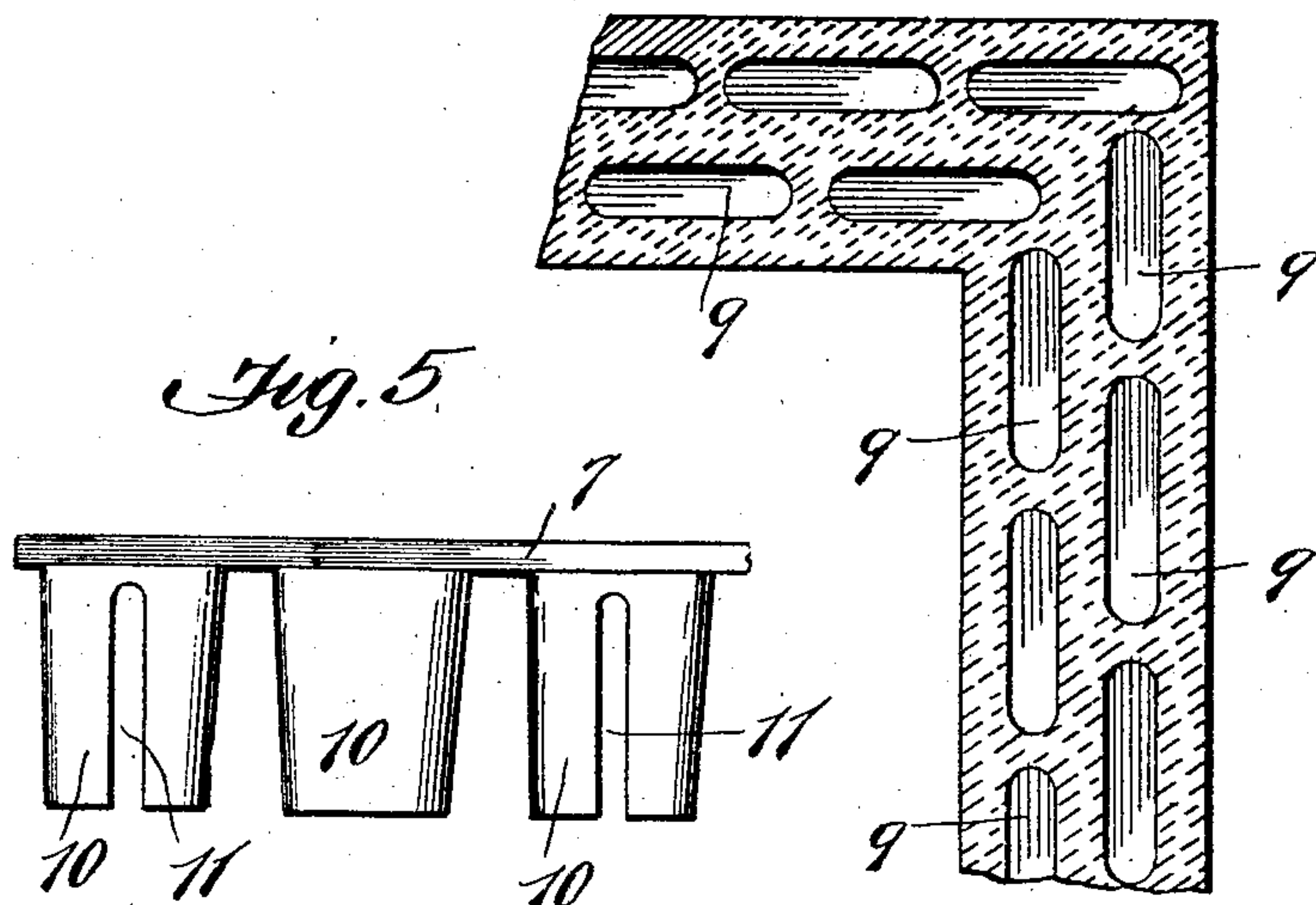
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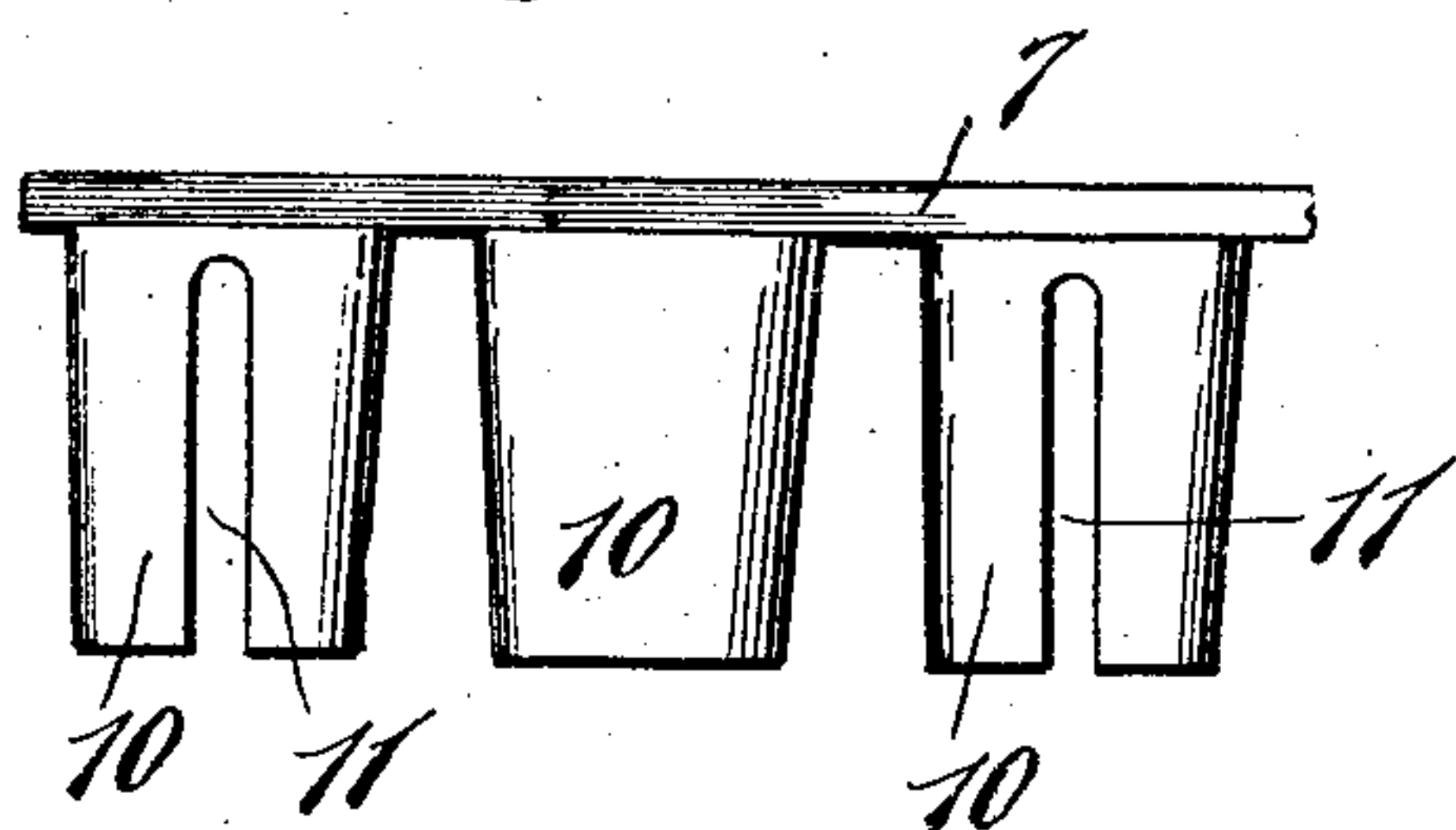
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2 SHEETS—SHEET 2.

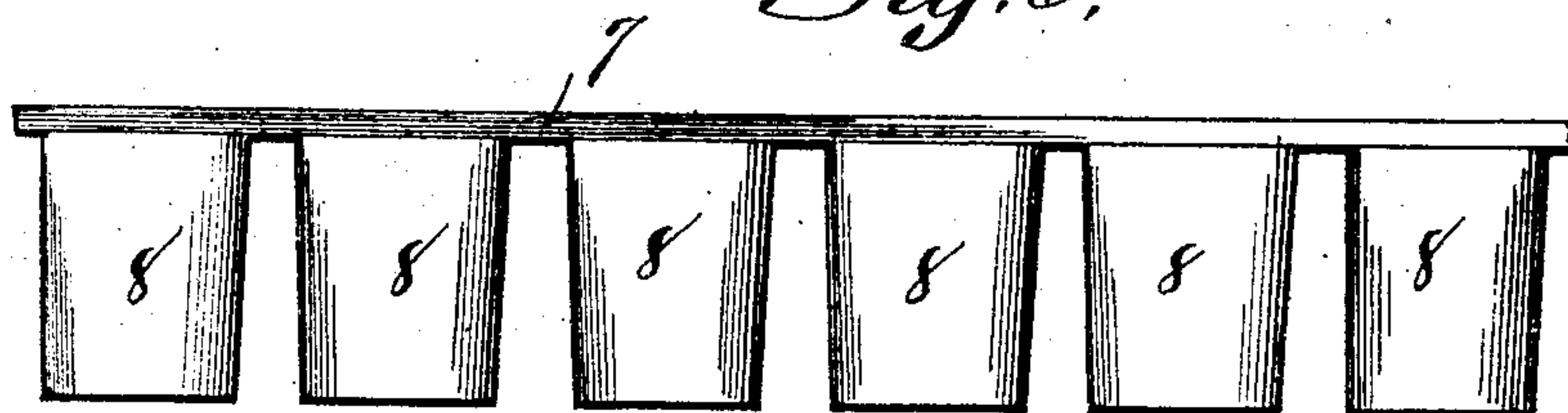
*Fig. 4.*



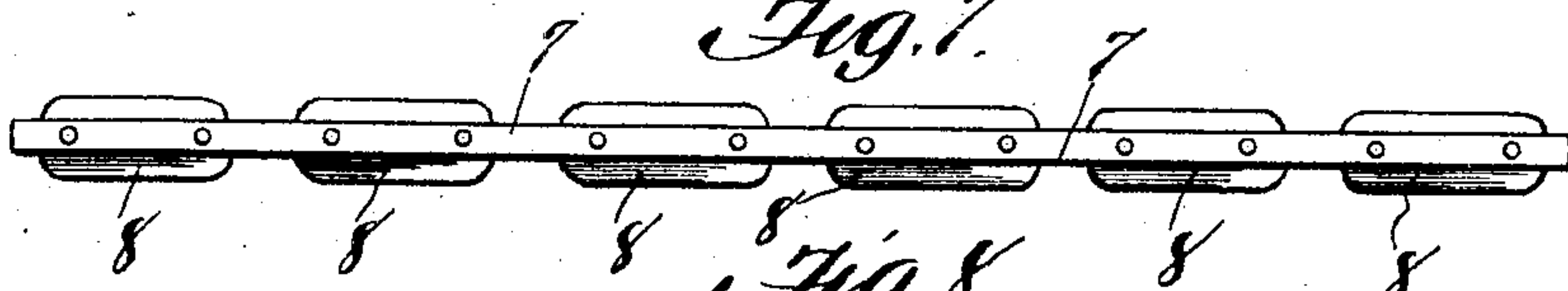
*Fig. 5.*



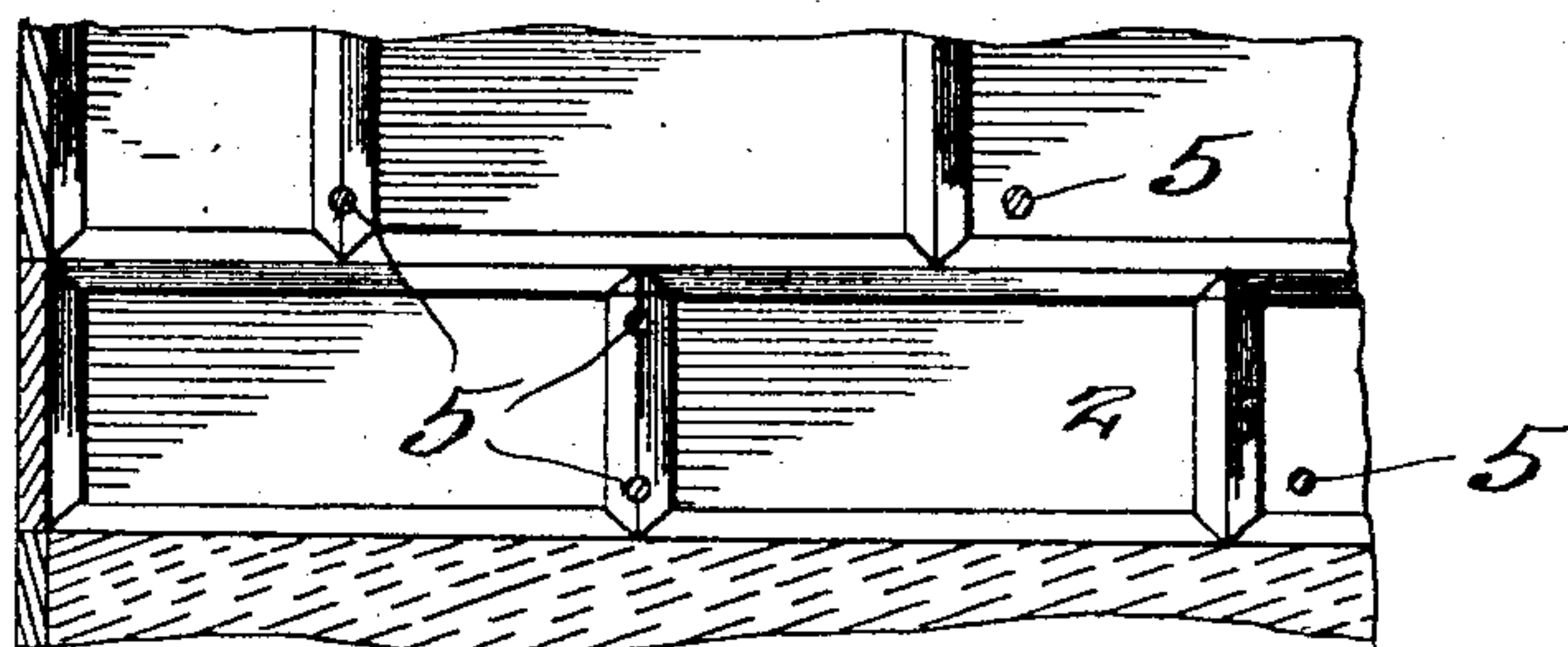
*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



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# UNITED STATES PATENT OFFICE.

WILLIAM L. MARCHAND, OF ROLLA, NORTH DAKOTA.

## WALL CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 786,370, dated April 4, 1905.

Application filed August 27, 1904. Serial No. 222,408.

*To all whom it may concern:*

Be it known that I, WILLIAM L. MARCHAND, a citizen of the United States, residing at Rolla, in the county of Rolette and State of North Dakota, have invented certain new and useful Improvements in Wall Construction, of which the following is a specification.

This invention relates to certain new and useful improvements in wall construction; and it has for its objects, among others, to provide novel molds and means whereby the wall can be quickly constructed, air-spaces being formed in the blocks as they are molded and the wall being built as of a single stone. I provide novel forms of molds, which are laid upon the wall and the concrete placed in position, the portions of the molds forming the air-spaces being removed as soon as the concrete is well packed, the other portion of the mold remaining on the wall till the concrete is hard enough to stand by itself, when it is removed and placed in position to form the next higher course. The mold may be faced with a metallic sheet to give to the outer face of the wall the appearance of natural stone, or any other suitable means may be provided for giving to the face of the stone the desired appearance. I provide for the rapid building of the wall, yet the same when finished will be strong, moisture-proof, fireproof, and possessing all the desirable qualities of a modern structure in this respect.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention in its preferred form is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a face view showing the wall in the course of construction. Fig. 2 is a vertical cross-section through the same on the line 2 2 of Fig. 1 looking in the direction of the arrow. Fig. 3 is a top plan of a portion of the wall. Fig. 4 is a similar view showing the wall at a corner of the same. Fig. 5 is a side elevation of a portion of the part of the mold by which the air-spaces in the blocks are

formed. Fig. 6 is a similar view showing another form of such part for forming the air-spaces. Fig. 7 is a view looking down on the part of the mold seen in Fig. 6. Fig. 8 is a view in vertical section as on the line 8 8 of Fig. 2 looking in the direction of the arrow, showing the inside face of the mold that forms the outside face of the wall. Fig. 9 is a perspective detail of a portion of the mold.

Like numerals of reference indicate like parts throughout the several views.

Referring now to the details of the drawings, 1 designates a plate of any suitable material, as a board, of any desired length and width to give to the block the desired width and to form in length as many of such blocks as may be found most expedient to form at one time. This board is faced upon its one side with a metallic sheet 2 to give to the stone when molded the form and appearance of real stone. This is employed on the outside of the wall. A similar plate or board 3, not usually provided with such metallic facing-plate, is employed for the inner face of the wall, Fig. 2 clearly showing the manner in which the said two plates or boards are employed. The plate or board 1 has at one edge the angular projection 4 to give to the wall when formed the fanciful appearance shown—that is, dividing the blocks and forming between each two blocks the double-beveled depression shown, it being understood, as will be readily seen from Figs. 1 and 8, that the angular projection extends both vertically and horizontally for an obvious purpose.

The plates 1 and 3 are connected by the transverse bolts or the like 5, passed through the plates and receiving upon one or both ends nuts 6, as seen in Fig. 2, whereby the rods may be easily removed.

In Fig. 6 I have shown one form of mold portion designed for use in connection with the mold formed by the two plates and their connecting-bolts as described. This comprises the plate or strip 7, having secured thereto in any suitable manner the cores 8, which may assume any desired shape, according to the shape it is desired to give to the air-spaces 9 in the wall, which said air-spaces are formed by these cores or blocks 8, as will soon appear.



These cores may be of any suitable material, preferably metal or wood faced with metal. There should be twice as many of these cores or blocks 8 on each strip 7 as there are to be  
 5 formed blocks by the mold composed of the plates 1 and 3 and their connecting-bolts. In the form shown in Figs. 6 and 7 there will be two of the cores between each two connecting rods or bolts; but in Fig. 5 I have shown  
 10 another form, in which each alternate, or it may be some other arrangement, block or core 10 is provided with a vertical slit 11 to straddle the connecting rods or bolts 5, as will be readily understood. The bolt-heads are  
 15 seated in openings 12.

The wall is designed to be formed of concrete or any of the other plastic compositions suitable for the purpose. The concrete or other plastic material used is to be put in  
 20 the mold and well packed by any suitable means between the inner and outer plates 1 and 3 and the air-space molds 8, the latter being supported or suspended in any suitable manner midway between the inner and outer  
 25 plates 1 and 3, so as to give to the completed wall double air-spaces, as seen in Figs. 3 and 4, Fig. 2 illustrating the wall as in the course of construction, the air-space-forming blocks or cores having been removed and the concrete  
 30 left to harden before removing the mold proper, it being understood that the concrete is to be made on the wall during its construction, so that the whole wall will be practically but one solid stone.

35 The holes or openings made in the wall to fasten the upper part of the mold are to be used to fasten the lower part of the same mold on the next following upper row.

In order to break joints of different rows,  
 40 the bolts are alternately changed and put in the center of the stone on the row below.

In forming the wall at the corners the molds are so arranged as to form the angle integral, the air-spaces being disposed, of  
 45 course, at right angles to each other in the right-angled portions of the wall, as illustrated in Fig. 4.

From the above it will be seen that I have devised a simple, novel, cheap, yet efficient

form of mold and means for forming a wall, 50 and while the structural embodiment of the invention as hereinbefore disclosed is what I at the present time consider the preferable one it is evident that the same is subject to changes, variations, and modifications with- 55 out departing from the spirit of the invention or sacrificing any of the advantages. I therefore do not intend to restrict myself to the details of construction herein described and shown, but reserve the right to make 60 such changes, variations, and modifications as come properly within the scope of the protection prayed.

What is claimed as new is—

1. A mold for the purpose described, comprising a plate with angular projections extending both vertically and horizontally, a second plate parallel with the first plate, bolts connecting said plates, a strip independent of said plates and adapted to be supported within 65 the inner and outer plates, and a series of cores depending from said strip and having vertical slits to straddle said bolts, said bolts being removable and adapted to engage the upper end walls of the said slits whereby the 70 molds may be removed from the wall after the blocks have been formed, as set forth.

2. A mold for the purpose described, comprising a plate adapted to form the outer side of the mold, a plate adapted to form the inner 80 side of the mold, bolts connecting the same with their heads seated in openings therein, a strip independent of said plates and a series of cores supported from said strip and having vertical slits, the end of the said 85 strip being extended beyond the end mold-cores and the bolts being removable whereby the cores may be engaged over the bolts and rest thereon after the mold is in position and the mold removed after the block has har- 90 dened, as shown and described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

WILLIAM L. MARCHAND.

Witnesses:

CHARLES A. VERRET,  
 JOE CRATEAU.