

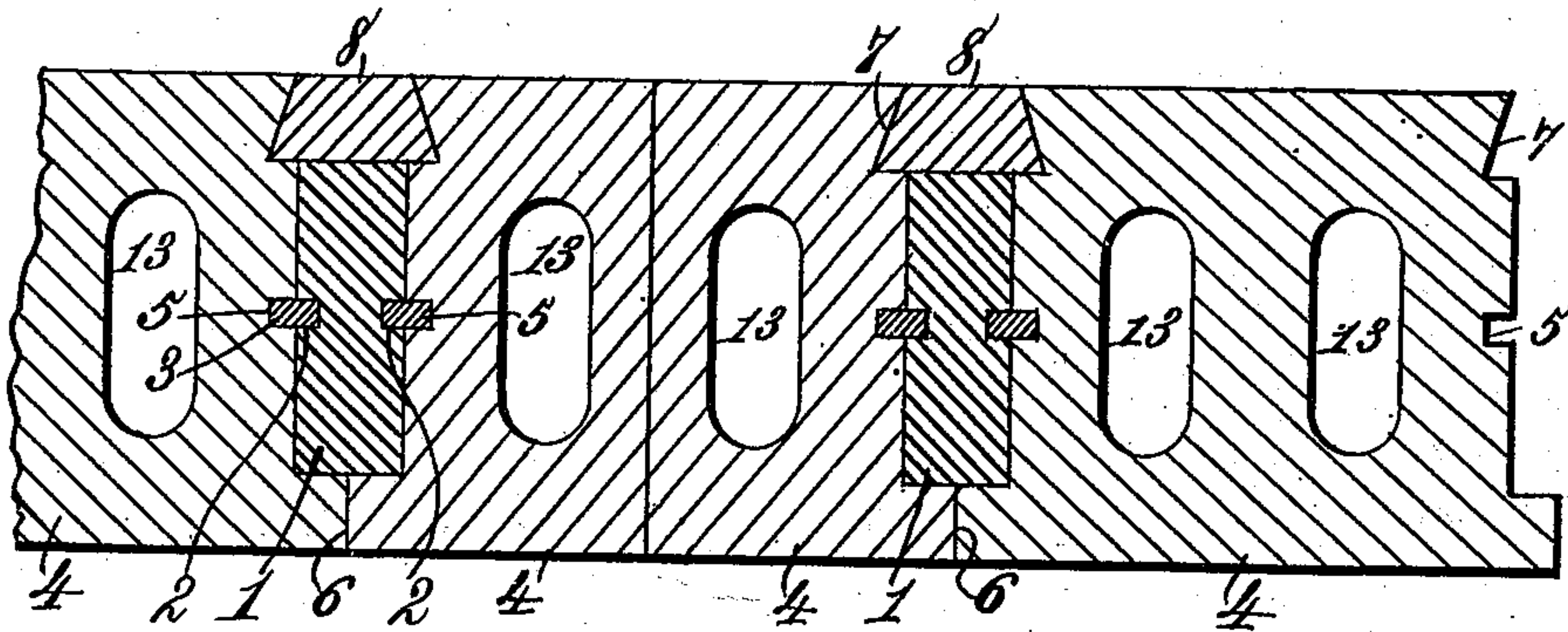
(No Model.)

J. W. BEAUMONT.  
CONCRETE WALL.

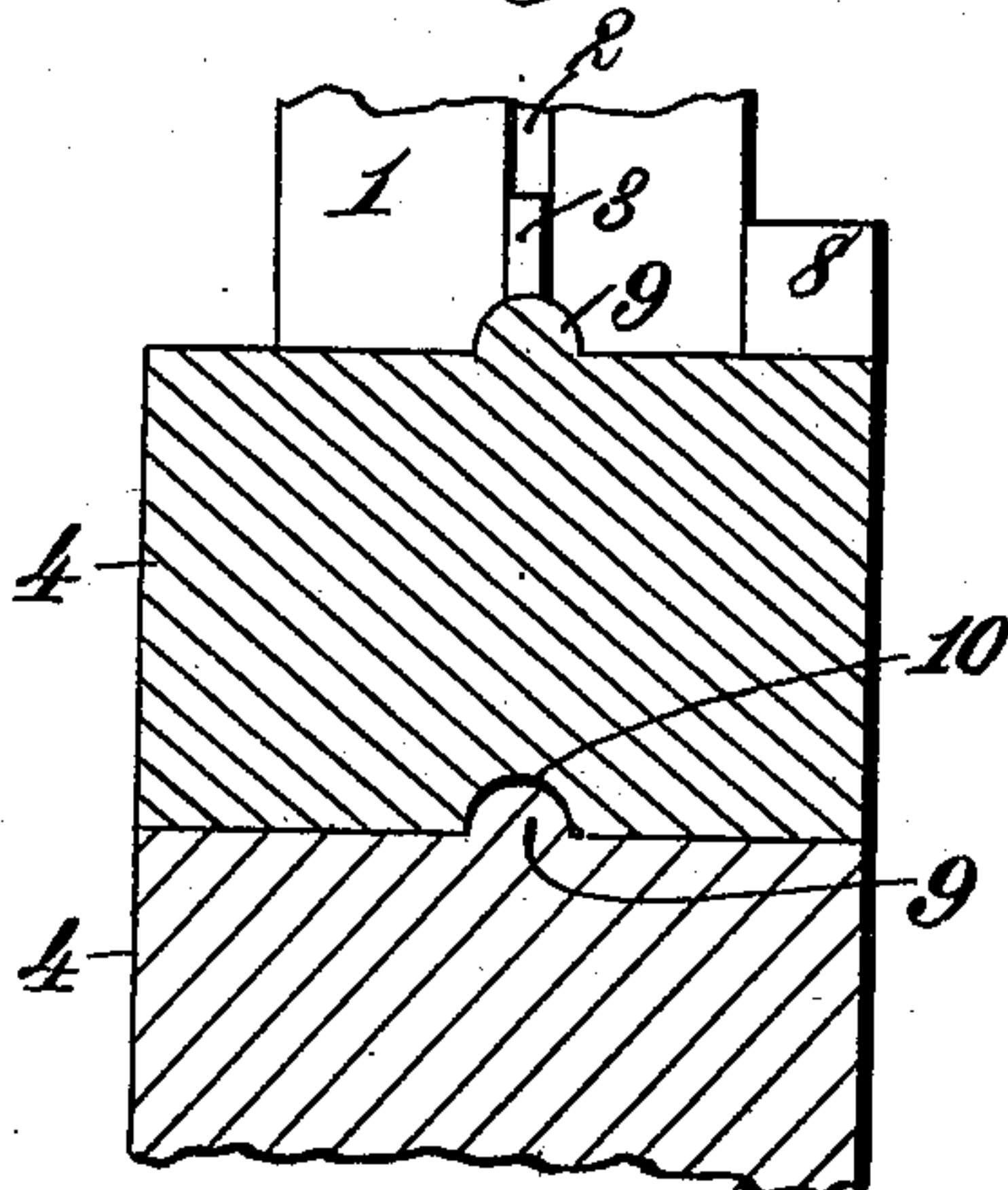
No. 504,194.

Patented Aug. 29, 1893.

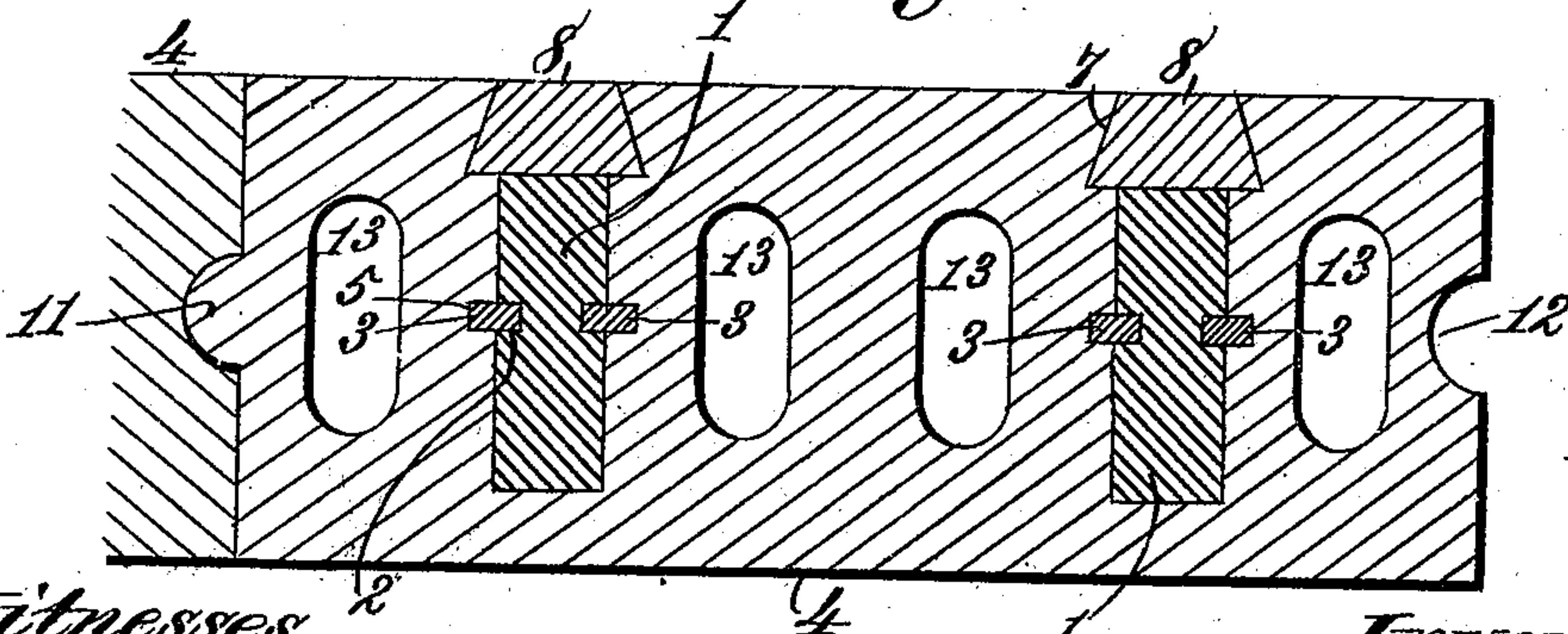
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN W. BEAUMONT, OF ST. LOUIS, MISSOURI.

## CONCRETE WALL.

SPECIFICATION forming part of Letters Patent No. 504,194, dated August 29, 1893.

Application filed February 6, 1892. Renewed July 11, 1893. Serial No. 480,175. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. BEAUMONT, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented new and useful Improvements in Concrete Walls, of which the following is a specification.

This invention relates to the construction of concrete walls, floors and ceilings and particularly to that class of studding-walls or partitions in which the studding is surrounded by concrete blocks keyed to each other and to the studding in such a manner as to form a strong fire-proof partition wall at comparatively small expense.

The invention consists in the construction of a fire-proof concrete studding-wall as hereinafter described and claimed.

In the annexed drawings—Figure 1 represents in horizontal section a portion of a concrete wall constructed according to my invention. Fig. 2 is a vertical transverse section of the same showing how the superposed courses of concrete blocks may be connected by tongue and groove joints. Fig. 3 is a horizontal section showing how the ends of adjacent blocks may be provided with tongue and groove joints.

Referring to the drawings, the numeral 1 designates studding posts which may be disposed at any suitable or convenient intervals as usual in studding walls or partitions. These studs or posts 1 may be composed of wood, iron or other metal, or any other appropriate material according to the character of the proposed structure. As contemplated by my invention each stud is provided on one or more sides with a vertical longitudinal groove 2 for reception of a key or keys 3 to assist in securing in place the concrete blocks 4 that are to complete the wall.

The concrete blocks 4 may be molded from any suitable composition of matter such as commonly employed in the preparation of concrete for building purposes. In each block is a recess 5 corresponding with the groove 2 of the stud 1 and, like said groove, adapted to receive a portion of one of the keys 3 that assist in securing the block 4 in place.

In Fig. 1, I have shown separate concrete blocks 4 on the opposite sides of a stud, the said blocks being approximately L shaped and

so arranged that when in position their short arms meet at the line 6 on one side of the stud. It is obvious, however, that the division line 6 may be dispensed with and each block be molded in such form that it will be adapted to embrace the opposite sides of one or more studs as shown in Fig. 3. The long arms of the concrete block or blocks 4 extend beyond the stud, when in position, as shown. In the inner side of each long arm, at its end, is a dovetail recess 7 which together with the corresponding recess of the other arm serves to engage a key 8 that fills the space between the ends of the block or blocks and locks said ends together on one side of the stud.

The wall is built up by laying successive courses of the concrete blocks 4 so as to surround the studding, as shown, and as each course is laid the keys 3 and 8 are inserted in place as required. These keys 3 and 8 may have a length equal to the height of one or two blocks 4, as preferred. In practice I may provide the upper and lower sides of the blocks 4 with tongues 9 and grooves 10 Fig. 2, to interlock with corresponding parts of adjacent blocks. The ends of the blocks 4 may also be provided with tongues 11 and grooves 12 Fig. 3 for a similar purpose. These tongues and grooves, however, are not essential. To economize material and lessen the weight of the concrete blocks 4 they may be molded with vertical openings 13 disposed at suitable points so as not to impair the strength of the wall. These vertical openings 13 will be arranged at corresponding points in the superposed blocks so as to form suitable communicating passages for inclosing gas and water distributing pipes.

I have shown the keys 3 as being rectangular in form and the keys 8 as having wedge shaped or inclined sides, but while these forms of keys are well adapted to their intended purposes and are such as to permit a ready fitting of the keys, it is obvious that the shape of the keys may be varied to suit the convenience of application.

It will be seen that a concrete wall of the character described in which the studding is completely covered with concrete blocks keyed in place, as shown, can be readily constructed without great expense and will be durable and substantially fire-proof. A wall of this con-



struction will be impervious to heat, cold and dampness; affords no lodgment for vermin or the germs of disease; and possesses the further advantages of great strength and durability.

5 What I claim as my invention is—

1. A wall composed of studding, concrete blocks embracing the studding and each provided with a dovetail recess 7 which lies opposite the studding to which the block is applied, and a key 8, engaging each dovetail recess and arranged flush with the surface of the block, substantially as described.

15 2. In a concrete wall, the combination of studs provided on opposite sides with longitudinal grooves, concrete blocks surrounding said studs and having recesses in their sides and in their adjacent ends, and keys inserted

in said grooves and recesses, substantially as described.

3. In a concrete wall, the combination of 20 the studs 1 having longitudinal grooves 2, the concrete blocks 4 provided with recesses 5 and 7 and arranged to surround the said studs, the keys 3 inserted in the grooves 2 and recesses 5, and the keys 8 inserted in the recesses 7, 25 substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

JOHN W. BEAUMONT. [L. S.]

Witnesses:

JOHN F. GREEN,  
W. B. HALE.