

929,470.

R. N. NEIL.
CONCRETE MOLD.
APPLICATION FILED JAN. 25, 1909.

Patented July 27, 1909.
2 SHEETS—SHEET 1.

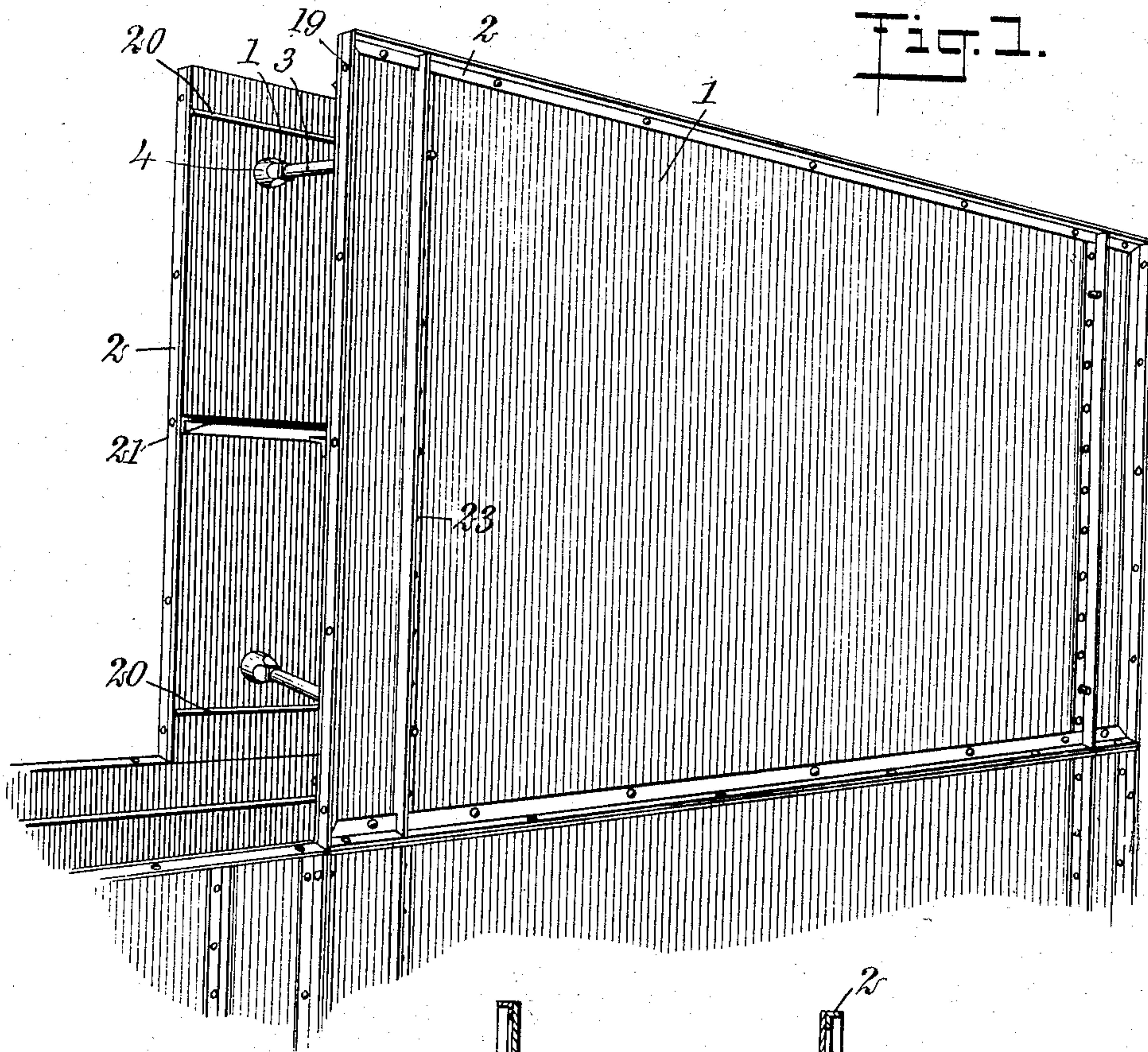
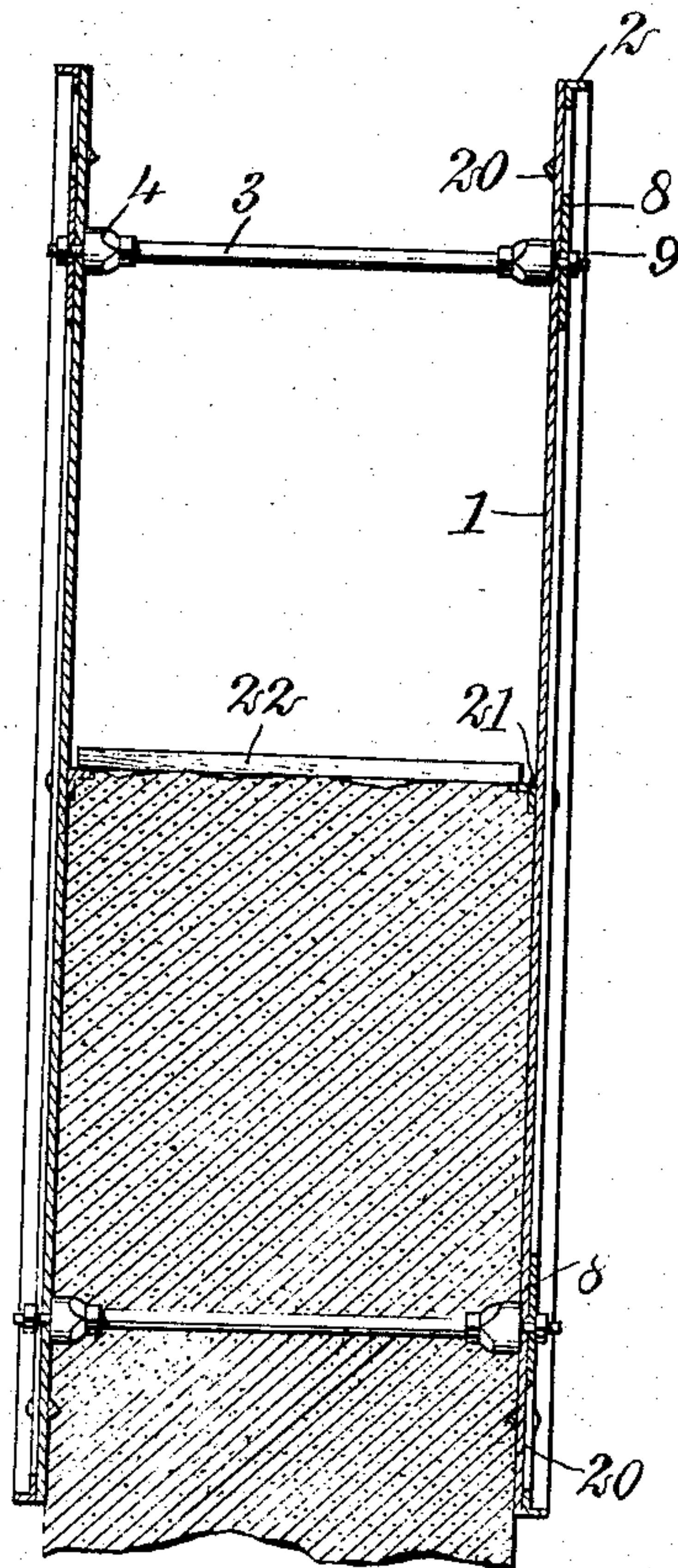


Fig. 2.



WITNESSES

E. B. Marshall
E. B. Marshall

INVENTOR

Roy N. Neil
BY *Mum Co.*

ATTORNEYS

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2 SHEETS—SHEET 2.

Fig. 3.

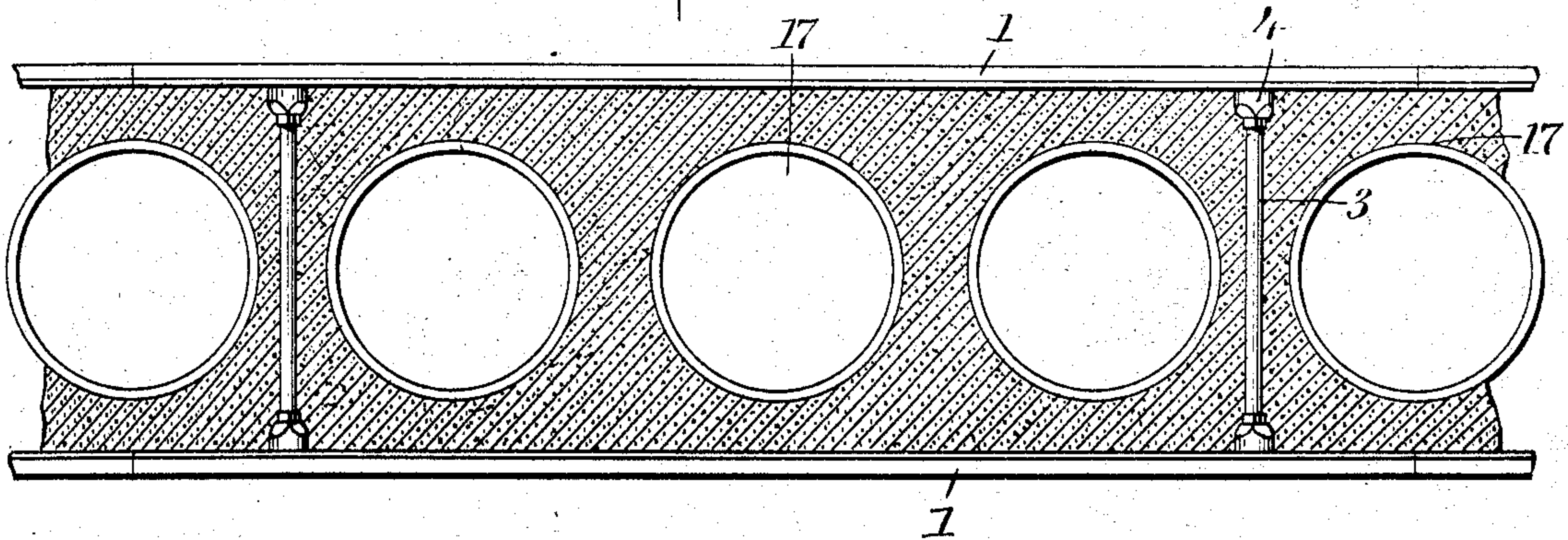


Fig. 4.

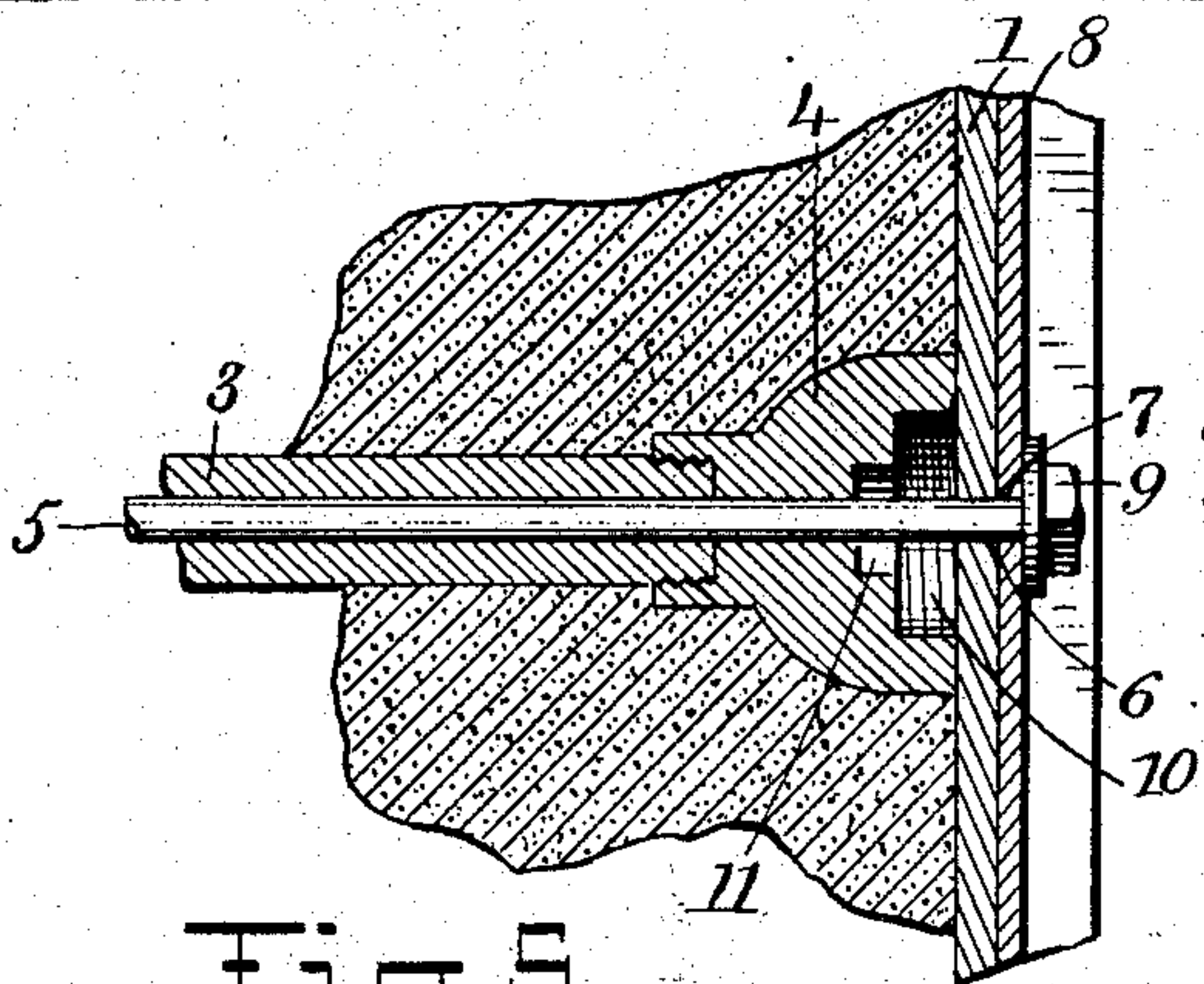
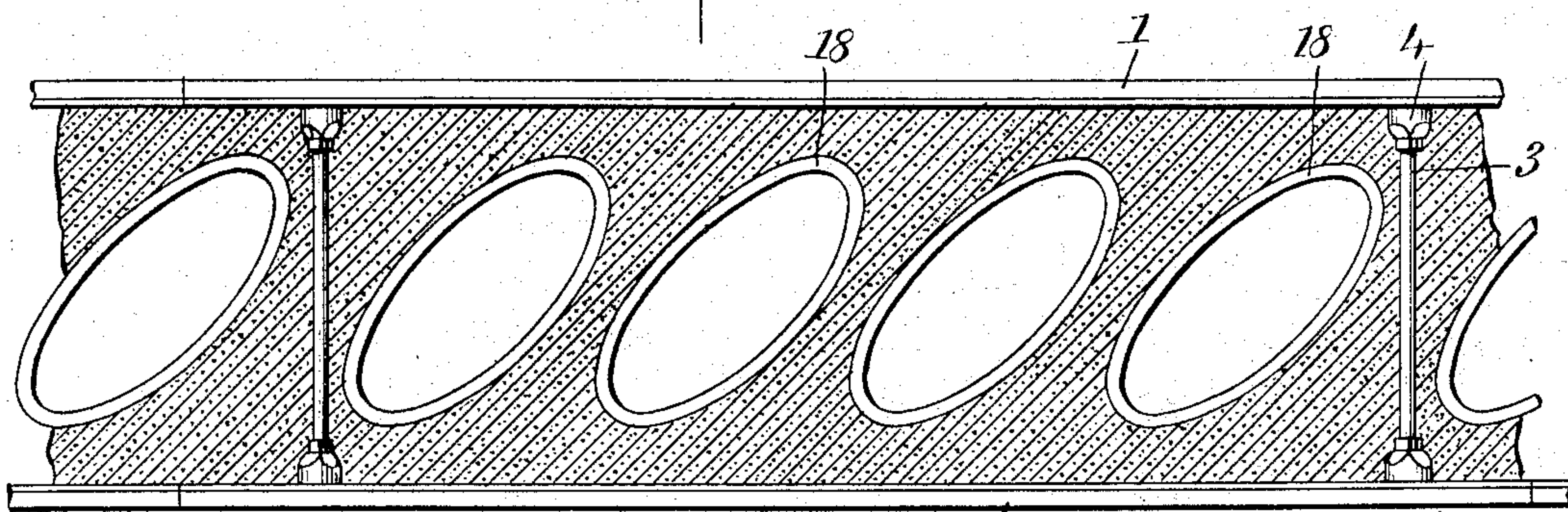


Fig. 5.

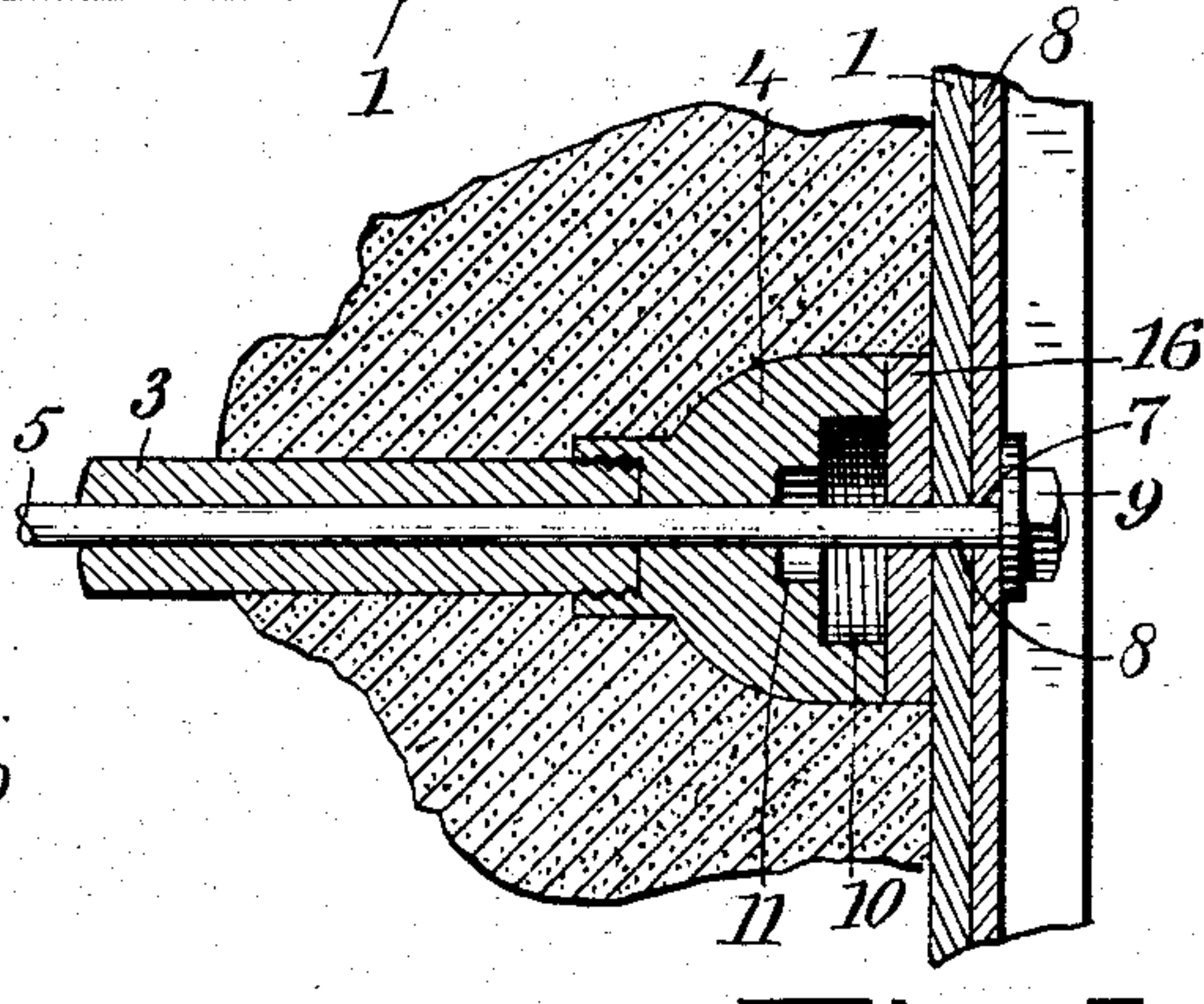


Fig. 6.

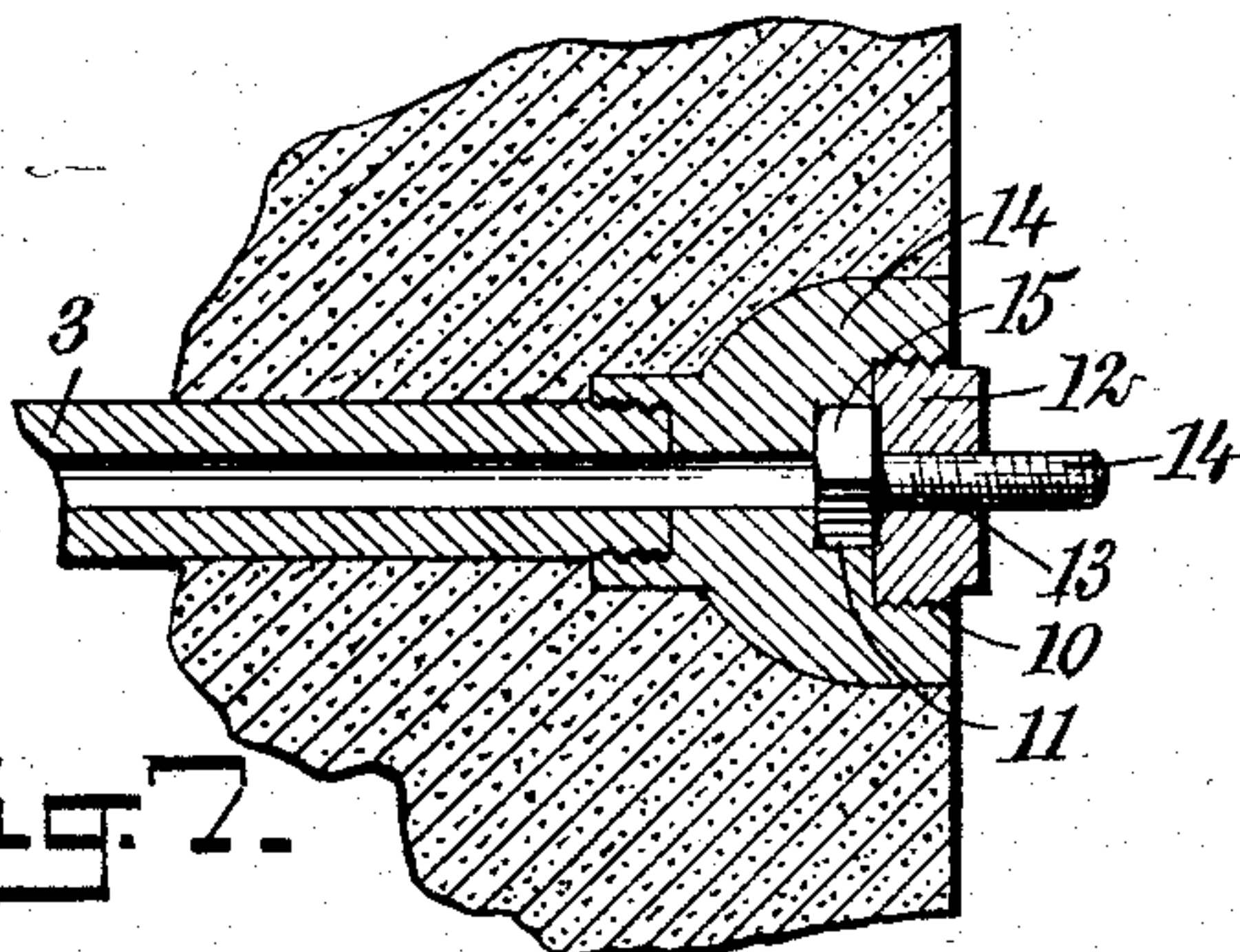


Fig. 7.

WITNESSES

E. B. Marshall
E. B. Marshall

INVENTOR

Roy N. Neil
BY *Mumco*

ATTORNEYS

UNITED STATES PATENT OFFICE.

ROY N. NEIL, OF COZAD, NEBRASKA.

CONCRETE-MOLD.

No. 929,470.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed January 25, 1909. Serial No. 474,068.

To all whom it may concern:

Be it known that I, ROY N. NEIL, a citizen of the United States, and a resident of Cozad, in the county of Dawson and State of Nebraska, have invented a new and Improved Concrete-Mold, of which the following is a full, clear, and exact description.

My invention relates to concrete molds, and it has for its object to provide one with side members which are connected by spools supported by rods disposed therein, the spools having hollow heads in which the rods are screwed, there being also additional screw threads in recesses in the extremities of the heads in which nuts having orifices therein are adapted to mesh, there being means in the heads respectively to prevent the rotation of the heads on bolts which are disposed in the orifices in the nuts respectively. I also provide hollow cores to be disposed between the side members and the spools, the hollow cores and the spools being permitted to remain in the concrete after the bolts are withdrawn and the side members are removed, but if desired the spools may be withdrawn if this is done at the proper time, the heads being first unscrewed.

Still other objects of the invention will appear in the following complete description.

In this specification I will describe the preferred form of my invention, but it will be understood that I do not limit myself thereto as I consider myself entitled to all forms and embodiments of the invention which may be held to fall within the scope of the appended claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, in which—

Figure 1 is a perspective view showing my mold erected ready for concrete to be disposed between the side members; Fig. 2 is a transverse sectional view of my invention; Fig. 3 is a plan view of my invention; Fig. 4 is a similar plan view but with hollow cores of a different shape disposed in the concrete; Fig. 5 is an enlarged fragmentary view showing a spool, its head and the bolt by means of which it is held to a side member; Fig. 6 is a similar view but showing caps by which the spool heads are separated from the side member, and Fig. 7 is a similar view showing the spool with its head embedded in the concrete, the side member and the bolt being re-

moved and a bolt and nut disposed in an orifice in the head of the spool, the nut being screwed into the spool head and the head of the bolt being disposed in an angular recess in the head.

By referring to the drawings, it will be seen that side members 1 are provided, which may be constructed of metal or other material, though in the drawings the side members are shown as constructed of metal with angle steel portions 2 at their edges, the angle steel portions being bolted to the side members to stiffen them. Between the side members 1, which are spaced apart, are disposed spools 3, having heads 4, bolts 5 being disposed through the spools and heads, the bolts passing through orifices 6 in the side members 1 and through orifices 7 in angle steels 8, which are bolted to the side members 1. The bolts 5 are held in position by means of nuts 9, which mesh with screw threads on the bolts and press against the angle steels 8. The spools 3 are screwed into their heads 4, the heads having threaded recesses 10 and angular recesses 11 disposed inwardly from the threaded recesses 10. This construction is provided, so that when the nuts 9 are removed and the bolts 5 are withdrawn from the spools 3, a nut 12 having an orifice 13, may be screwed into the recess 10 in the heads 4, and a bolt 14 disposed in the orifice 13, the head 15 of the bolt 14 being disposed in the angular recess 11, to prevent the bolt 14 from rotating. By this construction, it is possible to secure the concrete mold to other members, or to supports which will hold the concrete mold in a predetermined position. It is also possible to unscrew the heads 4 and remove the spools 3; provided this is done before the concrete has become too hard. When it is desired to have a smooth surface of the concrete block, unbroken by the spool heads 4, caps 16 may be disposed between the spool heads 4 and the side member 1, so that when the nuts 9 are removed and the bolts 5 are withdrawn, the caps 16 may also be removed and the spool heads 4 may be covered by concrete mortar. Between the side members 1 are disposed hollow core members 17, which may be annular in shape in cross section, as shown in Fig. 3, or elliptical in shape, in cross section, as shown in Fig. 4. When elliptical hollow cores 18 are used, I prefer to lap them as shown in Fig. 4, to afford additional strength, and additional resistance to the passage of heat

and moisture, the cores 18 being spaced apart at intervals to permit the spools 3 to be disposed therebetween. The angle steels 2 have orifices 19 therein, in which may be disposed studs, the studs projecting into similar orifices 19 in an adjoining side member which is disposed in alinement or at an angle with the first named side member, and which it is desired to retain in this position. Guides 20 project from the side members 1 near their top and bottom, the object of these guides 20 being to enable the side members to be readjusted after a mold has been formed, so that the lower guides 20 may be disposed in the recesses formed by the upper guides 20, and in this manner a concrete wall may be formed by degrees with the side members disposed in the same plane, after they have been advanced to the new position. Angle steels 21 are bolted to the inner faces of the side members 1, the angle steels 21 being provided to support a smoothing member 22, which is provided for smoothing the top of the concrete block or wall at any predetermined height, the angle steels 21 being adjustable on the side members 1, as they are bolted to the side members 1 and to the angle steels 8, the bolts passing through orifices 23.

In using my invention, the side members 1 are erected with the spools 3 disposed therebetween and with the bolts 5 disposed in the spools. The nuts 9 screw on the bolts to secure them firmly to the side members 1 and to the angle steels 8. The angle steels 21 are then adjusted at the proper height, and are then bolted to the side members and to the angle steels 8. Hollow cores of the desired shape are then disposed between the side members 1, when the space between the side members 1, with the exception of the openings in the cores, is filled with concrete to the level of the angle steels 21, when the smoothing member 22 is disposed on the angle steels and the upper surfaces of the mold is leveled. After the mold is sufficiently hard the nuts 9 are unscrewed and the side members 1 are removed, and the bolts 5 are withdrawn, leaving the spools 3 with their heads and the cores in the mold but if desired the heads may be unscrewed and the spools may be withdrawn. The bolt 14 is then disposed in the orifice 13 in the nut 12, the head 15 of the bolt being inserted in the angular recess 11 in the spool head 4 and the nut 12 being screwed in the threaded recess 10, the concrete block being adapted to be supported by the bolts 14. When there is no necessity of using the bolts 14 to support the concrete block, the caps 16 are provided to separate the head 15 from the side member 1, and after the side member 1, the cap 16 and the bolt 5 have been removed, the spool head 4 is covered with concrete mortar to make an even surface on the side of the concrete block. As has been stated, when a wall of any

height is to be constructed, after the side members have been removed from the concrete wall already formed, they are disposed so that their lower guides will rest in the recesses previously occupied by the upper guides 20 on the side members, so that the same side members which are used to construct the lower portion of the wall may be used to complete its upper construction.

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

1. In a concrete mold, side members, spools separating the side members, means for detachably securing the spools to the side members, there being screw threads in one side of the terminals of the spools respectively, and supporting means for a concrete block having an outer screw thread adapted to mesh with the screw threads in the said terminals.

2. In a concrete mold, side members, spools separating the side members, means for detachably securing the spools to the side members, there being recesses in one set of the terminals of the spools respectively, nuts with orifices therein, which are adapted to screw in the recesses respectively when the side members are removed, and bolts which are disposed in the orifices in the nuts.

3. In a concrete mold, side members, spools separating the side members, the spools having heads at their terminals which are adapted to lie against the inner faces of the side members, the outer faces of the heads having recesses with inner screw threads, nuts with orifices therein which are adapted to screw in the recesses when the side members are removed, means for holding the spools to the side members, bolts which are adapted to be disposed in the orifices in the nuts with their heads in the recesses in the spools, and means for preventing the bolts from turning.

4. In a concrete mold, side members spaced apart with orifices therein, spools separating the side members, caps which are disposed between the spools and the side members, and detachable means for supporting the spools and caps on the side members.

5. In a concrete mold, side members spaced apart, spools separating the side members, bolts disposed in the spools, the bolts passing through orifices in the side members, means for securing the bolts to the side members, and means adjustable on the inner faces of the side members for supporting a member for smoothing the upper surfaces of a concrete block.

6. In a concrete mold, side members spaced apart, spools separating the side members, means for detachably securing the spools to the side members so that the

spools may be permitted to remain in a concrete block, means adjustable on the inner faces of the side members for supporting a smoothing member, and means for holding in position the edges of side members disposed in alinement.

7. In a concrete mold, side members, spools separating the side members, means for detachably securing the spools to the side members, there being recesses in one set of the terminals of the spools respectively, nuts with orifices therein, which are adapted to screw in the recesses respectively when the side members are removed, bolts which are disposed in the orifices in the nuts, and means to prevent the bolts from rotating.

8. In a concrete mold, side members, spools separating the side members, the spools having heads at their terminals which are adapted to lie against the inner faces of the side members, the outer faces of the heads having recesses with inner screw threads, bolts supporting the spools, the bolts being detachably secured to the side members, nuts with orifices therein which are adapted to screw in the recesses when the

side members are removed, bolts which are disposed in the orifices in the nuts, means for preventing the bolts from rotating, and perpendicularly disposed core members which are elliptical in shape in cross section and which are disposed obliquely with reference to the side members.

9. In a concrete mold, side members spaced apart, spools separating the side members, bolts disposed in the spools, the bolts passing through orifices in the side members, means for securing the bolts to the side members, and elongated projecting guide ribs on the inner faces of the side members near opposite terminals, the side members being adapted to be removed and readjusted with their lower guides disposed in the groove in the concrete block which was previously occupied by the upper groove.

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

ROY N. NEIL.

Witnesses:

LOYD NEIL,
ELMER F. NEIL.