

T. J. HARPER, DEC'D.

G. T. OSBORN, EXECUTOR.

FIREPLACE.

APPLICATION FILED MAY 25, 1905.

Patented May 18, 1909.

2 SHEETS—SHEET 1.

922,422.

Fig. 1

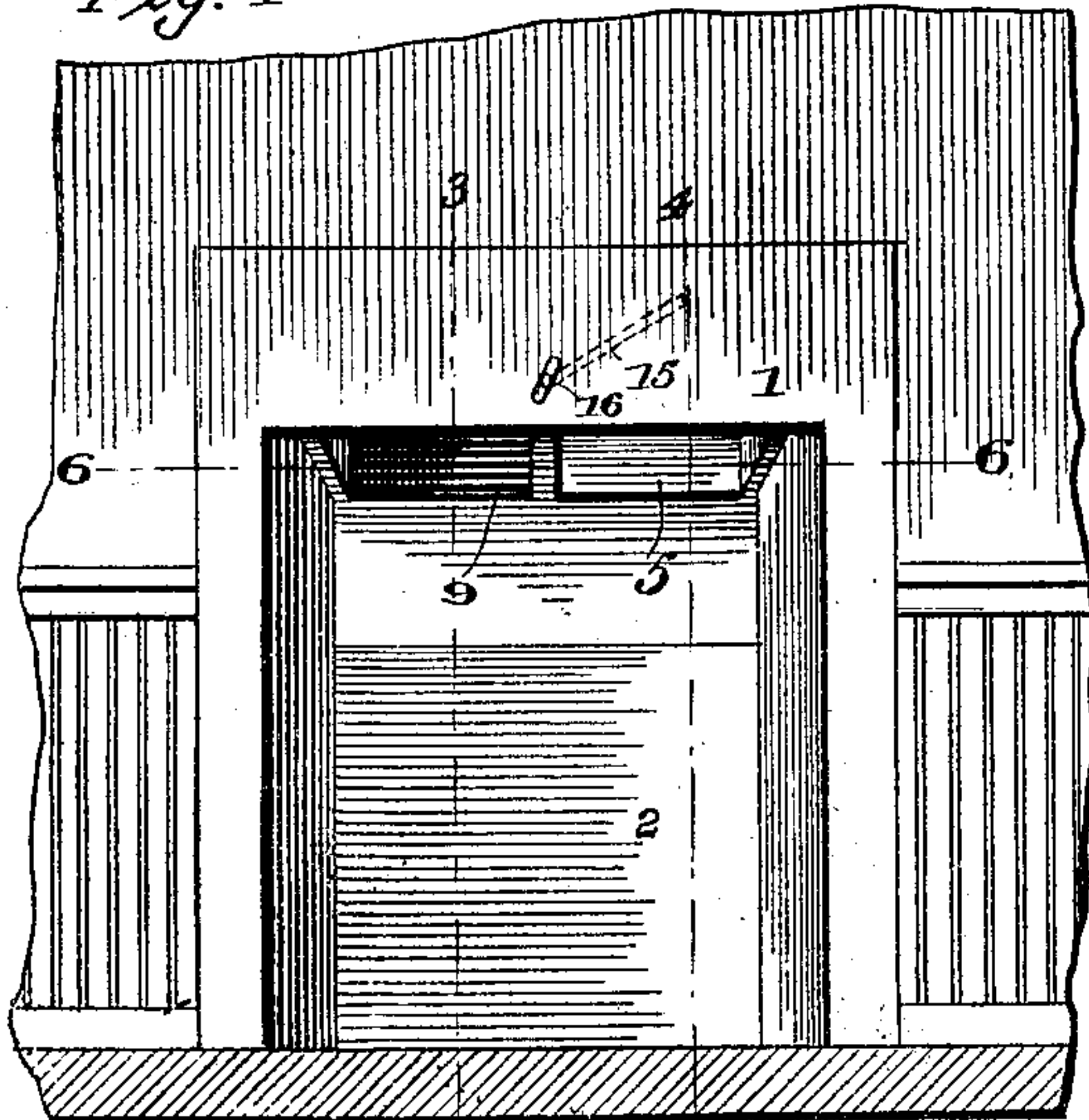


Fig. 2

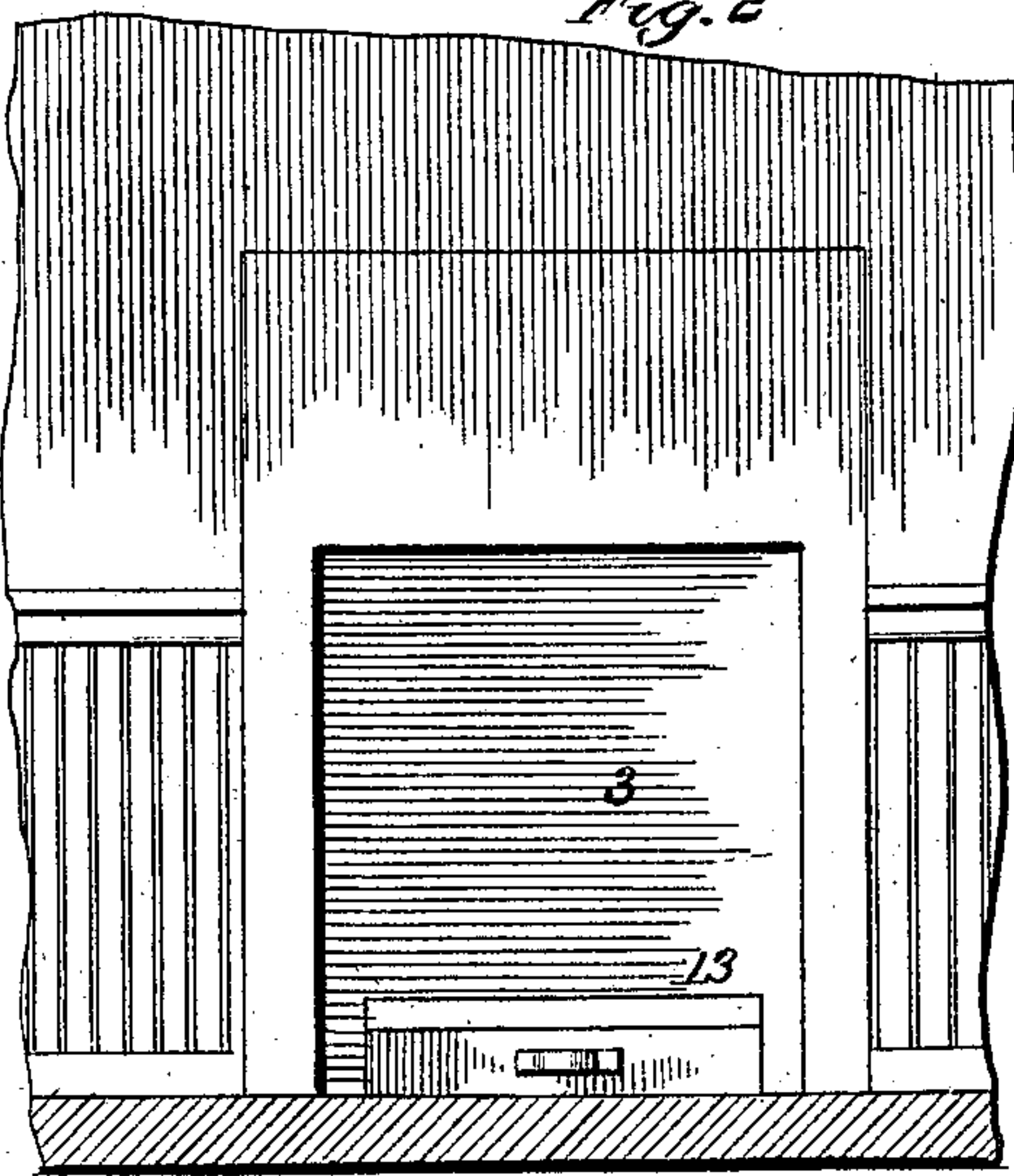


Fig. 3

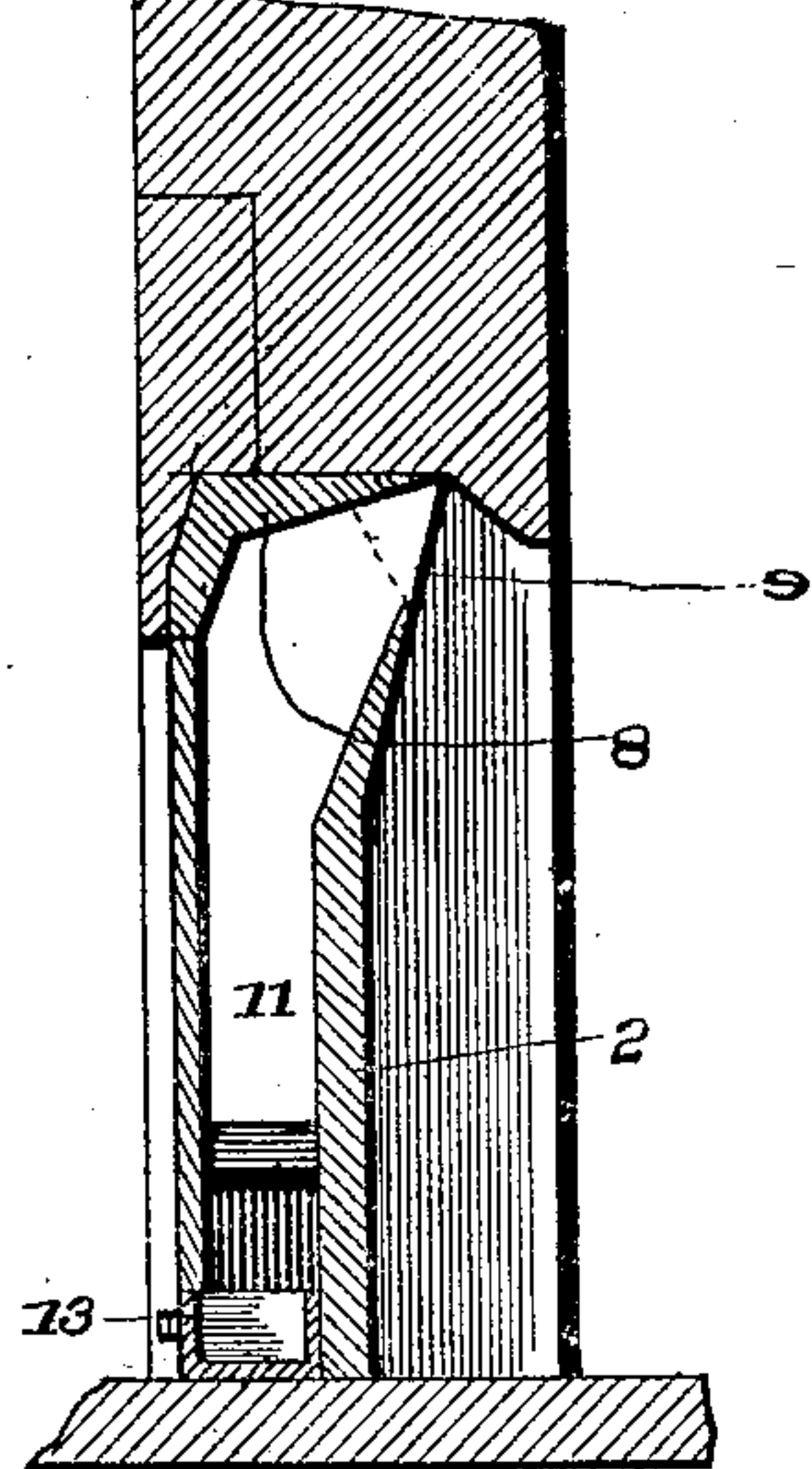


Fig. 4

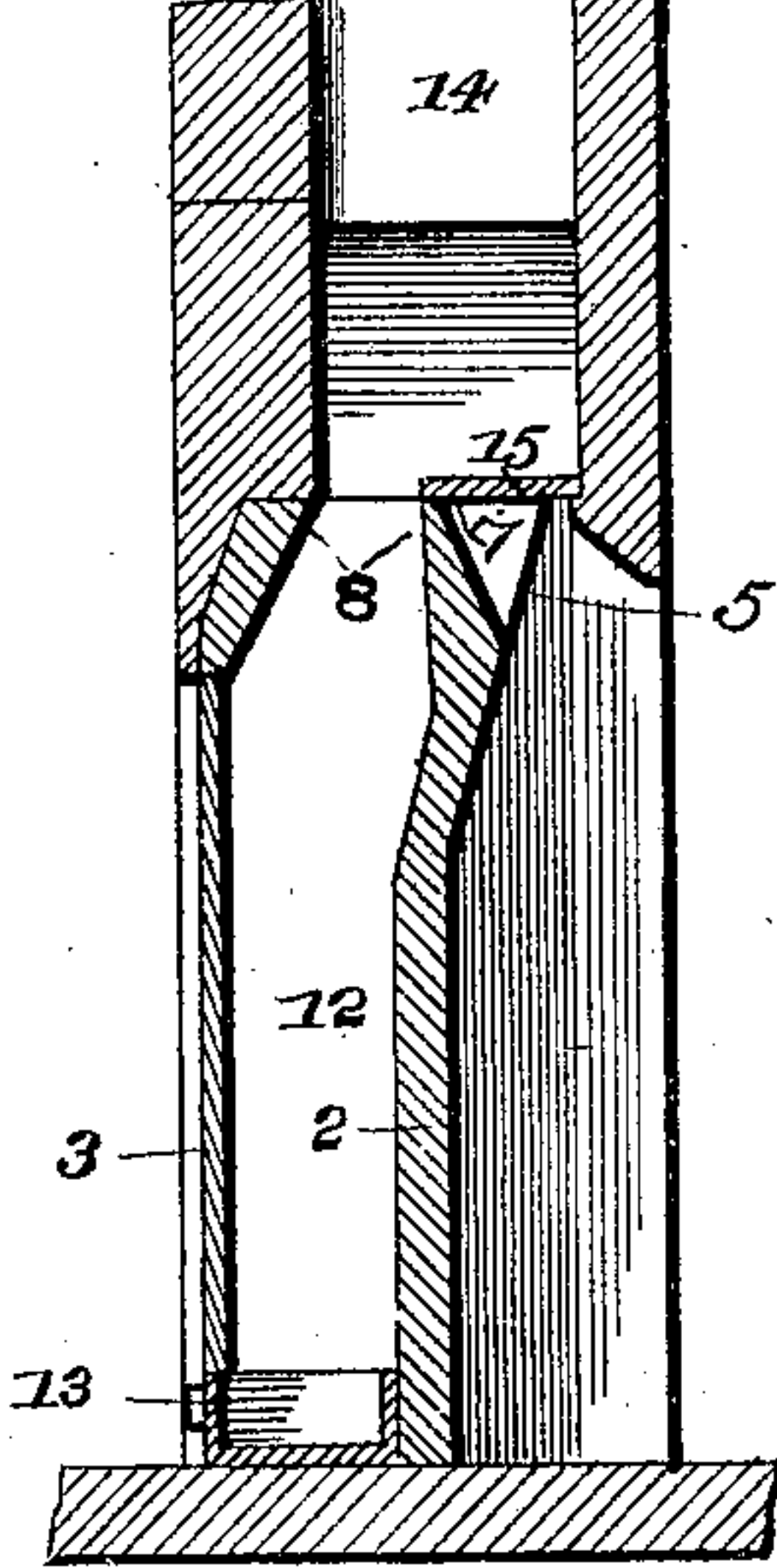


Fig. 5

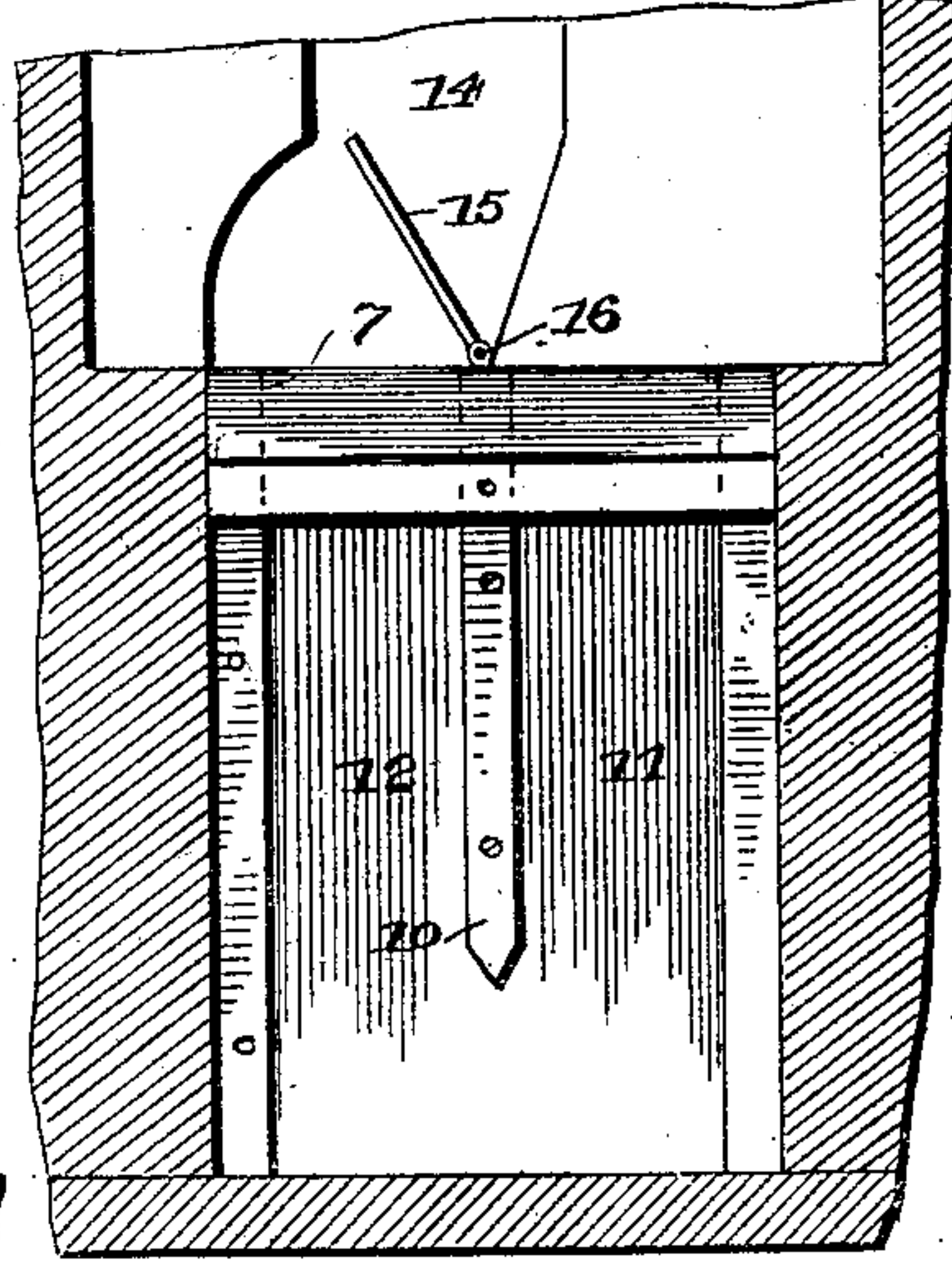
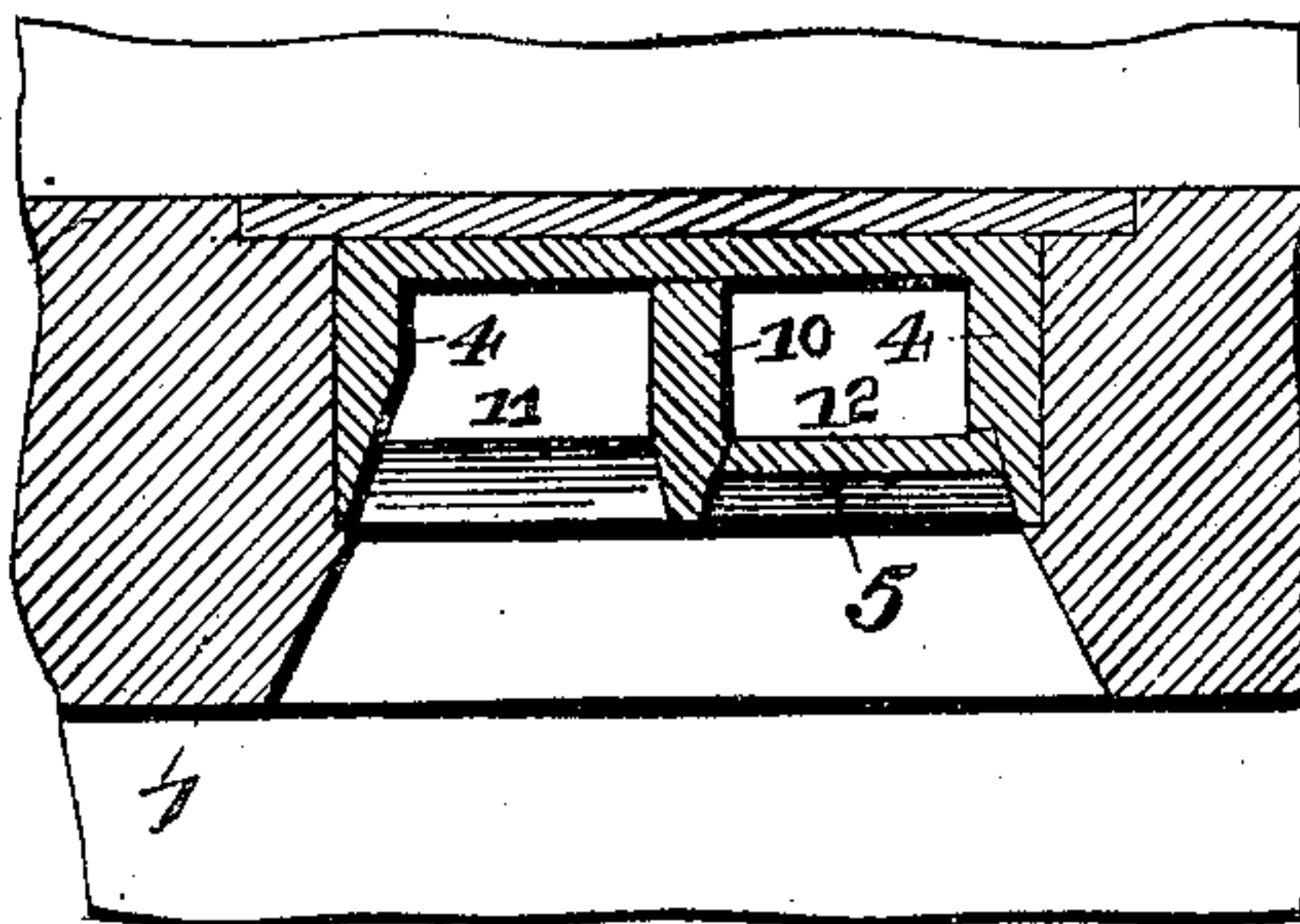


Fig. 6



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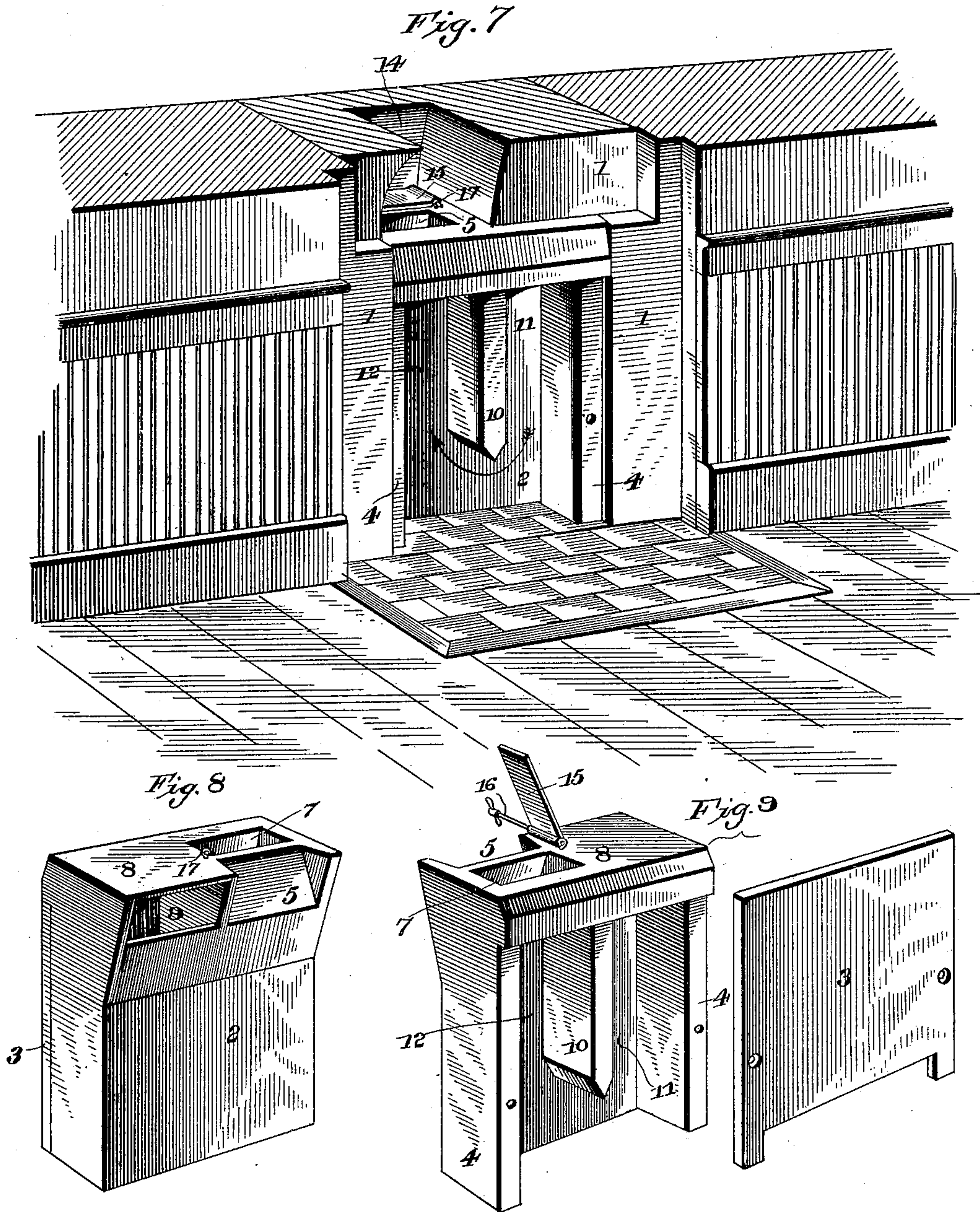
BY *Munn & Co.*

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FIREPLACE.

No. 922,422.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS J. HARPER, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have made certain new and useful Improvements in Fireplaces, of which the following is a specification.

My invention relates to an improvement in fireplaces and is designed particularly to heat two rooms with a single fire, its object being to produce a fireplace which is simple, cheap and efficient, one which will heat two rooms with a single fire, thus economizing the use of fuel, one which shall consist of few parts, and one which can be readily applied, removed or repaired.

With these and other objects in view, my invention consists in certain novel features of construction, arrangement and combination of parts, as will be hereinafter fully described and pointed out in the claims, reference being had to the accompanying drawing, in which—

Figure 1 is a front elevation showing my improved device. Fig. 2 is an elevation showing the rear of the fire back in an adjacent room. Fig. 3 is a vertical section on line 3—3 of Fig. 1. Fig. 4 is a similar section on line 4—4 of Fig. 1. Fig. 5 is a rear elevation partly in section, with the rear wall of the fire back removed, and also showing the chimney flue and damper. Fig. 6 is a horizontal sectional view taken on line 6—6 of Fig. 1. Fig. 7 is a sectional perspective view with the rear wall 3 removed. Fig. 8 is a perspective view of the fire place removed from the wall. Fig. 9 is a perspective view in detail showing the partition 10 and the damper 15.

In the drawing, 1 represents the ordinary brickwork surrounding the fireplace.

My improved fire back, which consists of the front wall 2 and the rear wall 3, leaving a vertical space between them, is fitted in the fireplace, the front wall extending forwardly at its upper portion. The improved fire back may be of cast iron, cast with the rear wall 3 integral with the front wall 2, but I prefer to make the rear wall 3 separate from the front and somewhat thinner and to secure it to the side walls 4 of the hollow back by suitable means. The fire back is provided with a cut out portion 5 at one side of its upper portion, and immediately behind this

cut out portion is the opening 7 in the upper wall 8 of the fire back.

9 is an opening extending through the front wall at one side near its top.

10 is a vertical partition cast integral, if desired, with the front wall, but preferably made separate, which extends from the top wall of the fire back downwardly to near the floor level, thus dividing the upper portion of the hollow fire back into two flues or chambers 11 and 12.

The rear wall 3 of the fire back, which, as stated before, is made quite thin, has an open space left at its lower end into which may be slid the ash pan 13, said ash pan being of sufficient size to extend to the front wall of the fire back.

14 is the chimney flue which connects directly with the cut out portion 5 at one side of the front wall of the fire back, said chimney flue also extending over the flue or chamber 12 between the front and rear walls of the hollow fire back.

15 is a damper secured at one end within the chimney flue, on a rod 16 which extends through the front wall of the brick work 1 of the fire place, and has on its outer end a suitable handle to manipulate it. This damper is just wide enough to cover the cut out portion 5, but does not cover the upper end of the flue or chamber 12.

In using my improvement, the various parts having been all properly put in place, the fire is started in any ordinary grate which may be located in front of the lower end of the front wall of the fire back, and the damper 15 is turned to prevent smoking, and allowing a strong draft up the chimney and causing the fire to burn up quickly, the gases and products of combustion passing up the chimney. As soon as the up-draft has been established, the damper 15 is turned down, closing the opening 5 which communicates directly with the chimney, whereupon the products of combustion from the fire will pass up into opening 9 into the flue or chamber 11, where they are deflected downwardly by the rear wall of the hollow fire back, passes around the lower end of the partition 10 into the flue or chamber 12, and thence up the chimney; the heated air taking this tortuous course, heats the thin rear wall of the hollow fire back to a high degree, and such rear wall, acting as a radi-

ator, will heat the room next to it, the improved fireplace having been set in the opening between the two rooms. The ash pan 13 is to catch any ashes or soot that may be
 5 drawn over the front wall of the fire back.

The damper may be operated by means of the rod and handle as shown, or it may be operated by a pendant attached to it, hanging in the fireplace and manipulated by an
 10 ordinary fire poker.

It will be observed that the chimney has but one flue, thus simplifying the construction, and that the partition 10 which begins at the top of the hollow fire back and extends down to the grate level, divides the
 15 hollow back into an indirect flue, beginning at the top of the fire back down and around the lower end of the partition, then up, connecting directly with the chimney flue; this
 20 arrangement of parts throws all the heat from the fire that ordinarily passes up the chimney into direct contact with the inner surface of the thin radiating wall for the other room. One wall or side (the front
 25 wall) is the grate fire back, and the other wall (the rear) is the radiator for the other room, said radiator to be protected by an open-work and ornamental fender, if desired.

30 While, as stated, the hollow fire back may be cast integral, yet it is preferred to make the front and rear walls separate, and to secure them together by suitable means.

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

1. A fire place for heating two adjacent rooms simultaneously, consisting of a hollow metallic casing comprising top, side, front
 40 and rear walls and a central vertical transverse partition extending downwardly from the top wall between the front and rear walls,

but terminating above the hearth level, said front wall having an opening at one side at its top communicating with a chimney flue, 45 and having also at the opposite side near its top an opening communicating with the interior of the casing, said openings being located on opposite sides of the central vertical partition, the top wall of the casing having 50 an opening communicating with the interior of the casing in the rear of the opening communicating with the chimney flue, said opening in the top wall also having communication with the chimney flue and means for 55 governing the direction of the flow of the products of combustion.

2. A fire back for fire places for heating two adjacent rooms, comprising a hollow casing, the front wall of which is thick and 60 the rear wall relatively thin, forming a radiating surface said rear wall having an opening at its lower end, and an ash tray adapted to fit in said opening and abut the front wall of the fire back, and means for 65 causing directly heated air to circulate between the said thick and thin walls and finally discharge into a chimney flue.

3. A fire-back for fire places for heating two adjacent rooms simultaneously, comprising a hollow casing having a thick front wall and a relatively thin rear wall connected at their upper ends, and a vertical transverse baffle plate or partition between said front and rear walls, the rear wall having an 75 opening at or near its lower end to receive an ash tray, and means for causing the products of combustion to circulate between the said front and rear walls and finally discharge into a chimney flue.

THOMAS J. HARPER.

Witnesses:

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