

No. 826,597.

PATENTED JULY 24, 1906.

C. A. NEWMAN.
CONSTRUCTION OF FOUNDATION WALLS.

APPLICATION FILED MAY 16, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

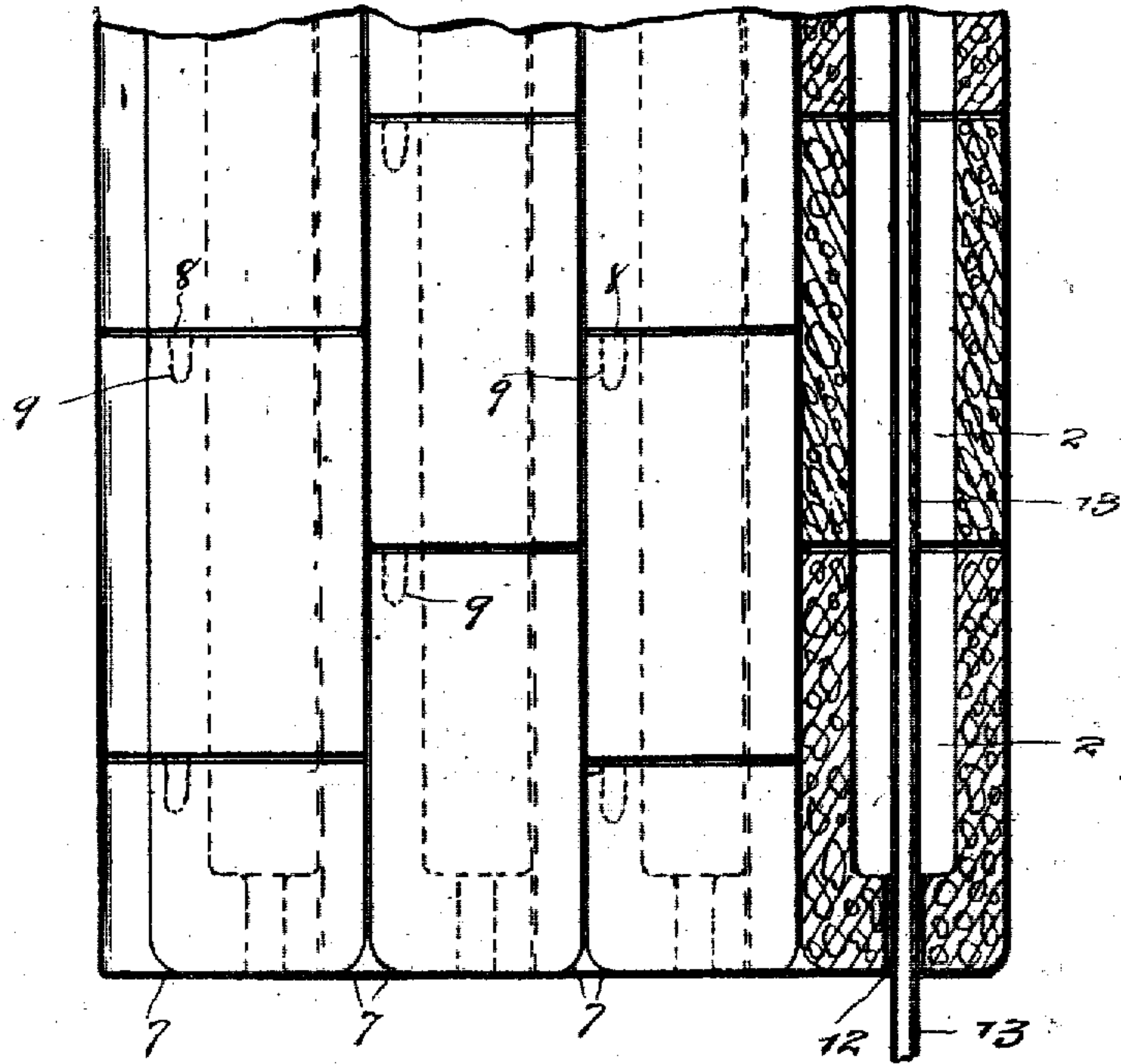
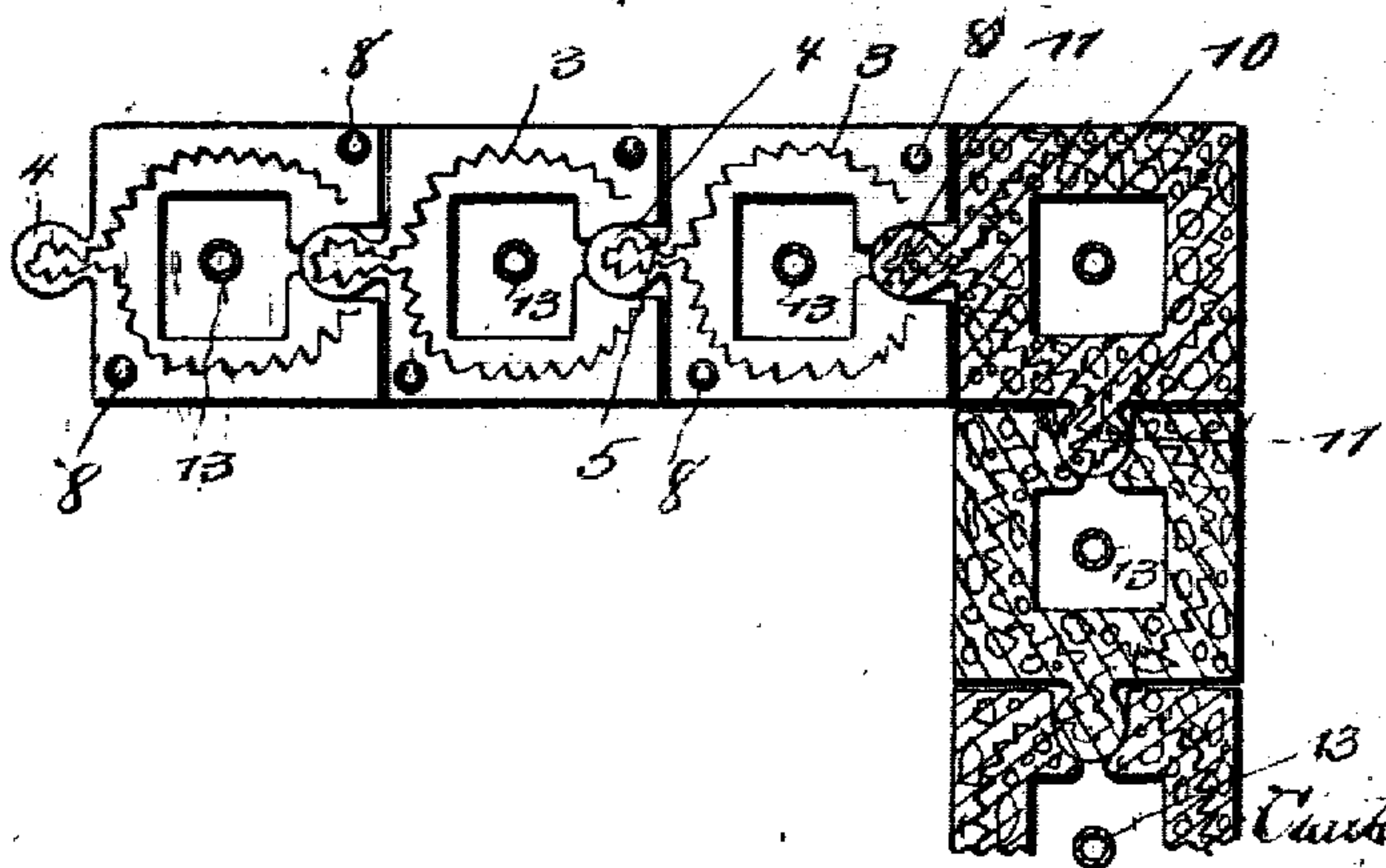


Fig. 2.



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2 SHEETS—SHEET 2

Fig. 3.

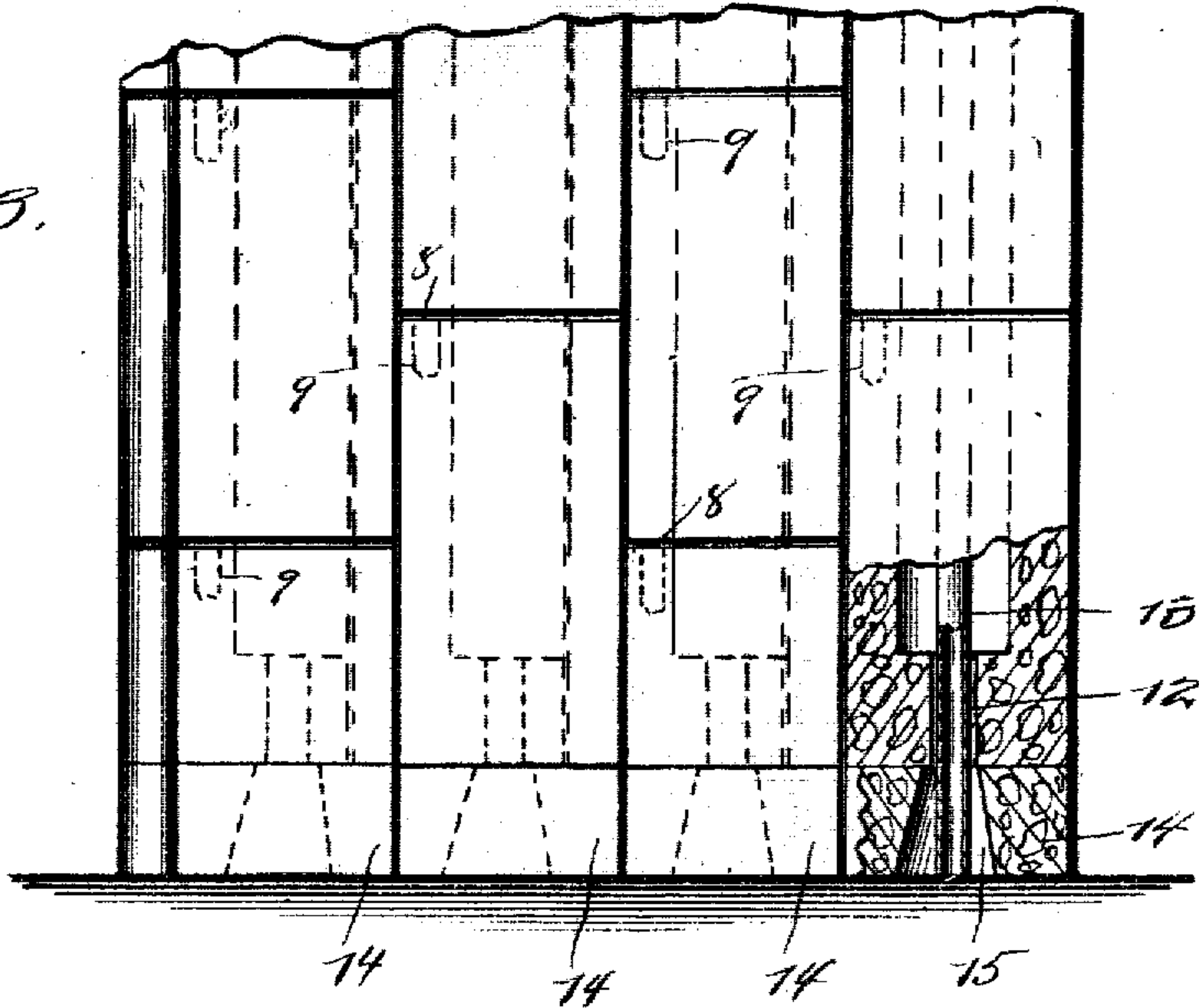


Fig. 4.

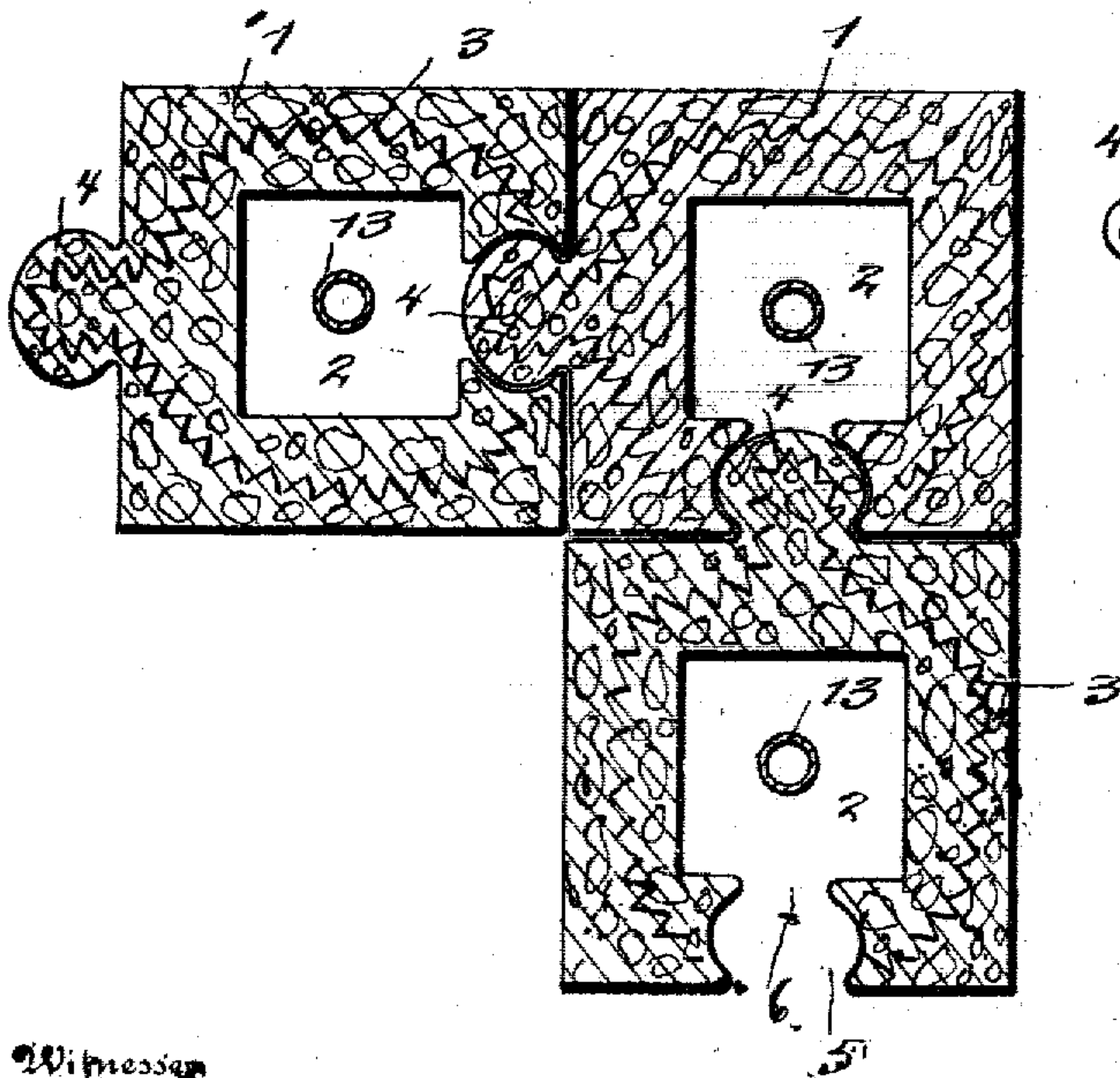
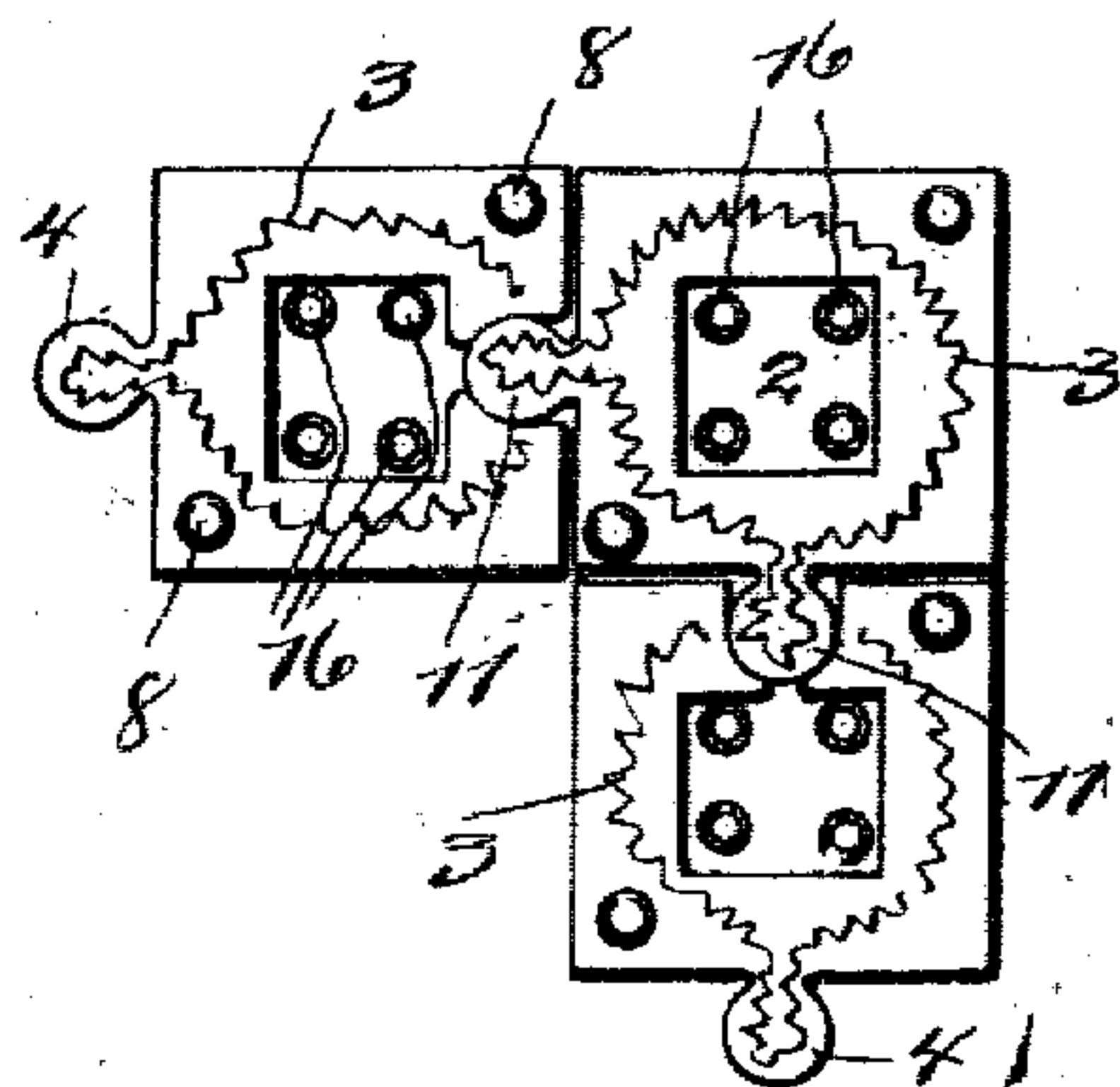


Fig. 5.



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UNITED STATES PATENT OFFICE.

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CONSTRUCTION OF FOUNDATION-WALLS.

No. 826,597.

Specification of Letters Patent.

Patented July 24, 1906.

Application filed May 16, 1905. Serial No. 260,847.

To all whom it may concern:

Be it known that I, CLARK A. NEWMAN, a citizen of the United States, residing at Atlantic City, in the county of Atlantic and State of New Jersey, have invented new and useful Improvements in Construction of Foundation-Walls, of which the following is a specification.

This invention relates to certain new and useful improvements in the method of and means for constructing foundations for buildings, cellar-walls, arch-bridges, abutments and piers, wharves, sea-walls, breakwaters, jetties, reservoirs, retaining-walls, and the like for any and all purposes, and is most efficacious in places where it is difficult and sometimes impossible to excavate for a foundation.

In mines, in sandy soils, in fact, in any and all places where excavation can be carried on only at great risk of life and limb and also to property, my invention will be found of great value.

The present invention has for its objects, among others, to provide for the building of a foundation, &c., without the necessity of excavating, the wall being built of blocks of concrete or other suitable material constructed to interlock and sunk into position by means of jets of water or other fluid caused to pass through holes in the blocks.

Any suitable form of block may be employed, strengthened, or reinforced, if found desirable, by a metal or other reinforce, and the interlocking being accomplished in any suitable manner.

In some instances it may be found that the block will not sink perfectly level or plumb. In this case I provide for causing the fluid to flow at one or more corners and stopping it at the other till the block seeks its level. In some instances but one pipe for the fluid may be employed. The blocks are so constructed that a block may be slipped into place upon top of the block already sunk without the necessity of lifting the same to lower it over the pipe. A sidewise movement is all that is necessary.

I may employ a practically solid base-block to be first sunk into the sand and through which the water-pipe is passed, the other blocks of the wall resting thereupon and all the blocks being interlocked at their adjacent edges and also upon their adjacent horizontal faces, and thus the blocks are in-

terlocked in two different directions at substantially right angles to each other, by which means relative movement of the blocks is prevented.

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 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 side elevation with a portion in section, showing a portion of a wall constructed in accordance with my invention. Fig. 2 is a top plan with a portion in section. Fig. 3 is an elevation with a portion broken away and a part in section, showing a wall with a solid base plate or block upon which the other blocks rest. Fig. 4 is a plan view with the blocks in horizontal section, showing a somewhat modified form of construction of the interlocking joints. Fig. 5 is a similar view showing a slight modification of the same.

Like numerals of reference indicate like parts throughout the several views in which they appear.

Referring now to the details of the drawings, 1 represents blocks of concrete or cement or the like cast in molds and provided with a substantially central hollow portion 2, as seen clearly in Figs. 2, 4, and 5, for a purpose which will soon be made apparent. These blocks may be of any desired shape and size and they may be reinforced and strengthened by a metal or other reinforce 3, as seen in Figs. 2, 4, and 5. The blocks are made to interlock in any convenient manner. In Fig. 2 they are shown as provided upon one side with a rib or projection 4, which may assume any desired shape, and upon the opposite side with a recess 5, the recess extending through to the hollow 2 of the block, as shown, so that the blocks may be placed in position by sliding or moving them horizontally, the opening 6 permitting of this action and avoiding the necessity of lifting the blocks vertically to place them over the pipe, which will soon be described. The lower ends of the lowermost blocks may be tapered or rounded, as seen at 7 in Fig. 1, if found necessary or desirable, to permit them to more readily sink into the sand and to allow for the more ready flow of the sand

as it is acted upon by the water flowing through the pipe. The blocks may be further provided with means to prevent relative movement thereof—as, for instance, with the interengaging teats 8 and holes or depressions 9, respectively, in their adjacent horizontal faces, as indicated in Figs. 1 and 3. The teats may be on the lower face of the upper block, as seen in Fig. 1, and engaged in the holes in the upper faces of the lower or under blocks, or the teats may be on the upper faces of the blocks, as seen in Fig. 2, to engage holes in the under faces of the blocks above them. The result is the same in both instances.

In Fig. 4 I have shown another form of interlocking rib or projection and recess in which the construction is such that while the blocks have to be placed in position by vertical movement they are more firmly interlocked in position.

In Figs. 2 and 5 I have shown a block 10, designed for use at the corner of a wall. This is substantially the same as the other blocks, except that it is provided with a rib or projection 11 on two sides, the object of which will be obvious from an inspection of these views. The remaining blocks in the wall will be like those previously described—that is, with a rib on one side and a recess for the reception of a rib on the opposite side.

As will be seen in Figs. 2, 4, and 5, the reinforce when employed extends into the rib to strengthen the same.

The lowermost block, as seen in Fig. 1, is practically solid at the bottom, with the exception of the hole 12 for the passage of the pipe 13.

In Fig. 3 I have shown a base-block 14, practically solid except for a hole for the passage of the pipe, and sometimes I may enlarge this opening, as seen at 15, the walls thereof being inclined, as seen in Fig. 3, to facilitate the sinking of the block into the sand.

In practice the blocks are driven or sunk by means of water-jets by means of the pipe 13, extended through the opening in the lowermost block into the sand, as seen in Fig. 1 and also in Fig. 3. The wall is built up as the blocks are sunk by placing one block upon another, breaking joints in the usual way, as seen in Figs. 1 and 3. The jets of water wash away the sand or other material upon which the blocks rest, it being understood that the pipes may be removable and

are to be connected with some suitable source of water-supply. (Not herein shown.)

In some cases I may employ a plurality of pipes, as seen in Fig. 5, where I have shown four pipes 16 within the hollow 2, so that the block may be sunk evenly, and if one corner should sink faster than another the water through the pipe at that corner may be shut off for a moment or so till the block seeks a level and then the water turned on again. More or less pipes may be employed as may be found most expedient.

The teats 9 are shown in Fig. 2 as arranged at diagonally opposite corners of the blocks in order to best hold the blocks against relative movement; but it is evident that they may be differently arranged, if desired.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed as new is—

1. A wall formed of hollow interlocking blocks having lateral openings from the interior, and open at their upper ends, with their lower ends formed with a contracted opening for the passage of a removable pipe for sinking the same.

2. A wall formed of hollow interlocking blocks having lateral openings from the interior, and open at their upper ends, with their lower ends formed with a contracted opening for the passage of a removable pipe for sinking the same, said blocks being interlocked in a plurality of directions and at right angles to each other.

3. A wall composed of hollow blocks open at top and bottom, superimposed one upon the other, the lowermost block having an opening with inclined walls, and the next uppermost block being practically closed at its bottom and having an opening for the passage of a removable pipe.

4. A block having a vertically-disposed passage therethrough a side opening from said passage forming a socket for the reception of a rib on an adjacent block and a bottom with contracted opening for the passage of a removable pipe, said bottom being tapered at the corners.

In testimony whereof I affix my signature in presence of two subscribing witnesses.

CLARK A. NEWMAN. [L. s.]

Witnesses:

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