

No. 762,899.

PATENTED JUNE 21, 1904.

A. GILLETT.
HOLLOW BRICK OR TILE DIE.

APPLICATION FILED SEPT. 30, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

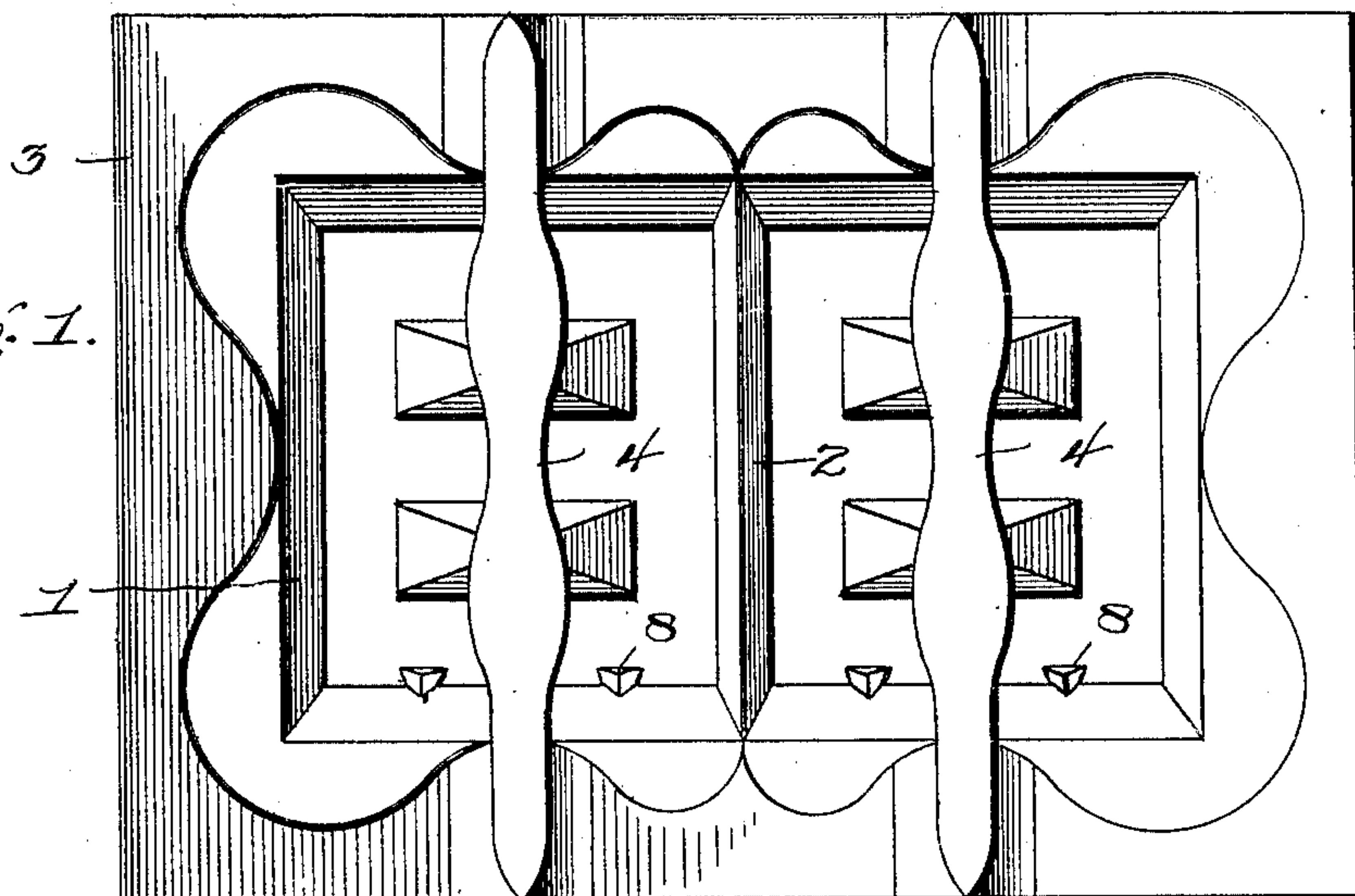


Fig. 2.

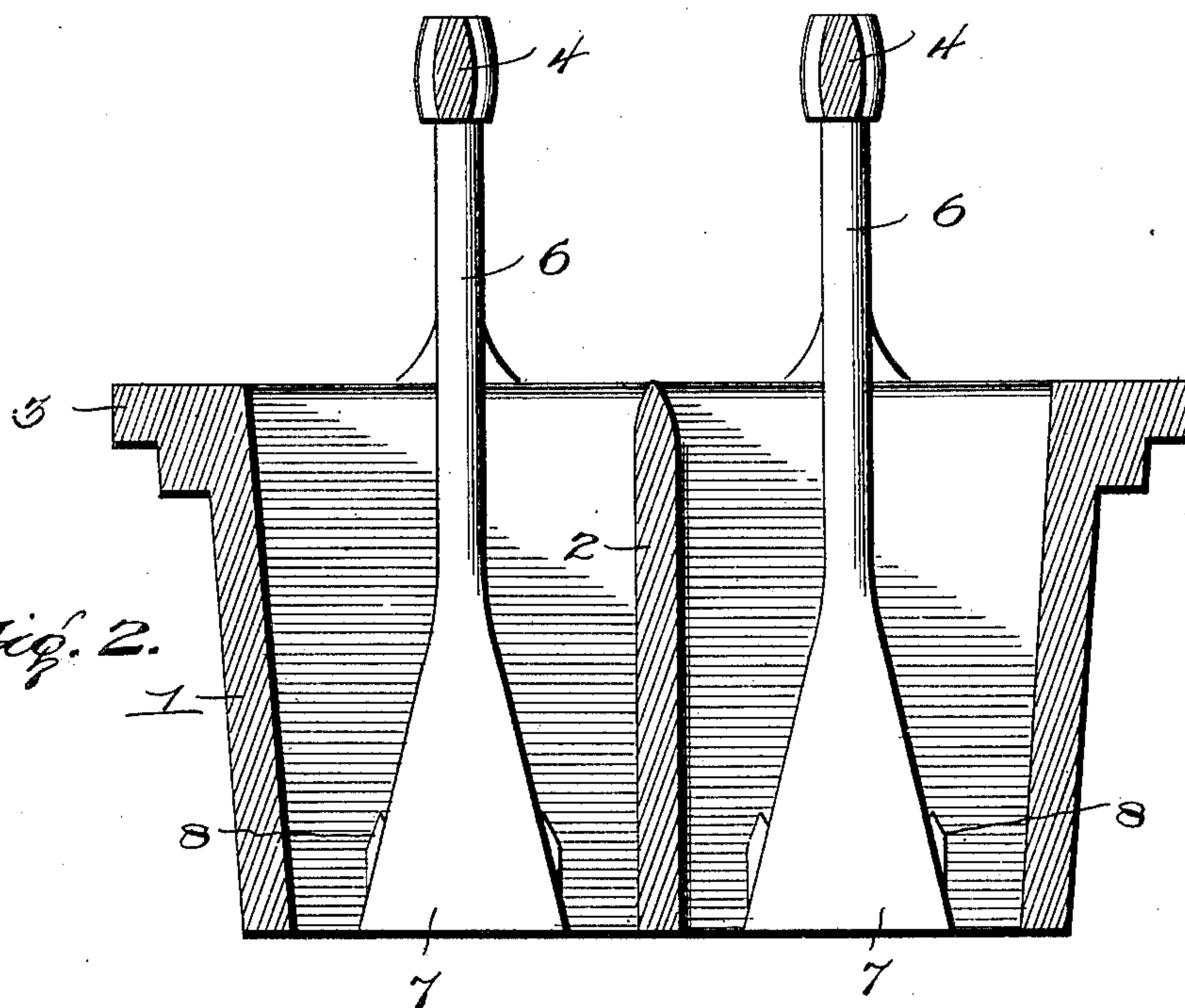


Fig. 5.



Witnesses
J. L. Hockman
G. S. Roy.

Inventor
Arthur Gillett,

By

D. P. Wolhaupter,
Attorney

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2 SHEETS—SHEET 2.

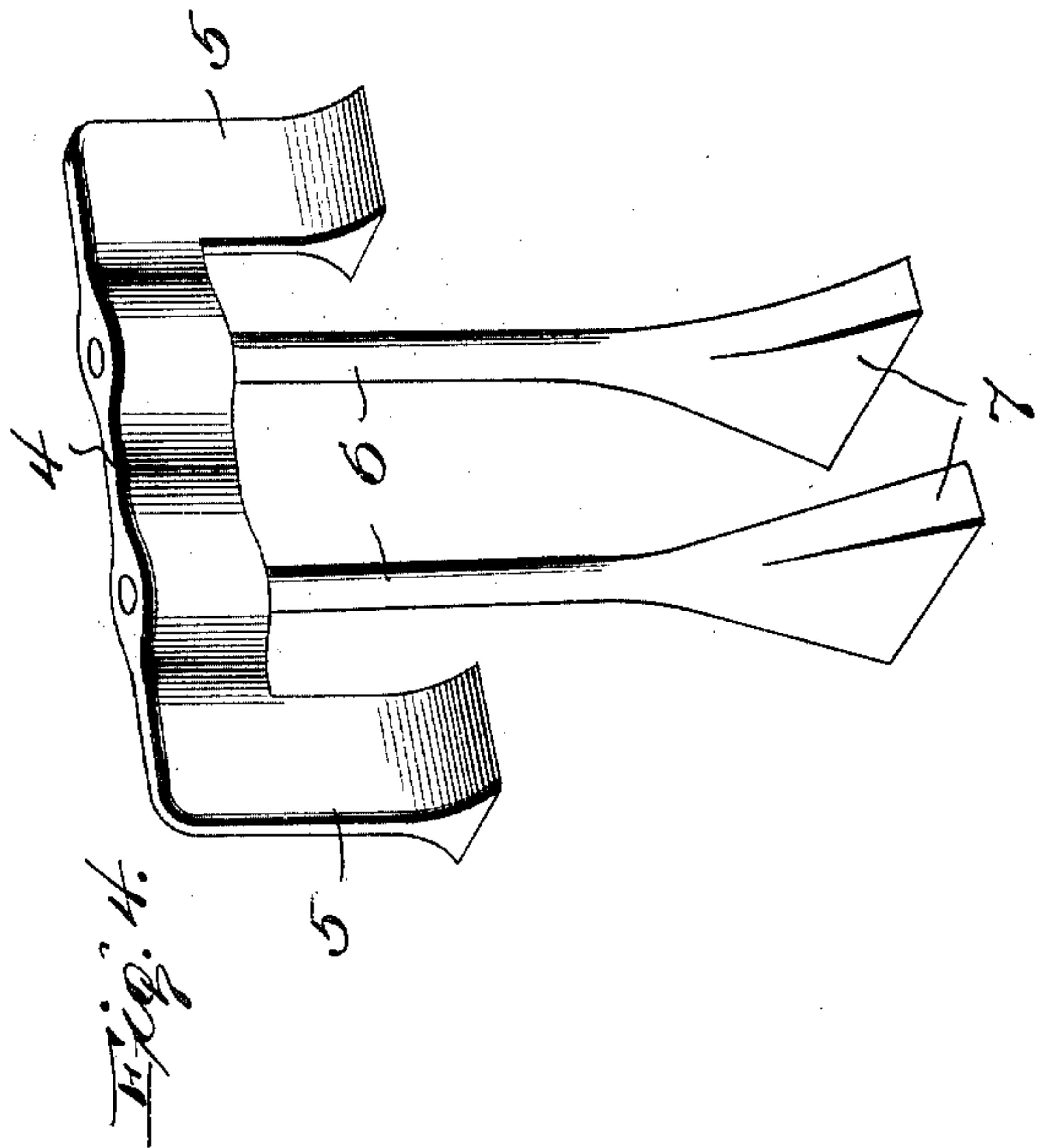


Fig. 6.

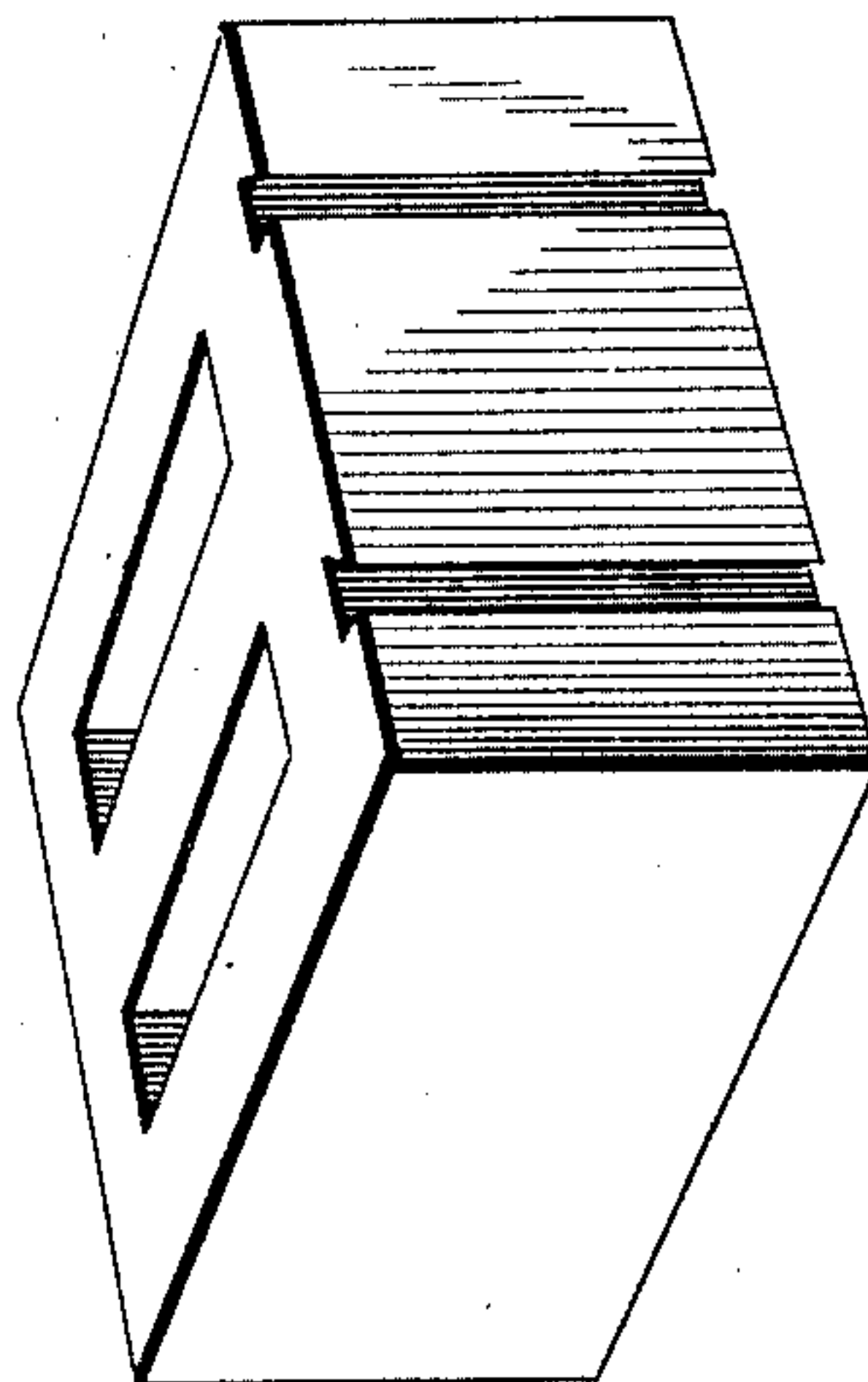
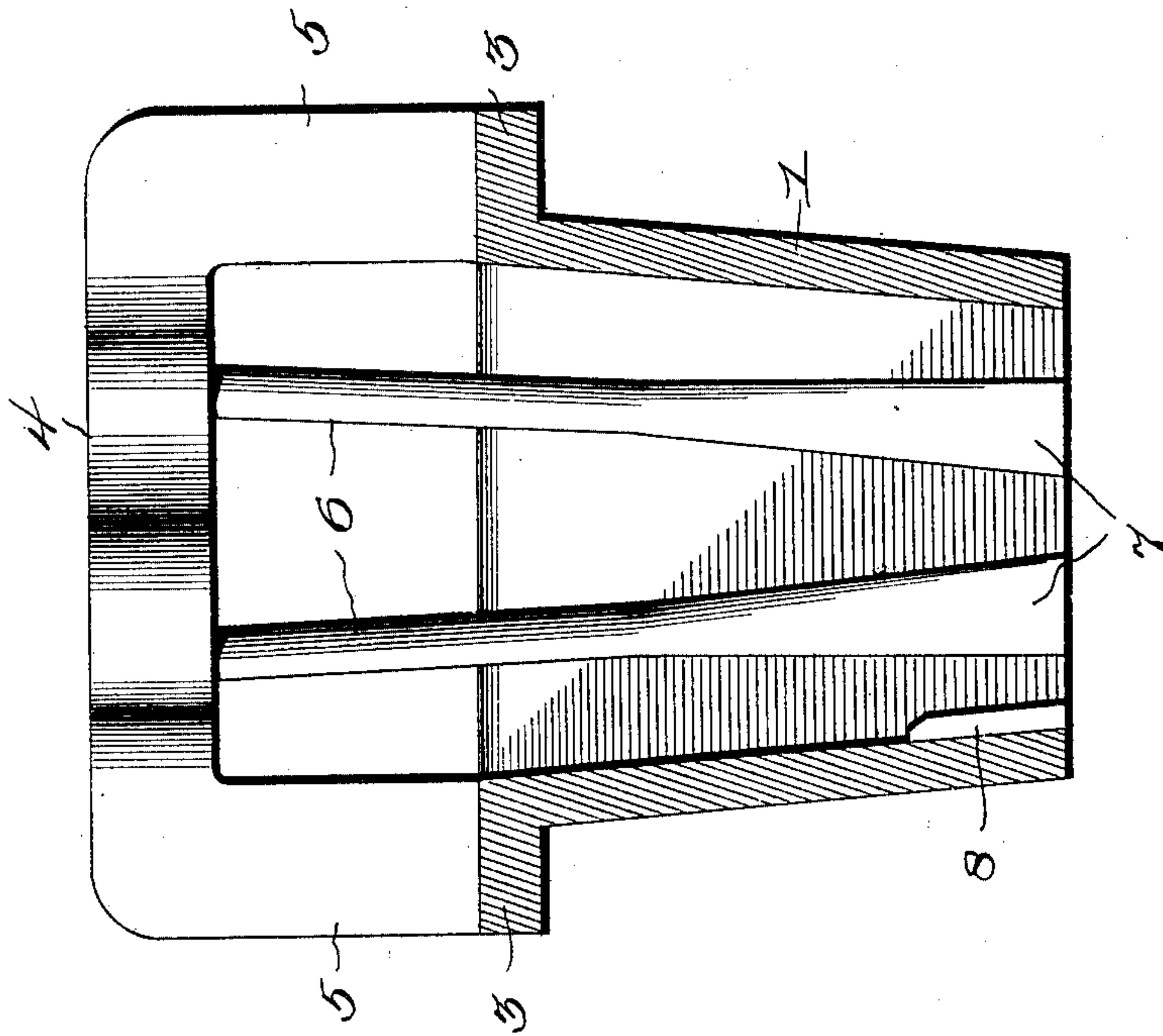


Fig. 5.



Witnesses

J. L. Neocham
G. S. Roy.

Inventor

Arthur Gillett,

By

D. P. Wolhaupter.

Attorney

UNITED STATES PATENT OFFICE.

ARTHUR GILLET, OF GALESBURG, ILLINOIS.

HOLLOW BRICK OR TILE DIE.

SPECIFICATION forming part of Letters Patent No. 762,899, dated June 21, 1904.

Application filed September 30, 1903. Serial No. 175,207. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR GILLET, a citizen of the United States, residing at Galesburg, in the county of Knox and State of Illinois, have invented certain new and useful Improvements in Hollow Brick or Tile Dies, of which the following is a specification.

This invention relates to dies for forming hollow bricks or tiles used for building purposes, the object in view being to provide a simple and effective die through which material in a plastic condition is adapted to be forced by any suitable feeding mechanism, the die acting during the passage of the plastic material therethrough to compress and shape the material into the form of a hollow brick or tile, producing the required channels or openings through the body of the brick or tile and at the same time forming one or more of the other flat sides of the tile or brick with grooves or plaster-receiving recesses of special shape.

In buildings of modern construction it is desirable and customary to employ bricks or tiles of hollow form for purposes well known and also to provide one or more of the outer surfaces of such bricks or tiles with grooves of such shape as to receive a portion of the plaster with which the walls formed by the bricks are covered, so that an effective bond is established between the plaster and the bricks forming the wall, thereby doing away with the usual laths employed until recent years for that purpose.

The aim of the present invention is to provide a die of such shape and configuration as to form tiles or bricks of the construction referred to by simply forcing the clay or other material while in a plastic condition through the die.

With these and other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts, as will be hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a top plan view of a double die constructed in accordance with the present invention. Fig. 2 is a vertical longitudinal section through

the same. Fig. 3 is a vertical cross-section through the same. Fig. 4 is a detail perspective view of the bridge and channel formers. Fig. 5 is a detail view of one of the groove-formers. Fig. 6 is a perspective view of a hollow tile or brick formed by the die.

Like reference-numerals designate corresponding parts throughout the several figures of the drawings.

Under the preferred embodiment of this invention two or more dies are constructed in one—that is to say, the dies are arranged in series or in a cluster, so that plastic material may be simultaneously introduced to all the dies and a number of bricks or tiles formed at one and the same time.

In the drawings I have illustrated two dies formed in one with each other, the main body of the die being substantially rectangular in cross-section or comprising the four pendent sides 1, which converge from their upper toward their lower edges, so that the plastic material as it is forced through the die from top to bottom is compressed or compacted by said downwardly-convergent walls.

2 designates a dividing-partition which separates the space between the walls 1 into two compartments or separate dies of equal size and of the same shape, whereby two tiles or bricks are simultaneously formed. It may here be noted that the number of dies or compartments may be diminished or increased *ad libitum* without departing from the principles or sacrificing any of the advantages herein-after claimed.

The die as a whole is provided at or near the top with a flange or rim 3, extending entirely around the same and which serves as a support for the die, the said flange being adapted to rest upon parallel rails or supporting-bars placed at any suitable elevation.

Extending across the top of each die or compartment is a bridge 4, provided at opposite ends with legs 5, which extend downward and are supported upon the top of the die and preferably upon the top of the flange 3. Connected to the bridge 4 and extending downwardly therefrom are the shanks or stems 6 of a pair of channel-formers 7. The lower ends of the channel-formers lie substantially

flush with the bottom edge of the side walls 1 of the die and may be given any suitable shape in cross-section. For the purposes of illustration said channel-formers are given a
 5 rectangular shape at their lower ends, tapering from thence upward to the points where they merge into the shanks or stems 6. Thus the sides of the channel-formers 7 gradually diverge in a downward direction, so that they
 10 act to compress the plastic material as it is forced through the die, the said material being compressed between the channel-formers and also between said formers and the oppositely-lying downwardly-convergent walls 1
 15 of the die. In this way as the material is forced through the die channels or openings are formed through the body of the tile or brick produced in the operation.

Secured to the inner surface of one or more
 20 walls of the die are groove-formers 8, which are tapered or of wedge form toward their upper ends. (See Figs. 1 and 2.) The lower ends of the groove-formers lie close to the bottom of the die, while the tapering upper
 25 ends thereof are brought to a point or edge, so as to divide the plastic material as it comes in contact therewith. By preference the groove-formers 8 are of dovetailed shape in cross-section, so that they serve thereby to
 30 form cross-sectionally-dovetailed grooves in one or more surfaces of the brick or tile, the purpose of said grooves being referred to hereinabove.

From the foregoing description it will be
 35 understood that the clay or other material in plastic condition when forced through the die from top to bottom will be acted upon by the side walls of the die and also by the channel-formers and groove-formers, all of which contribute to compress or compact the plastic
 40 mass, which passes from the die in the form of a tile or brick, which may be cut into suitable blocks or lengths to suit requirements. It will be seen that the material is compressed
 45 between the side walls 1 and the channel-

formers and that said material is also compressed between the channel-formers themselves. Any number of channel-formers may be employed, and likewise any number of
 50 groove-formers, according to the number of channels or grooves which it is desired to form in the brick or tile. It will also be understood that the several parts of the die may be formed of one piece, or said parts may be
 55 separately formed and united together in any usual or convenient manner. By reason of the particular shape given to the die and the several parts thereof no oiling or lubricating of the parts of the die is necessary. The
 60 plastic material may be fed to the die by an auger-feed or any other suitable machine for that purpose.

I do not wish to be limited to the details of construction herein shown and described, and accordingly reserve the right to make such
 65 changes in the form, proportion, and minor details of construction as properly fall within the scope of the appended claims.

Having thus described the invention, what is claimed, and desired to be secured by Letters
 70 Patent, is—

1. A die comprising converging walls, means for forming openings or channels through the body of a plastic mass as the latter is forced
 75 through the die, and one or more wedge-shaped groove-formers secured to the inner surface of one of the walls of the die.

2. A die comprising converging walls, channel-formers located between and out of contact with said walls, and one or more wedge-
 80 shaped groove-formers secured to the inner surface of one of the die-walls and having its opposite edges undercut, substantially as and for the purpose specified.

In testimony whereof I affix my signature in
 85 presence of two witnesses.

ARTHUR GILLET.

Witnesses:

WM. D. GODFREY,
 BERTHA SEARLE.