

J. CARR.
FORM FOR CONCRETE CONSTRUCTION.
APPLICATION FILED MAY 9, 1908.

925,080.

Patented June 15, 1909.

2 SHEETS—SHEET 1.

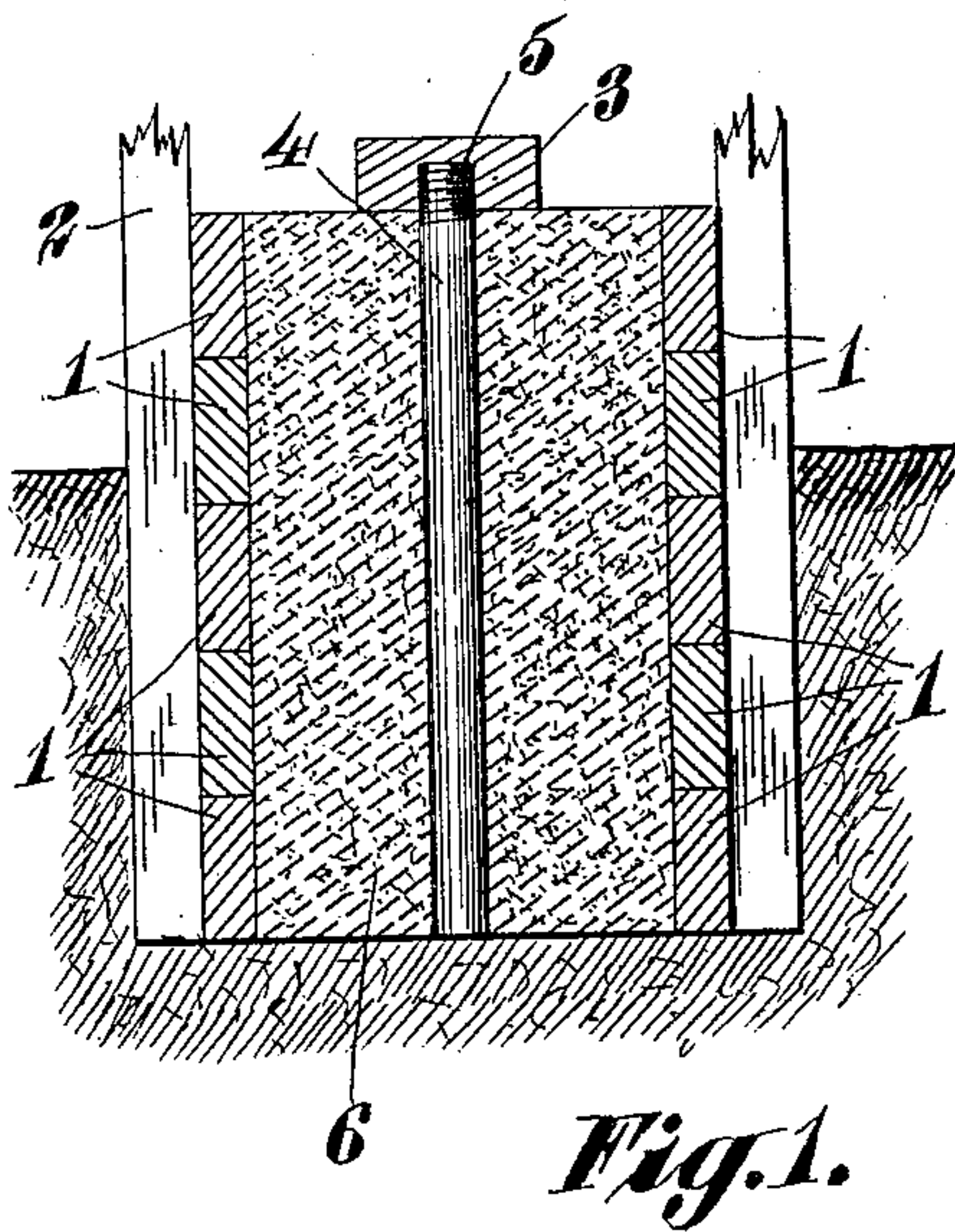


Fig. 1.

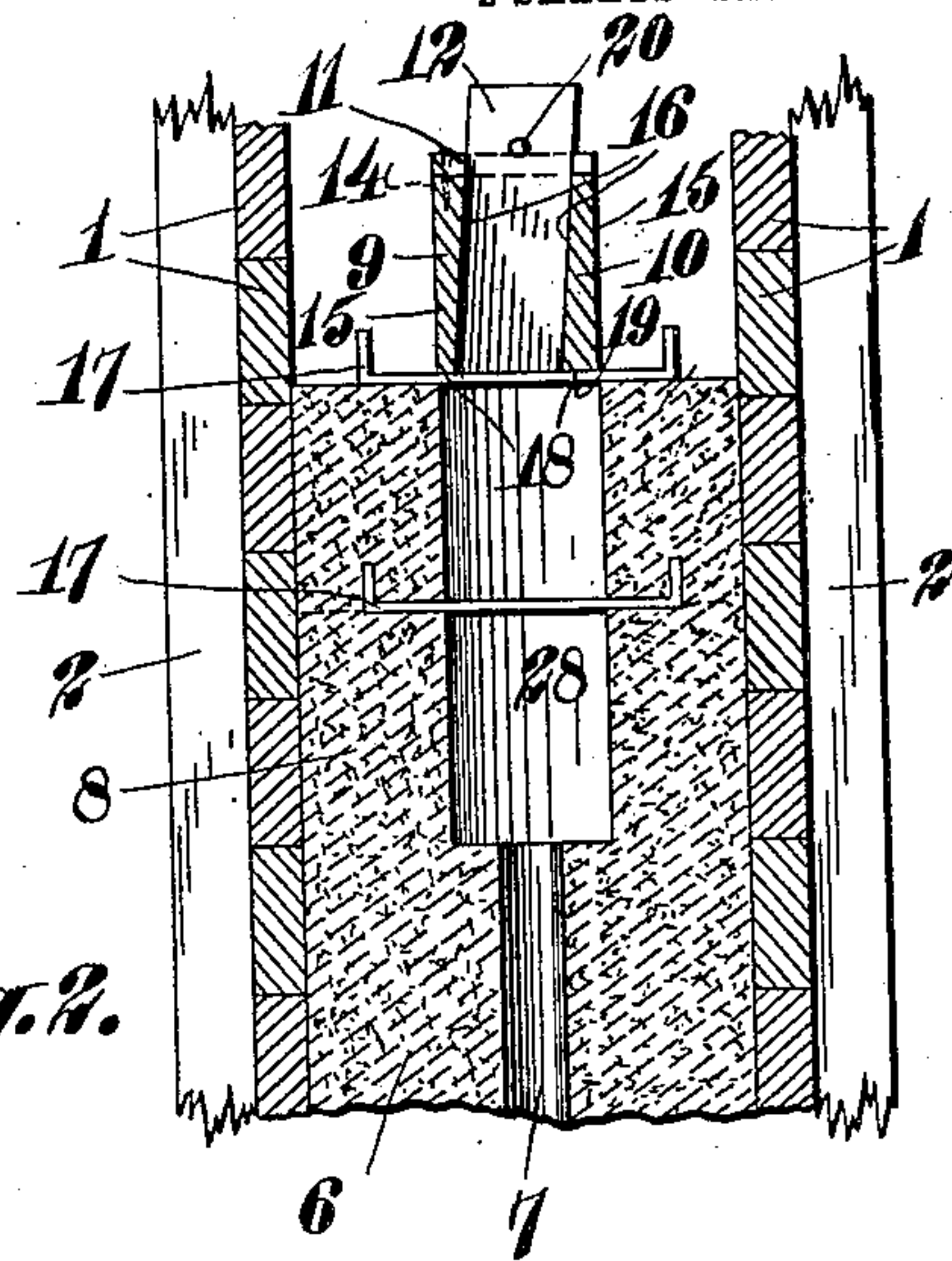


Fig. 2.

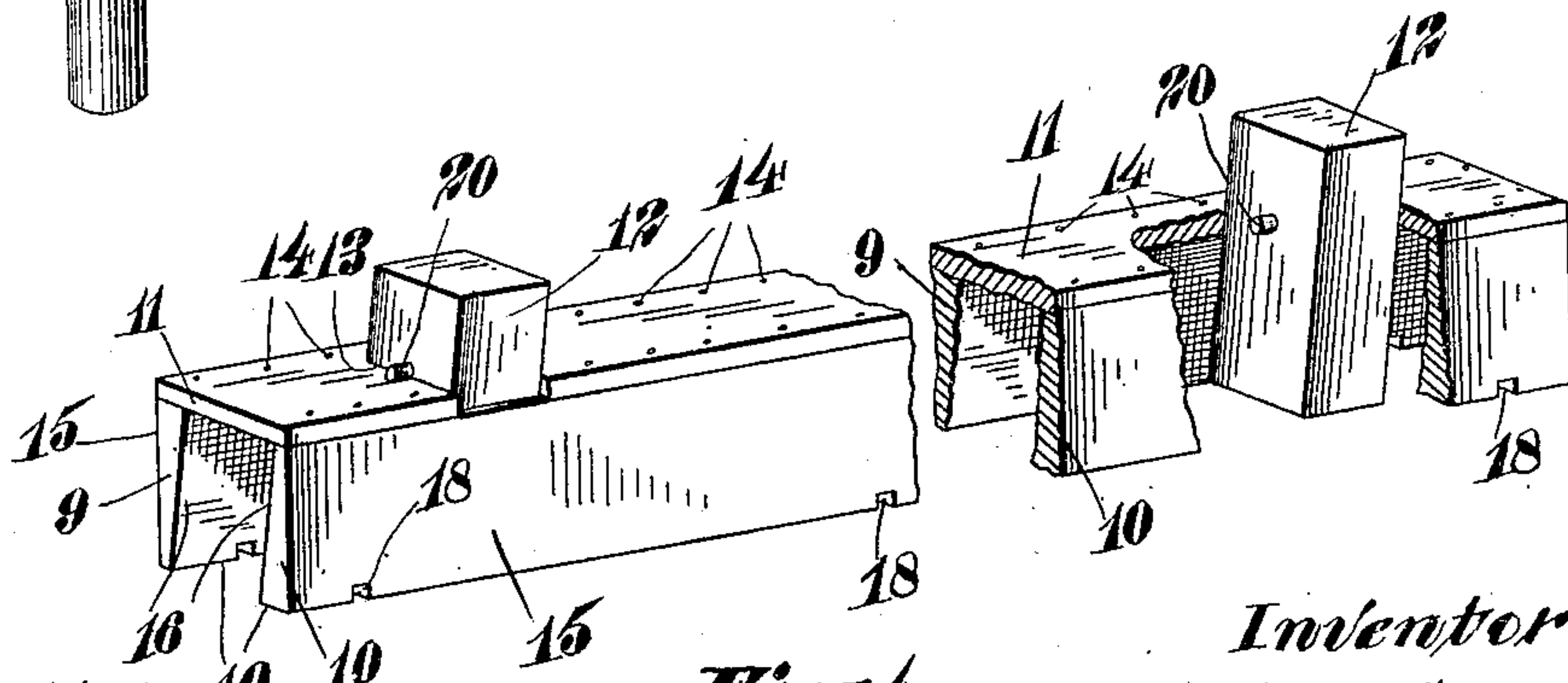
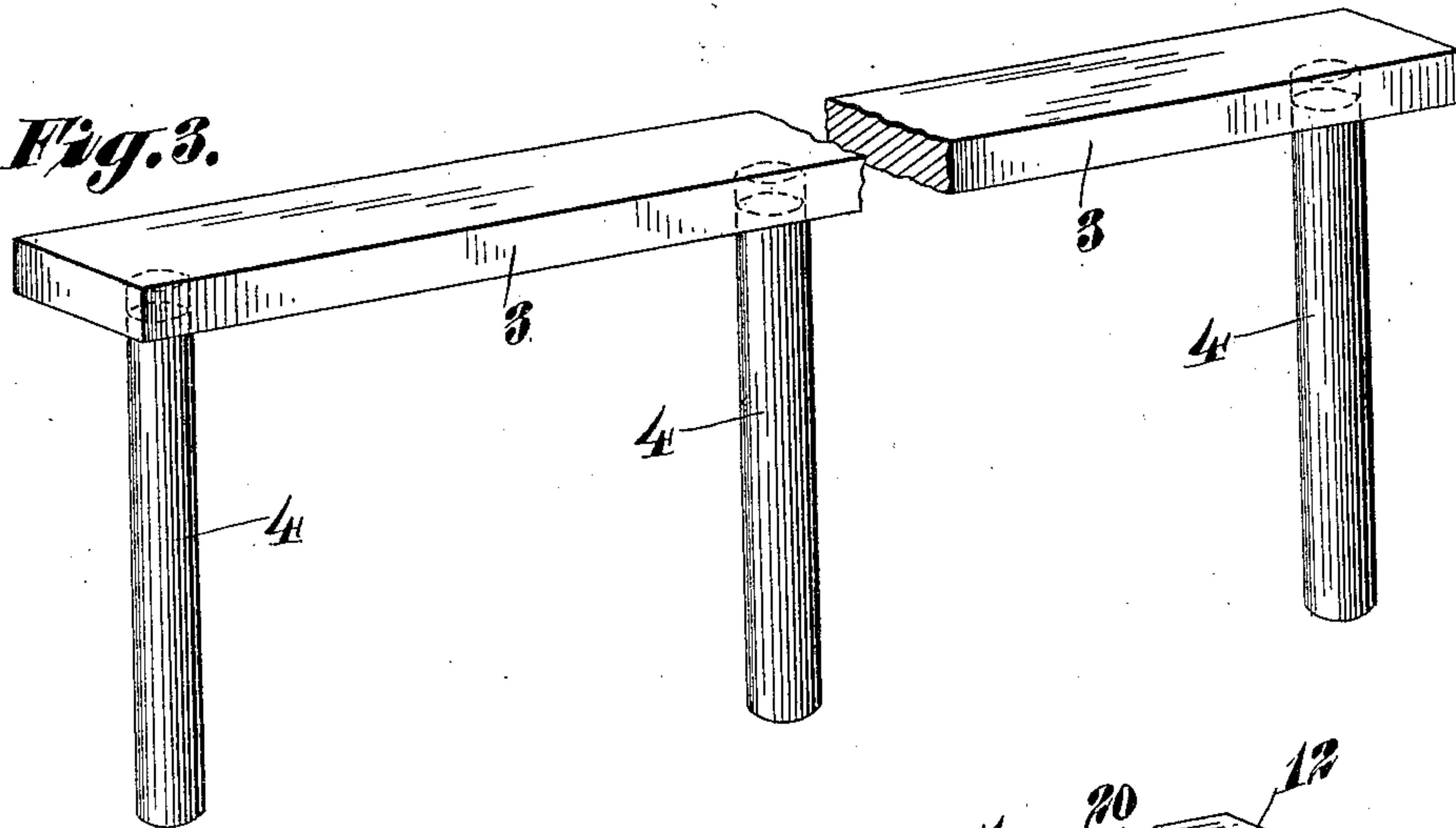


Fig. 3.

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2 SHEETS—SHEET 2.

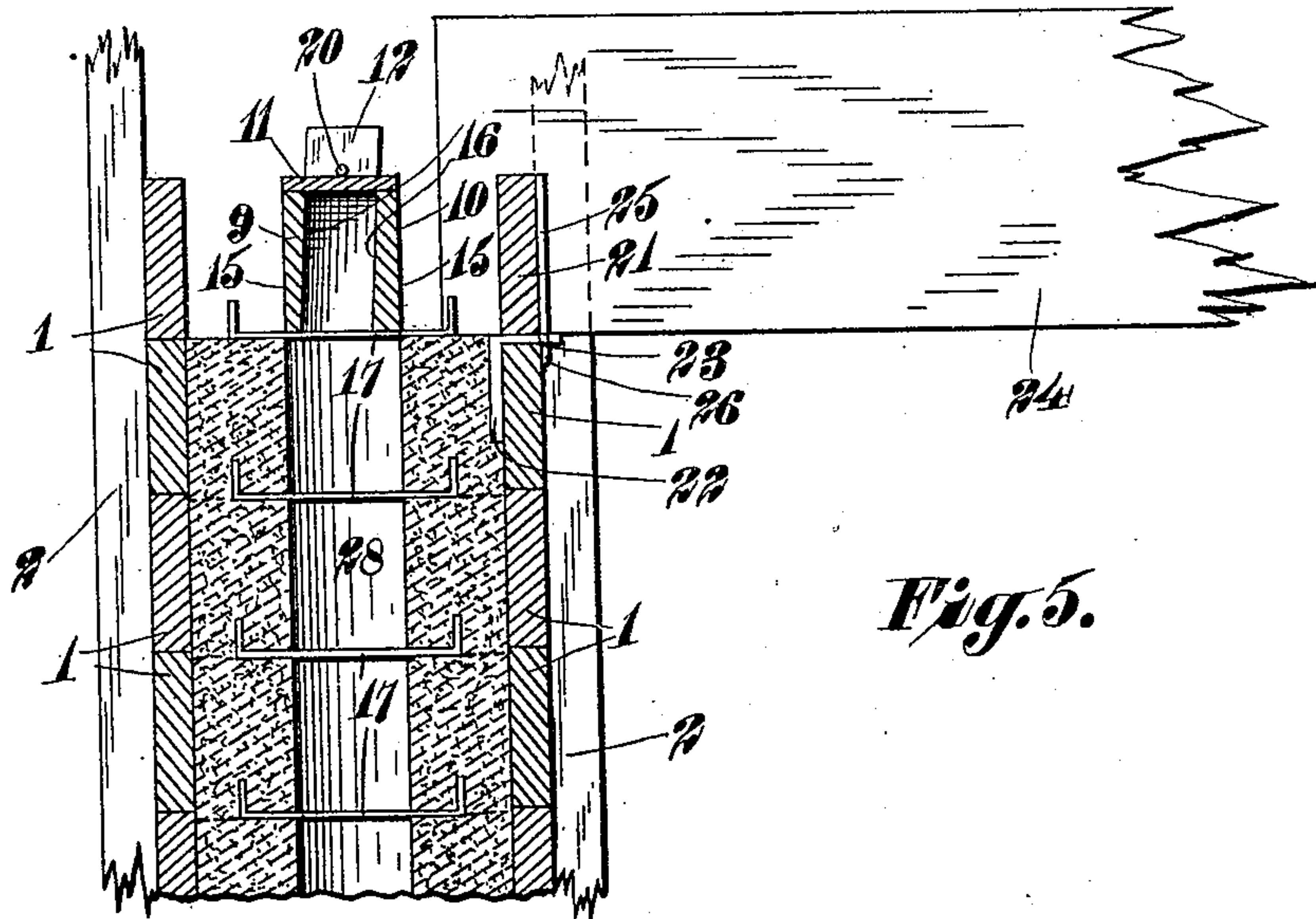


Fig. 5.

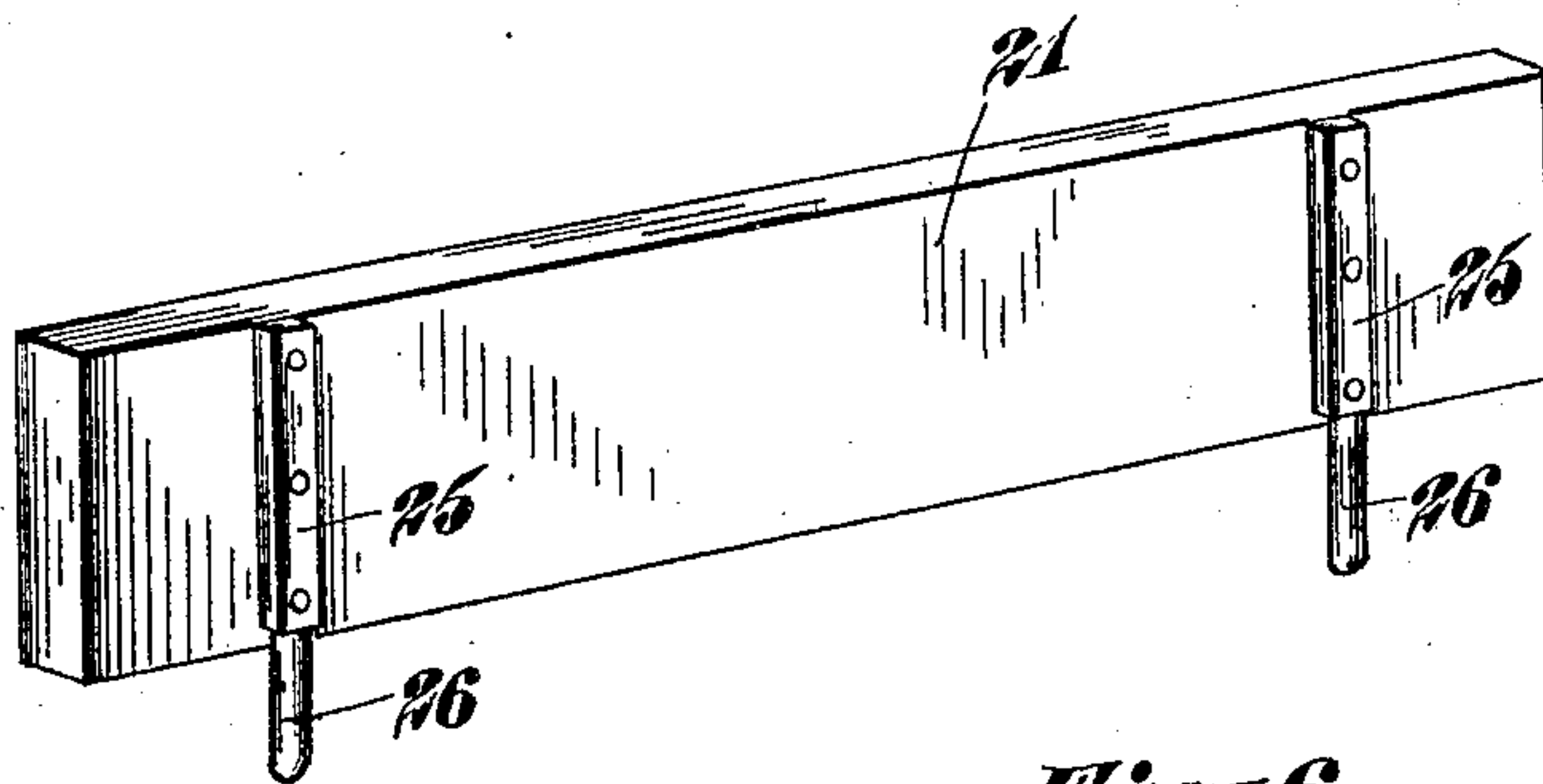
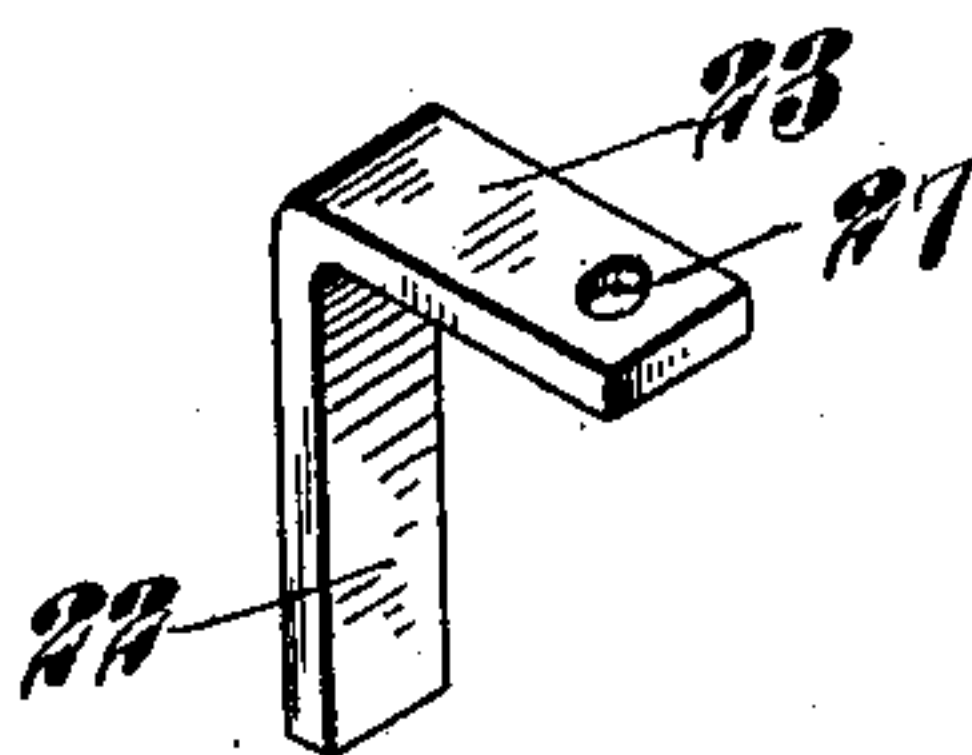


Fig. 6.

Fig. 7.



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UNITED STATES PATENT OFFICE.

JAMES CARR, OF CHICAGO, ILLINOIS.

FORM FOR CONCRETE CONSTRUCTION.

No. 925,080.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed May 9, 1908. Serial No. 431,848.

To all whom it may concern:

Be it known that I, JAMES CARR, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have

invented certain new and useful Improvements in Forms for Concrete Construction, of which the following is a specification.

My invention relates to molds for concrete construction, and particularly to molds for constructing hollow concrete walls.

The object of my invention, is to provide a mold for constructing hollow or double concrete walls, having a solid foundation perforated at intervals with vertical drain openings extending from the space between the sections of the wall to the bottom of the foundation, to prevent the accumulation of moisture at the bottom of the air space.

A further object of my invention, is to provide a form or mold as mentioned, which shall be of simple construction and readily used.

Other objects will appear hereinafter.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a vertical section of the portion of the mold used in the construction of the foundation, showing the foundation course completed, Fig. 2 is a similar view of the portion of the form used in the construction of the wall, illustrating two courses of the wall completed, and the form in position to receive the concrete or cement for the third course, Fig. 3 is a detail perspective view of the core used in the construction of the foundation, Fig. 4 is a perspective view of the core used for constructing the wall, Fig. 5 is a view similar to Figs. 1 and 2, illustrating the form as arranged at the point where the beams enter the wall, Fig. 6 is a perspective view of one of the form members such as used on the inner face of the wall between the beams, and Fig. 7 is a perspective view of one of the members for securing the form members mentioned, in place.

The mold comprises outer form walls suitably braced and cores for the hollow portions of the wall, and to form the drainage openings in the foundation. The form walls comprise longitudinally or horizontally disposed members 1, secured in place by the braces 2 of any ordinary or preferred form. The foundation core which is covered in a depending application comprises a longitudinal

member 3 to which are secured at intervals, depending members 4. The members 4 are preferably formed of small tubes such as gas-pipe, and are threaded into the member 3, as indicated at 5 in Fig. 1. After the foundation form walls 1 and the core are in position, the concrete is filled in and tamped, forming a solid foundation 6 perforated at intervals by the vertical drain openings 7 extending from top to bottom of the foundation, and which carry off all moisture which would otherwise accumulate in the hollow superimposed wall, and permit the moisture thus drained off, to be absorbed by the ground. After the foundation is sufficiently set, the core 3—4 is removed.

The foundation being completed, the wall core is set in position above the row of openings 7, and the outer form members 1 are continued to or slightly above the height of said core, and the concrete filled in and tamped, forming the first course of the wall. The core comprises a pair of longitudinal members 9 and 10, a top member 11, and a plurality of spacing members 12. The members 9 and 10 are arranged parallel and are spaced apart by the interposed vertical members or blocks 12, and the member 11 rests upon the upper edges of the members 9 and 10, and closes the opening between them intermediate of the members 12, the member 11 being recessed as at 13 to receive the members 12 and permit the same to project some distance above the same. The member 11 is secured to the member 9 as by the nails or screws 14, whereas the member 10 is unattached or loose from the remaining parts. The members 9 and 10 are preferably tapered in cross section, the taper of the two members being equal, but opposite, that is, the broad edge of the member 9 is at the top, while the broad edge of the member 10 is at the bottom. With this construction, the core presents the vertical and parallel outer faces 15—15, and the diagonal or slightly inclined parallel inner faces 16—16 against which the members 12 abut. By having the members 9 and 10 tapered, the members 12 are normally inclined and when pulling the latter upwardly to remove the form they will tend to assume a vertical position thereby forcing the members 9 and 10 slightly apart, making it easier to remove the form. It will be seen by reference to Fig. 4 that the member 11 snugly closes the core at the top and prevents the cement or

concrete from dropping through and choking the drain openings 7. After the course is set the members 12 are withdrawn, and the core collapsed, after which it may be readily removed without injuring the freshly set concrete. Metal ties or bonds 17 are then placed at intervals upon the upper face of the course, bridging the same. The core is then rested in position upon the bond 17 as illustrated in Fig. 2, and the lower edges of the members 9 and 10 are preferably notched as at 18, to receive the bonds, letting the lower edges 19 rest flush with the upper edge of the last completed course.

20 indicate pins or lugs on the members 12, which rest upon the upper face of the member 11, supporting the members 12 and preventing them from dropping through into the air space of the wall. It is obvious that where the beams are inserted in the wall, the inner form members 1, cannot be continuous as they are at other points, but must be formed of short sections reaching from beam to beam.

21 indicates one of the sections. The sections are held in position by small brackets inserted between the adjacent underlying member 1 and the wall, and lugs or pins on the section engaging said brackets. In Fig. 7 I have illustrated one of the brackets which is formed of a single strip of metal bent to form the arms 22 and 23 at right angles to each other. When the last member 1 is positioned beneath the beams and the concrete filled in, the arm 22 of the bracket is inserted between said member and the wall as shown in Fig. 5, the arm 23 resting upon and projecting beyond the upper edge of the member. Two of the brackets are inserted between each pair of beams. 24 indicates a beam. Secured to the outer face of the section 21 are a pair of irons 25 terminating in pins 26 which extend downwardly below the lower edge of the section, and which engage apertures 27 formed in the arms 23 of the brackets. The sections 21 are seldom as high as the beams, hence similar sections are superimposed upon the first and are secured in position in like manner, the vertical arm 22 of the bracket being inserted between the

lower section 21 and the adjacent portions of the wall. After the members 21 reach the top of the beam, the members 1 are substituted and continued upwardly until the position is reached where other beams are to be secured in the wall.

The air space 28 in the wall may be made of any width by varying the width of the core. This may be readily done by substituting wider or narrower members 12 as it is desired to increase or decrease the size of the space.

Having described my invention what I claim as new, and desire to secure by Letters Patent, is:

1. A form for constructing concrete walls comprising outer form walls, and a core, said core comprising a pair of parallel longitudinal members arranged upon their edges, and equally and oppositely tapered, a plurality of spacing blocks arranged between said members and a horizontal member closing the spaces between said longitudinal members and between said spacing blocks, substantially as described.

2. In a form for constructing concrete walls, an inner form wall comprising a plurality of horizontally disposed members arranged edgewise one upon the other and extending upwardly to the floor beams, short horizontally disposed members arranged above and upon the top of the last said members, and in the same plane therewith and means for securing the same in position, said means comprising strap irons secured to the upper member and having downwardly extending pins projecting below the lower edge of said member, and angle irons fixed to the inner face of the member below and projecting outwardly over its upper edge and provided with an eye in its end to receive said pin, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES CARR.

Witnesses:

JANET E. HOGAN,
HOWARD S. AUSTIN.