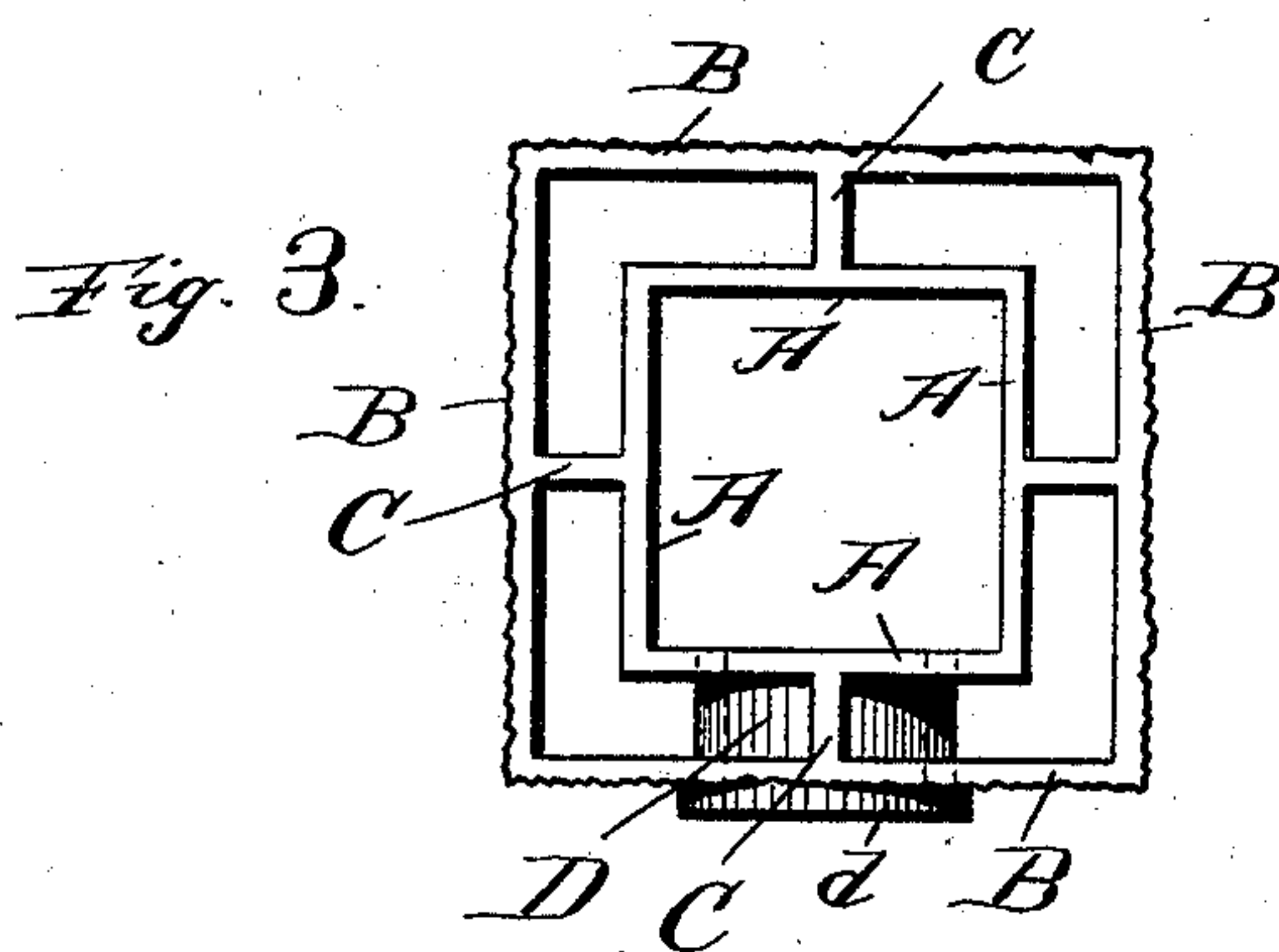
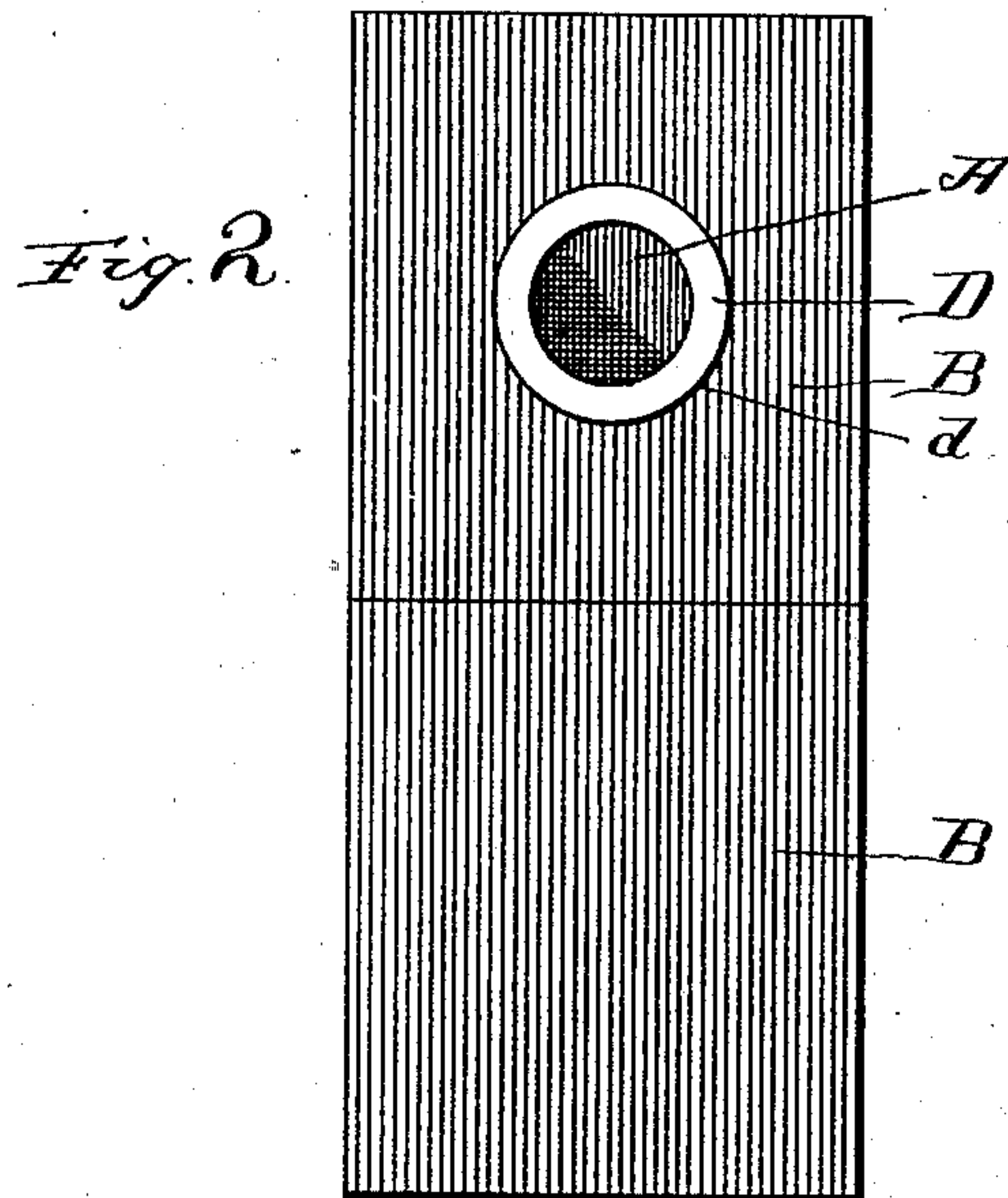
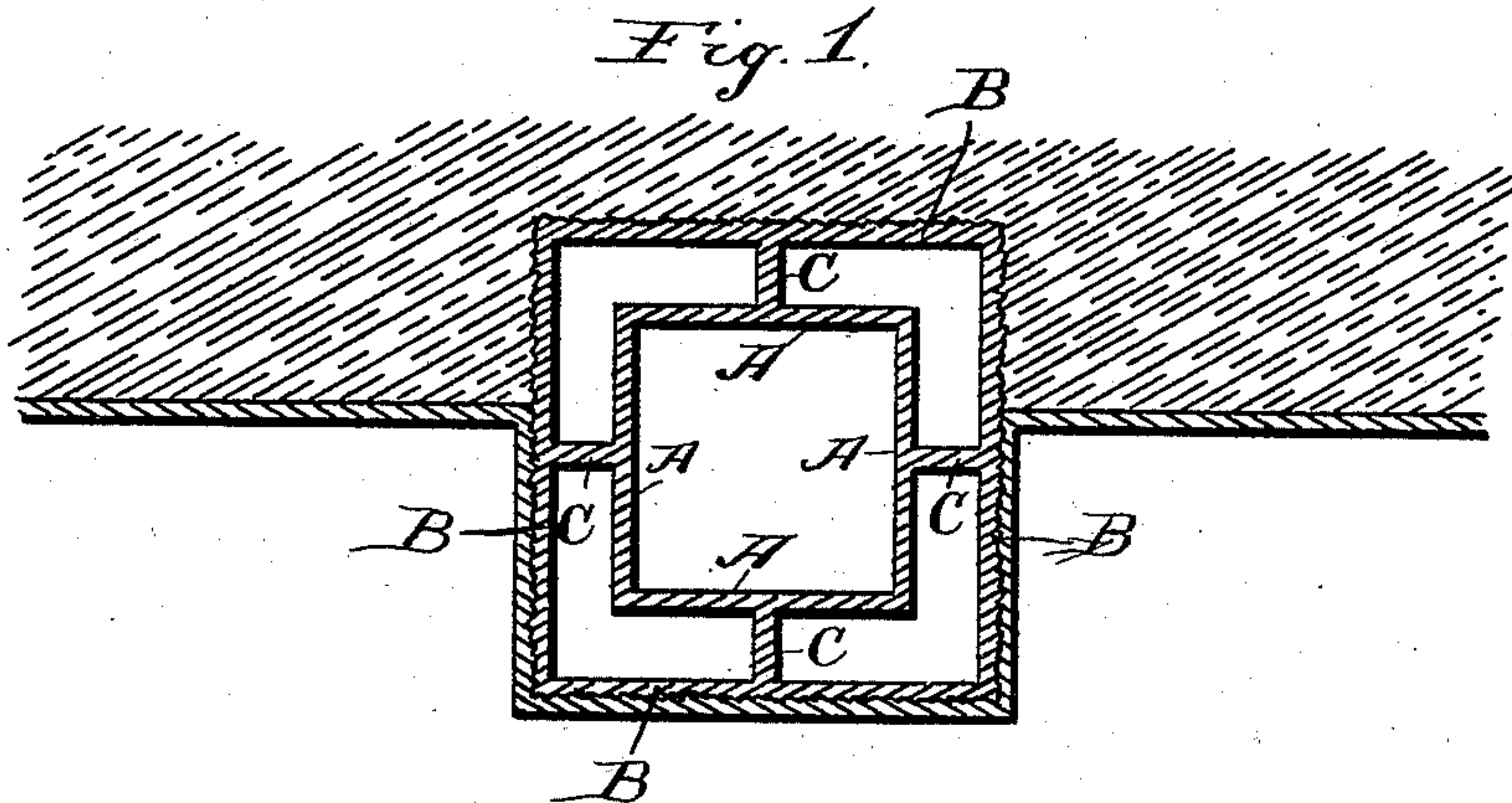


(No Model.)

E. V. JOHNSON.
CHIMNEY FLUE TILE.

No. 366,323.

Patented July 12, 1887.



Witnesses:
Lew. C. Corbis.
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His Attorneys:

UNITED STATES PATENT OFFICE.

ERNEST V. JOHNSON, OF CHICAGO, ILLINOIS.

CHIMNEY-FLUE TILE.

SPECIFICATION forming part of Letters Patent No. 366,323, dated July 12, 1887.

Application filed February 12, 1887. Serial No. 227,332. (No model.)

To all whom it may concern:

Be it known that I, ERNEST V. JOHNSON, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Chimney-Flue Tiles, of which the following is a specification.

This invention relates to an improvement in that class of chimney-flue tiles wherein a rectangular inner smoke-flue is surrounded by an outer or second shell separated from the inner shell by independent spaces, such spaces being sometimes used for ventilating-flues, as, for example, in the Patent No. 222,211, dated December 2, 1879; and my improvement consists in so connecting the inner and outer shells as to give the structure additional strength at its weaker part, and at the same time to facilitate the manufacture of the tile. I accomplish this result by placing the tie or connection at the middle of the flat sides of the rectangle instead of in the corner. This not only gives strength where most needed, but also so distributes the material that it issues from the molding-die in a more equal manner and with less liability to increased flow at particular parts and consequent lack of homogeneity.

In the accompanying drawings, which form a part of this specification, Figure 1 is a top or plan view of a chimney-flue constructed of my improved tile, showing the adjacent wall in section with the plastering applied thereto and to the tile. Fig. 2 is a front view of a portion of a chimney constructed of the tile, showing two tiles *in situ*, the upper one having a stove-pipe hole. Fig. 3 is a plan view of the upper tile of Fig. 2.

Like letters of reference indicate like parts in the several figures.

In the said drawings, A A A A are the four sides of the inner rectangular shell; B B B B are the corresponding sides of the outer shell; C C C C are the connecting partitions running vertically the whole length of the tile, and located in the middle portion of each face of the rectangle extending from shell to shell. The tile so formed is made in the ordinary manner

of making clay drain-tiles, &c., by forcing the plastic clay out of a suitably-shaped die-aperture and cutting it off in lengths.

The partitions C C C C, being located in the middle of the flat sides, serve to more effectually sustain the plastic clay before it is burned, lessen the liability to warping and cracking in the firing, and finally give stability and strength to the completed structure. These advantages are not attained where the partitions are made diagonal in the corners; and, moreover, in such structure more clay is required and an unequal flow is liable from the increase of the die-aperture at the corners.

To fit the chimney to receive a stove-pipe, one of the tiles of each flue may be made as the upper one shown in the drawings, *i. e.*, as follows: A tile fresh from the die, and while still plastic, is taken, and a circular aperture is cut through one of its sides, penetrating both the outer and inner shells and the intervening partition. Into the hole so formed a piece of cylindrical pipe, D, is slipped, and the whole is then fired in the kiln as one piece. A projecting bead or collar, *d*, will serve as a balk or shoulder for the plasterer in coating the chimney.

The whole exterior of the outer shell may be fluted or corrugated, as shown in the drawings, in order to receive the plaster directly, and the flue may be partly bedded in the wall, as indicated at Fig. 1, and applied to the surface of an existing wall.

Of course, the space between the inner or smoke-flue shell and the outer shell may be utilized as a ventilating-flue, or it may serve simply as a non-conducting space to guard against fire.

I claim—

The chimney-flue tile consisting of an inner rectangular shell joined to an outer rectangular shell by longitudinal partitions located in the middle part of the faces of the rectangle, substantially as specified.

ERNEST V. JOHNSON.

Witnesses:

H. M. MUNDAY,
EDW. S. EVARTS.