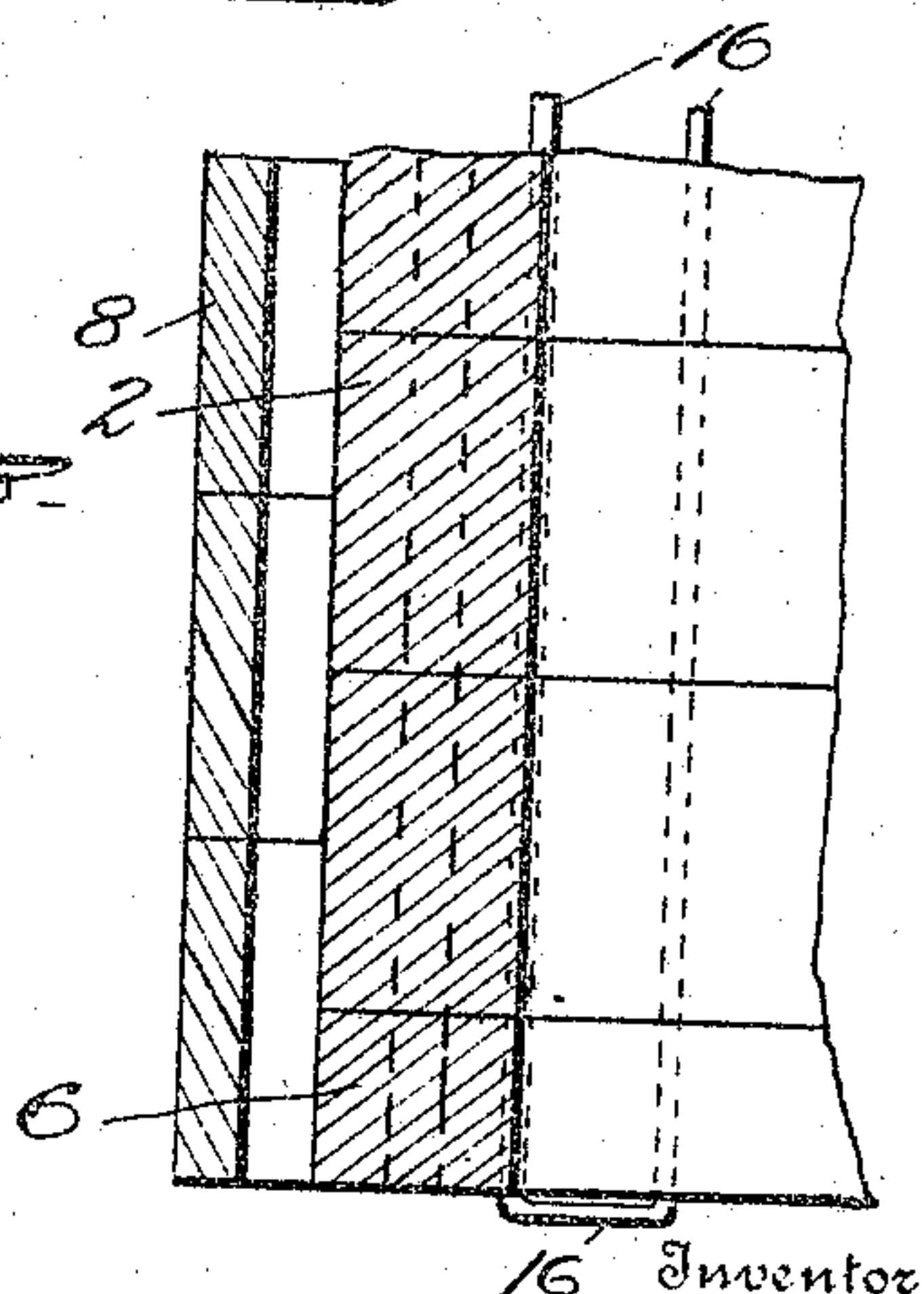
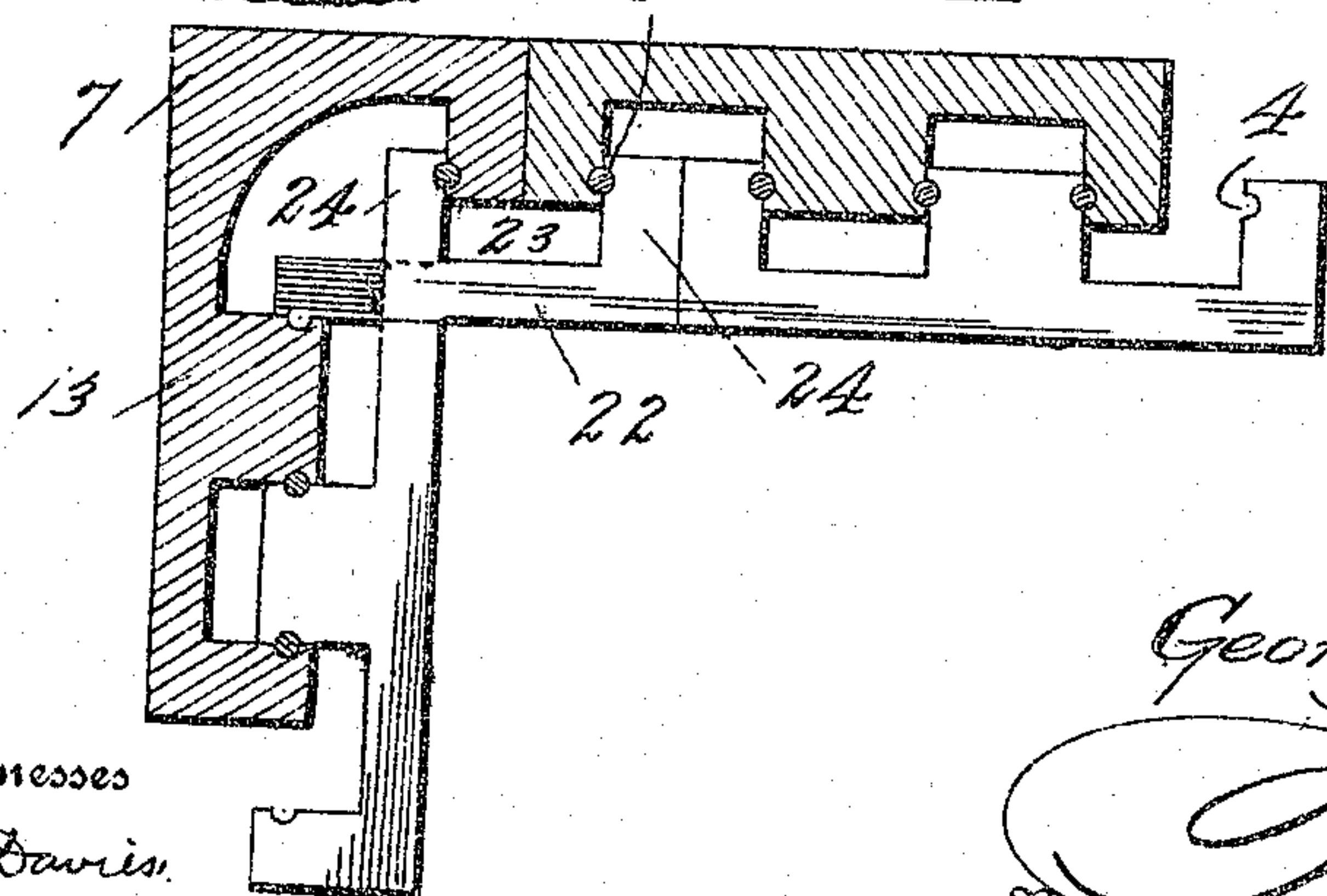
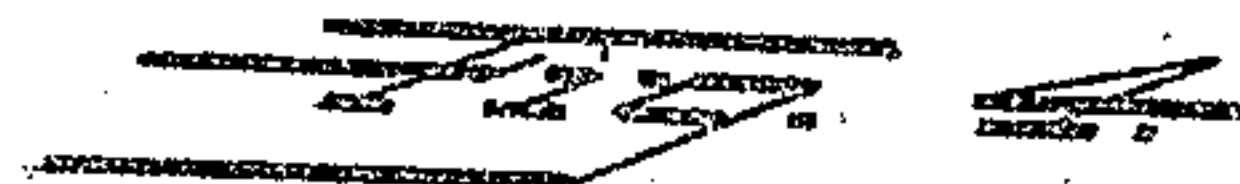
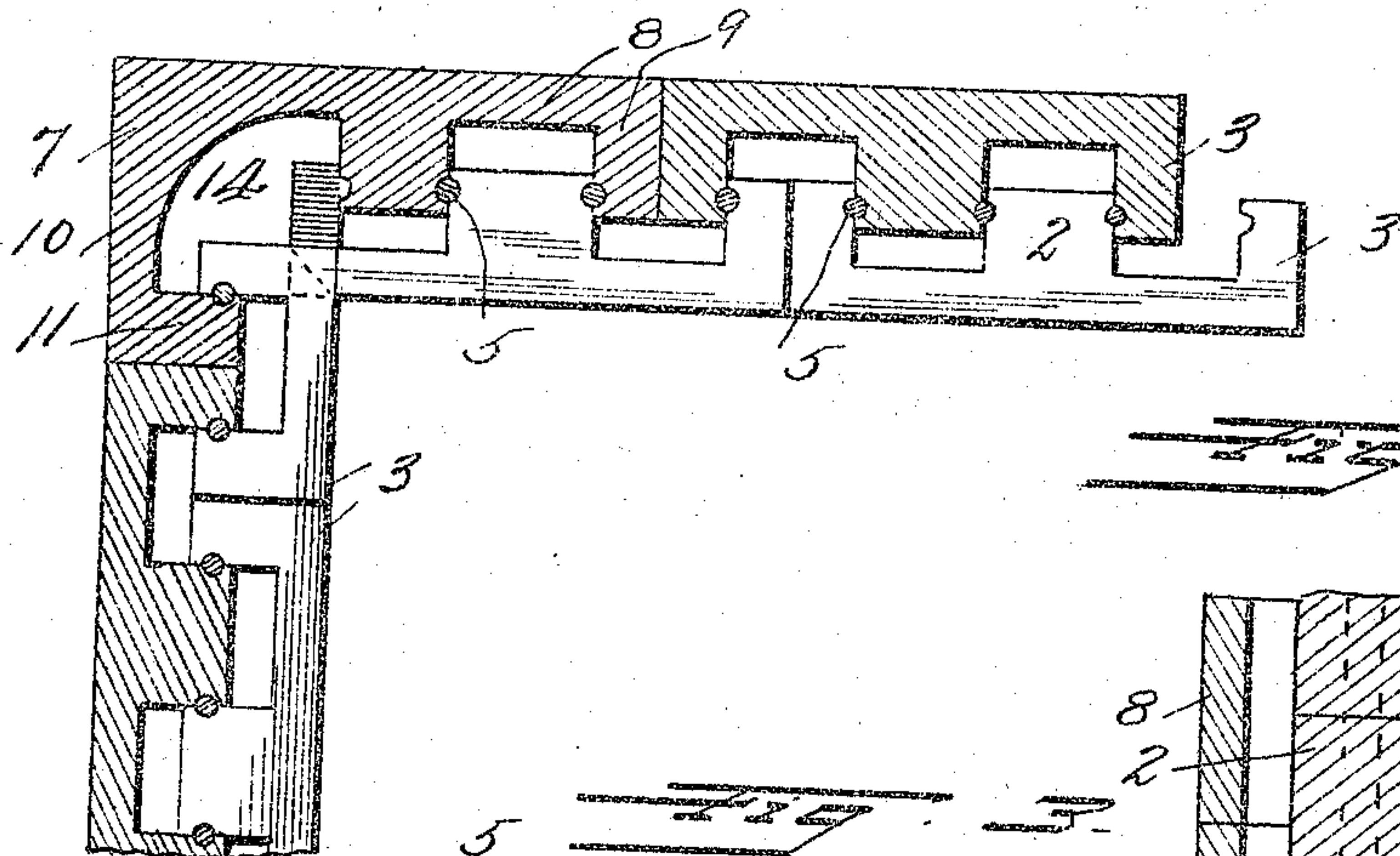
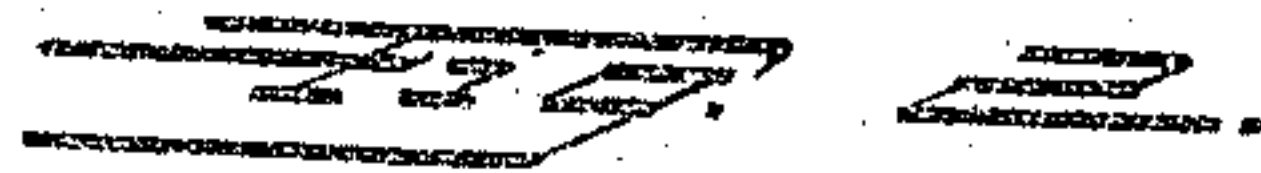
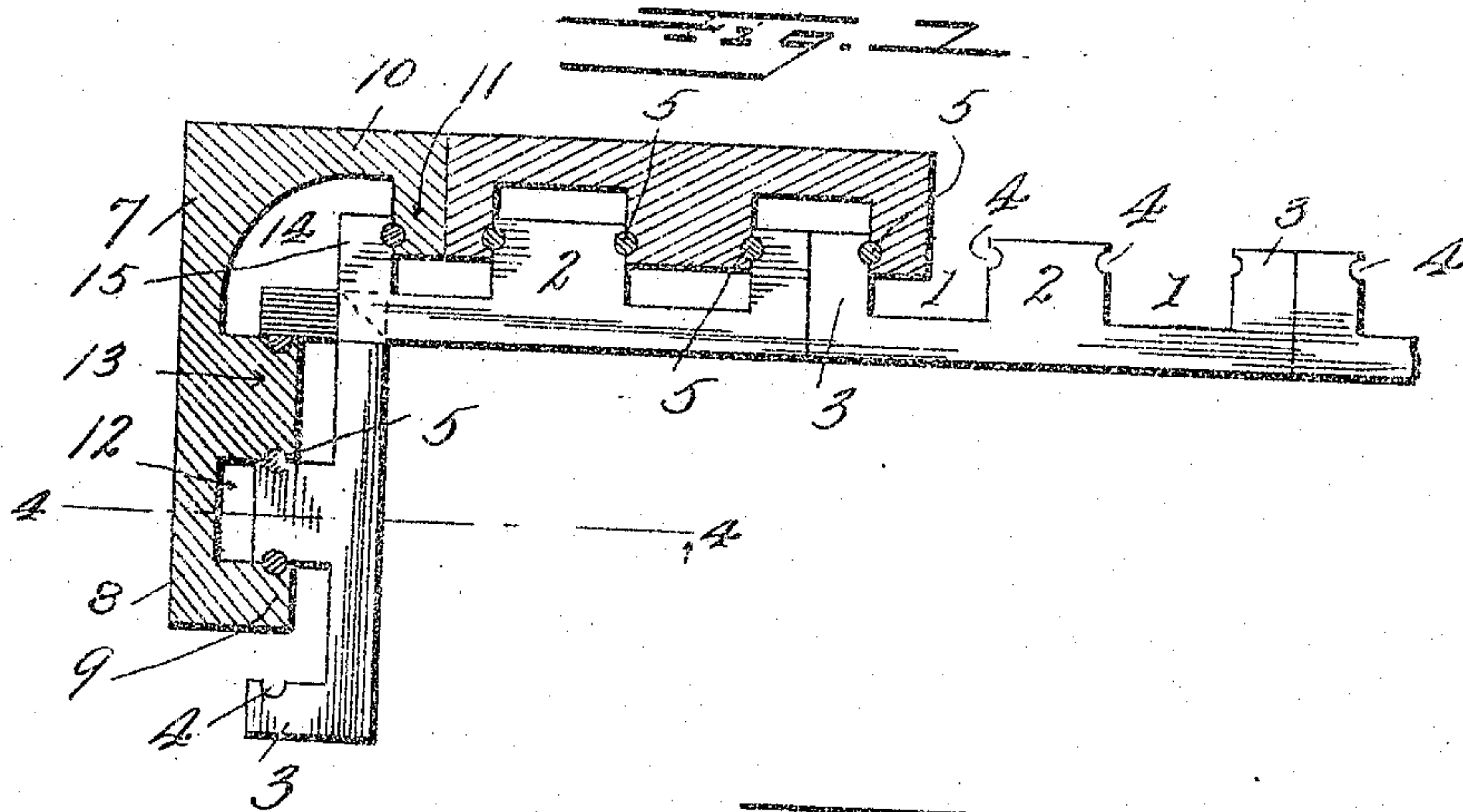


No. 867,954.

PATENTED OCT. 15, 1907.

G. E. DAVIS.
WALL CONSTRUCTION.
APPLICATION FILED DEC. 27, 1906.

2 SHEETS—SHEET 1.



Witnesses
C. H. Davis.
H. E. Moore

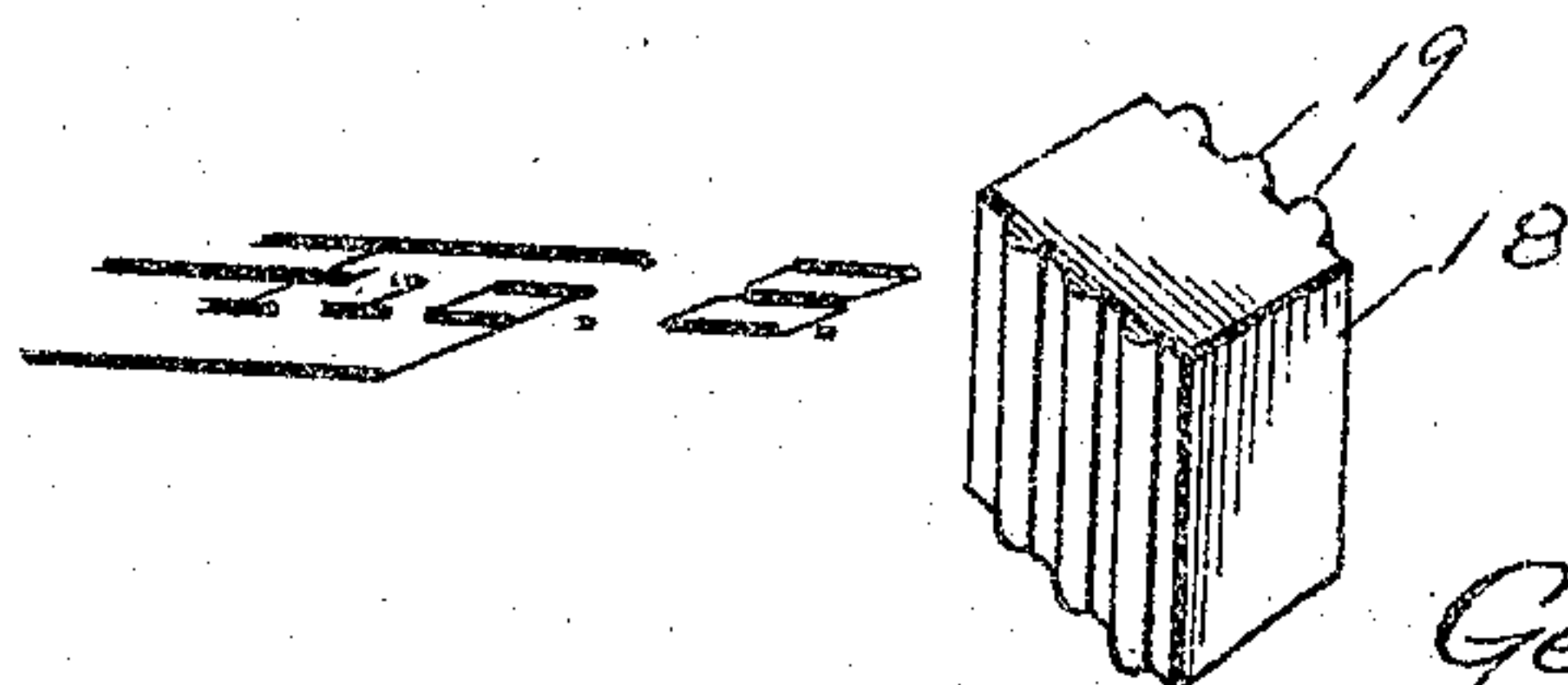
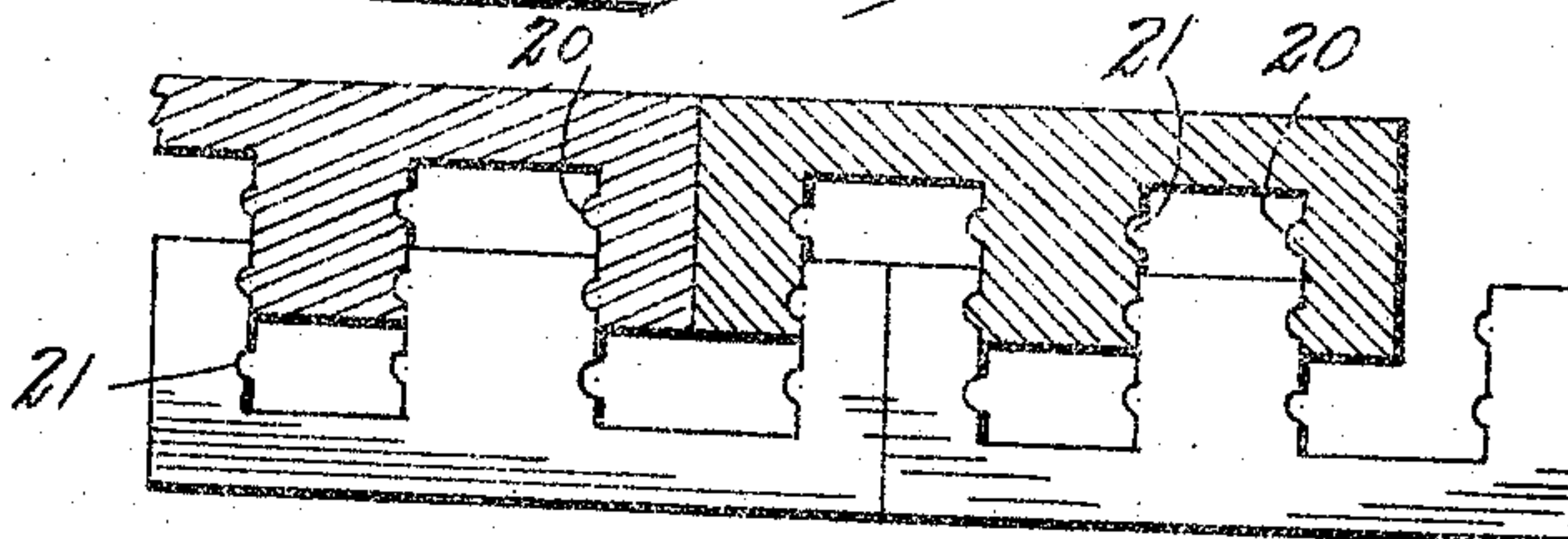
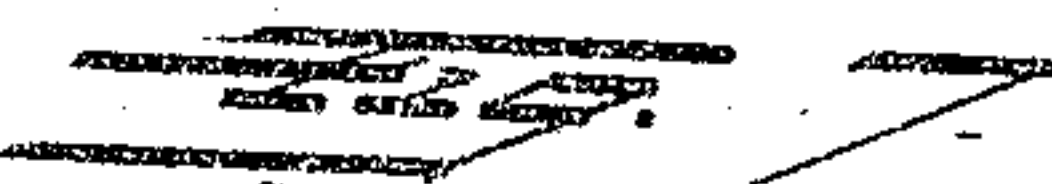
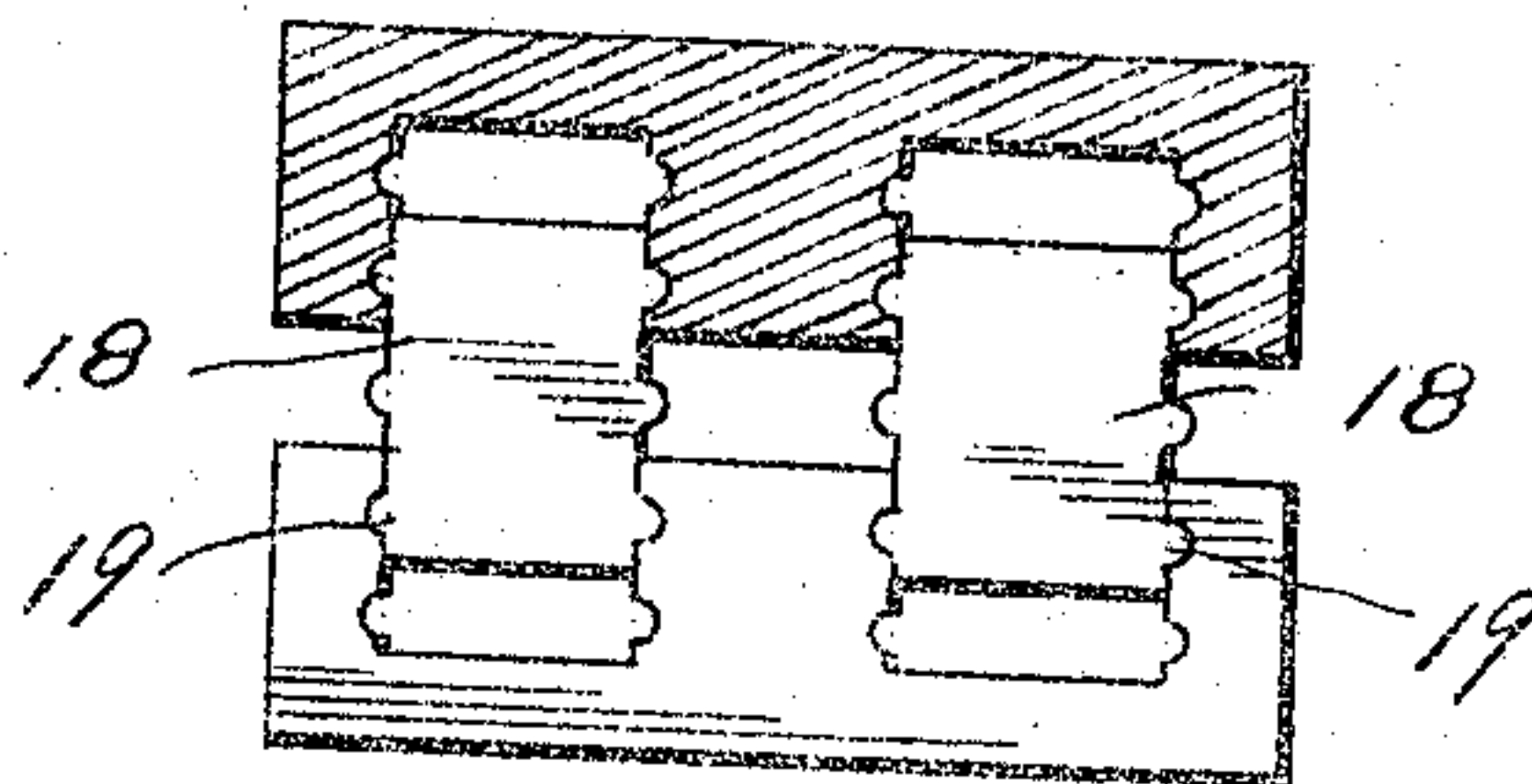
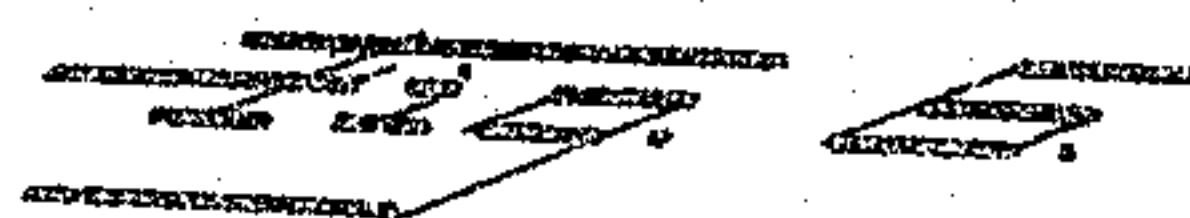
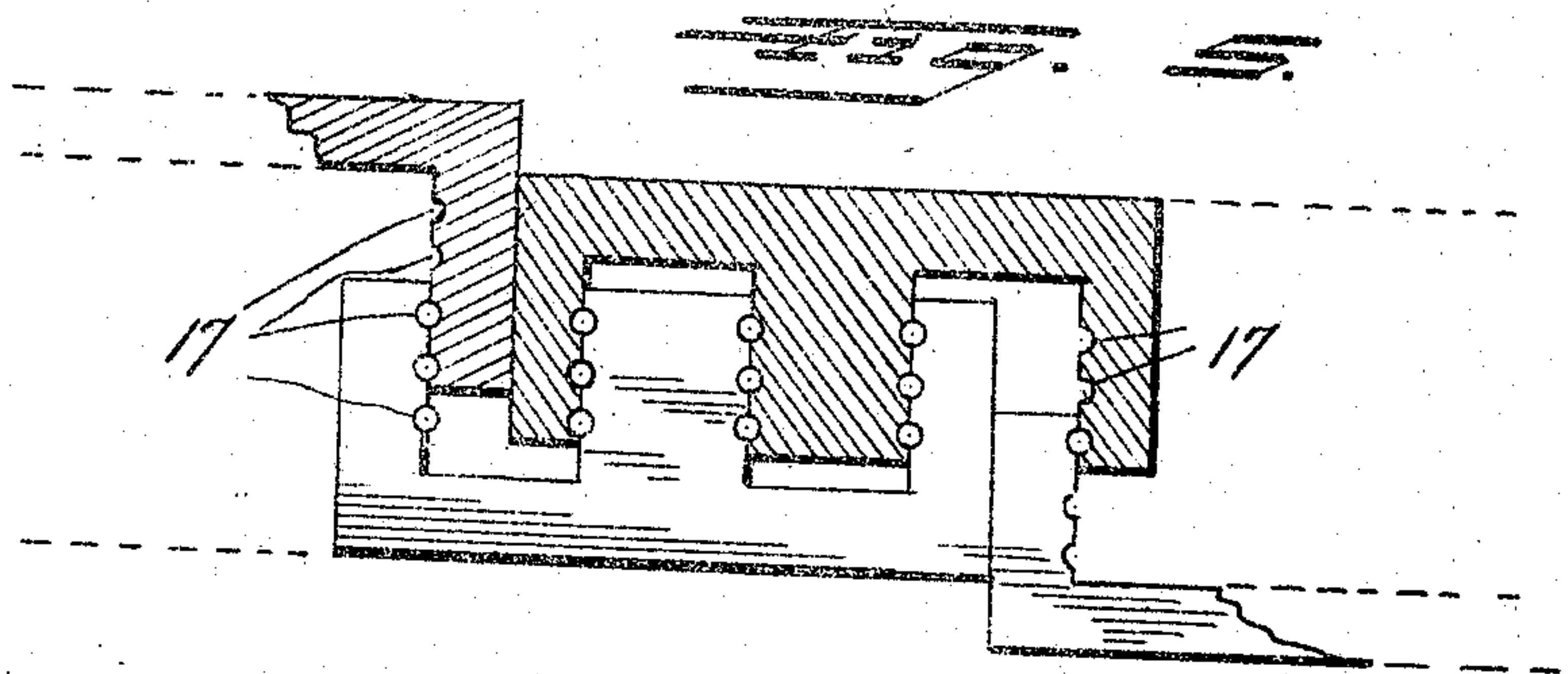
George E. Davis.
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No. 867,954.

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APPLICATION FILED DEC. 27, 1906.

2 SHEETS—SHEET 2.



Witnesses

C. K. Davis

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UNITED STATES PATENT OFFICE.

GEORGE E. DAVIS, OF DUBUQUE, IOWA.

WALL CONSTRUCTION.

No. 867,954.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed December 27, 1906. Serial No. 349,607.

To all whom it may concern:

Be it known that I, GEORGE E. DAVIS, a citizen of the United States, residing at Dubuque, in the county of Dubuque and State of Iowa, have invented certain new and useful Improvements in Wall Construction, of which the following is a specification.

My invention relates to improvements in wall construction, and has for its object to provide a ventilated wall having continuous air spaces at every point in the wall so that the wall will be waterproof, fireproof and frostproof, and to provide a wall having the above attributes, of simple, inexpensive and substantial construction.

Another object of my invention, is to provide a building unit for walls and the like which will be extremely simple and durable and which while not of hollow formation itself, will in combination with similar units, form a practical and efficient ventilated wall.

A further object of the invention, is to provide building units by means of which walls of varying thicknesses may be formed, to suit different requirements, in which the dead air spaces are continuous throughout the wall, the units having such interlocking connection that the building or wall is practically indestructible.

With such objects in view, my invention comprises a wall embodying interlocking units so assembled that continuous air spaces are formed at all points in the wall both in a vertical and horizontal direction, and it further consists in certain other novel features of construction, combination and arrangement of parts substantially as herein disclosed.

Figure 1, is a plan view of the outer and inner courses to my improved wall, the outer course being shown in section. Fig. 2, is a similar view of a portion of the wall, this view being of the next course above or below the one shown in Fig. 1. Fig. 3, is a similar view of a portion of the wall, in which a shorter corner block is employed in the inner course. Fig. 4, is a vertical sectional view through a wall constructed in accordance with the invention, taken on the line 4—4 of Fig. 1. Fig. 5, is a plan view with the outer course shown in section to illustrate a slightly modified form of the invention, in which the building units are capable of lateral adjustment to vary the width or thickness of the wall. Fig. 6, is a similar view of a slight modification of the invention, in which an intermediate core block is used to secure the inner and outer courses together. Fig. 7, is a like view of a modified form of integral locking means for securing the inner and outer courses together. Fig. 8, is a perspective view of one of the intermediate core blocks employed in the construction shown in Fig. 6.

The building blocks or units which I am about to describe, may be made of cement, concrete, terra-cotta, tile, or in fact of any material which may be molded, cast or machined. The blocks composing the inner

and outer series of my wall, are of similar character so that they are interchangeable and may be assembled with ease. The blocks have formed near each end thereof, an angular recess 1, which thereby provides the central projection or extension 2, and the end tongues or extensions 3. The face of the three extensions on the block are on a level, and the recesses are each of the same width as the central extension, and the tongues on the ends of the block are each half the width of the recesses, so that when placed end to end, the meeting tongues on the ends of the adjacent blocks exactly fit in the recess of the corresponding block in the opposite course. As shown in the plan views, the blocks are arranged in inner and outer courses, and the blocks of the opposite courses alternate, so that the central projection of the block in one series engages the corresponding recess in the block of the opposite series, and the tongues on the ends of the adjoining blocks engage the corresponding recess in the block of the opposite series. Grooves or recesses 4 are formed in the inner walls of the interlocking tongues or projections, so that when the blocks are assembled, the corresponding grooves or channels form complete openings for the reception of the locking key 5. This locking key may be made of the same material as the blocks or of any other suitable material, and the complete openings may be circular as shown or of any other desired size or shape.

In building a wall in accordance with my invention, it is preferable to start the inner course with a block which is of less height than the regular blocks as shown at 6, in Fig. 4. By this arrangement, the outer and inner courses are arranged in staggered vertical series, so that the meeting edges of the opposite series are out of alinement, and the wall is thus locked together more securely. The corner block 7, is formed with a long arm 8, terminating in a tongue 9, and a short arm 10, terminating in a similar tongue 11. A recess 12, is formed in the long arm of the block thus providing the central projection of tongue 13, the tongues of this block being of a width corresponding to the tongues on the other or regular blocks. An arc-shaped recess 14, is formed in the inner wall at the bend of the block to receive the interlocking tongues on the ends of the corner blocks in the inner course. The end tongues on the inner course end-blocks, are of half the thickness of the body of the block as at 15, so that these reduced portions mortise or rest one upon the other as shown in Figs. 1, 2, and 3. In building a wall or other structure, the blocks in both the inner and outer courses are arranged to alternate in all directions, so that the adjoining ends of the blocks in one series are engaged in one of the angular recesses of a block in the opposite series or course, and the blocks in the next course above or below, are arranged so that an integral portion alternates with the meeting-ends of the blocks

in the other course. The horizontal meeting edges of the blocks are also arranged in staggered series so that the wall is securely tied together to form a substantial unit.

5 Where it is of advantage to anchor the blocks to the foundation, rods 16, shown in Fig. 4, or cables, or chains may be secured to the foundation and passed up through the key-ways in the blocks so that the blocks are securely locked together and as the rods or similar
10 fastenings extend the full height of the wall, the wall is thereby securely anchored upon the foundation. This construction is useful where there is great stress brought to bear upon the wall.

Where walls of various thicknesses are to be built,
15 it is advantageous to form a series of spaced grooves or keyways in the walls of the interlocking tongues of the blocks as shown at 17, in Fig. 5. The walls may thus be constructed of any desired thickness by varying the mesh of the interlocking tongues so that any one
20 or all of the series of key-ways coincide. Varying sizes of air spaces are thus also provided to suit different climatical conditions.

The inner and outer courses may be tied together with the blocks in alinement, by using the core blocks
25 18, shown in Fig. 6, the said blocks having locking ridges or ribs 19, on their lateral edges to engage the grooves formed in the walls of the tongues on the blocks.

To simplify the construction still further, the locking keys may be dispensed with, as illustrated in Fig. 7,
30 the opposite inner walls of the interlocking tongues being formed with corresponding tongues 20, and grooves 21, which interlock with the alternating series of grooves and tongues respectively in the block of the opposite course.

35 In corner construction, where the blocks in the inner course do not finish or come out even, a short corner block 22, may be used, such a construction being illustrated in Fig. 3. This short corner block has the central depression or recess 23, to receive the interlocking
40 tongue or tongues of the blocks in the opposite or outer course, and the end tongues 24, of half size.

From the foregoing description taken in connection with the drawings, the many advantages and uses to which my wall construction may be applied will be
45 readily appreciated, and it will be evident that I have accomplished all the results herein set forth as the objects of the invention.

I claim:

50 1. A building block having a central projection and tongues on the ends thereof, the projection and tongues

having plane sides disposed at right angles to the body of the block, the width of the projection and intervening spaces between the tongues, being equal, the end tongues being of half the width of the central projection there being bonding grooves formed in the inner walls of the end tongues and in corresponding positions on the opposite side walls of the central projection these bonding grooves and keys being located near the ends of the lateral projections of the blocks. 55

2. A building block having a central projection and tongues on the ends thereof with recessed portions between the central projection and end tongues, the projection and tongues having plane sides disposed at right angles to the body of the block, bonding grooves formed in corresponding positions near the outer edge on the inner walls of the tongues and side walls of the central projection, the width of the central projection and recessed portions being equal, and the end tongues being of half the width of the central projection and intervening recesses. 60

3. A wall comprising inner and outer courses of interchangeable interlocking units, each unit having a central projection and end tongues spaced therefrom, the units in the opposite series alternating so that the central projection of one block enters between the central projection and end tongue of the opposite block, and the end tongues of two adjoining blocks abut and enter between the projection and end tongue of the block in the opposite series the blocks in the opposite courses meshing only partially so as to leave alternating air spaces throughout the entire breadth of the wall and bonding grooves and keys located near the ends of the lateral projections on the blocks to hold them in spaced relation. 70

4. A wall comprising inner and outer courses of interchangeable interlocking units, each unit or block having a central projection and end tongues spaced therefrom, the units in the opposite series alternating so that the central projection of one block enters between the central projection and end tongue of the corresponding block in the opposite course, and the end tongues of two adjoining blocks abut and enter between the projection and end tongue of the block in the opposite course, the blocks of the opposite courses only interlapping partially so that air spaces are provided between the interlocking tongues and projections and the inner face of the block in the opposite series, the blocks having bonding grooves formed in the meeting edges thereof and keys entered in the bonding openings formed by said grooves. 80

5. A corner construction for walls comprising a corner block having a long and an angular short arm, end tongues and a central projection on the block, the block on the inner course having corresponding end tongues and a central projection to mesh with those of the corner block and provide air spaces the corner ends of the blocks in the inner series being each of alternate reduced thickness so as to intermesh and rest one upon the other. 90

In testimony whereof I affix my signature in presence of two witnesses. 95

GEORGE E. DAVIS.

Witnesses:

N. P. COLLIS,
J. J. INGLE.

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