

No. 649,456.

Patented May 15, 1900.

J. T. HOUGH.

BANK VAULT.

(Application filed May 9, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

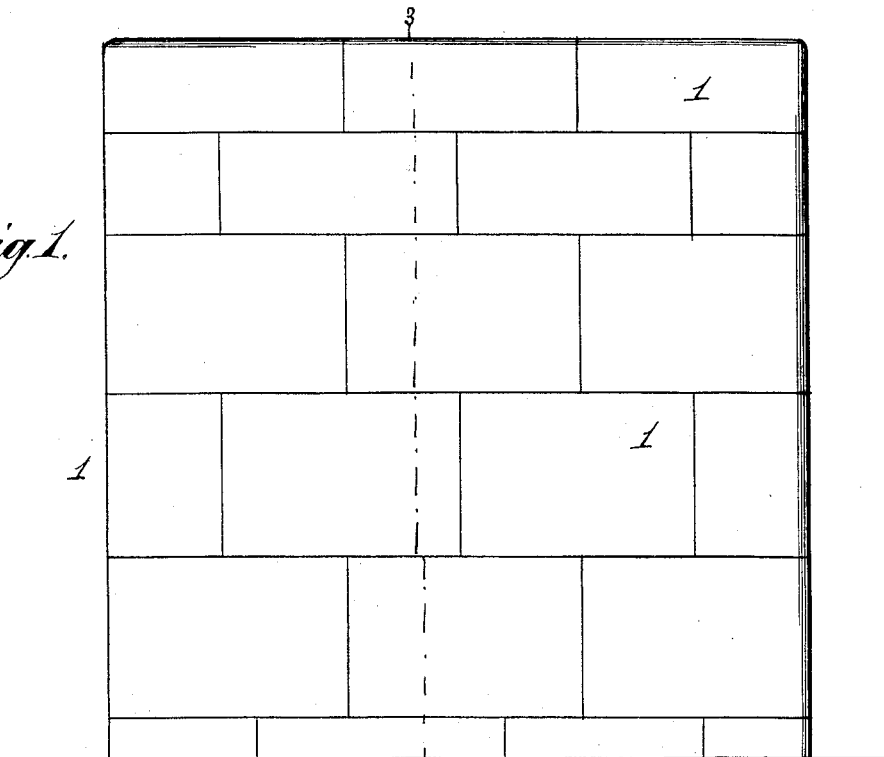
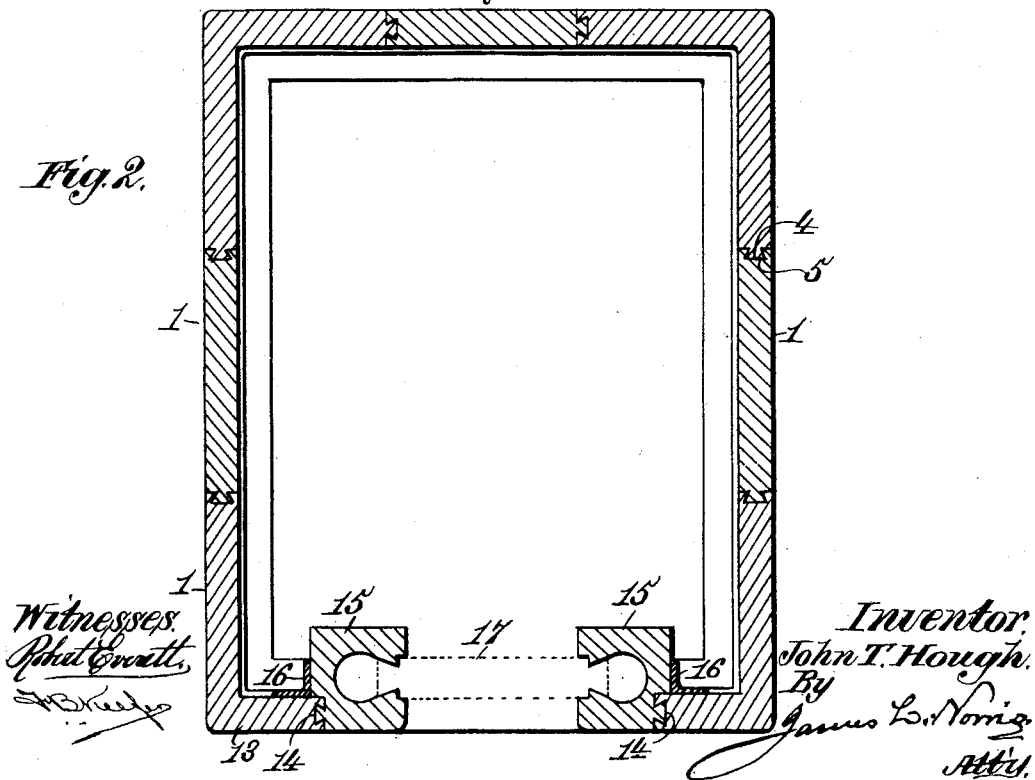


Fig. 2.



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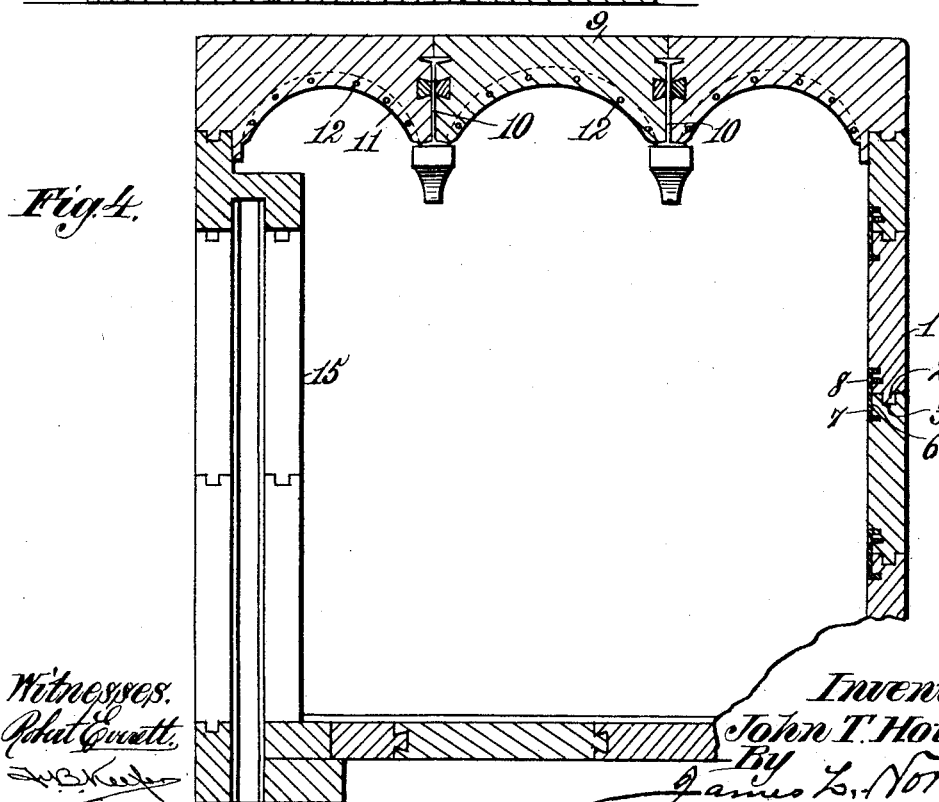
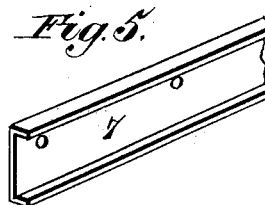
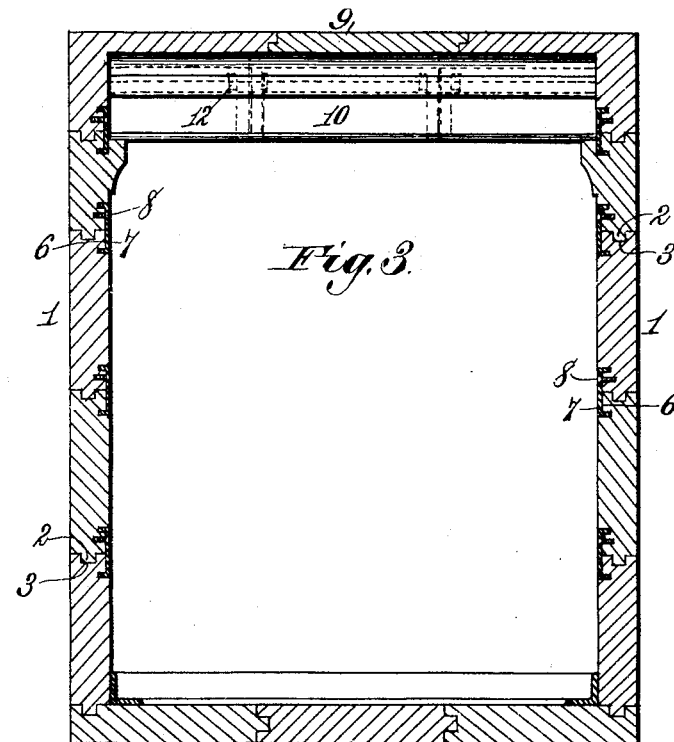
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

JOHN THOMPSON HOUGH, OF PITTSBURG, PENNSYLVANIA.

BANK-VAULT.

SPECIFICATION forming part of Letters Patent No. 649,456, dated May 15, 1900.

Application filed May 9, 1899. Serial No. 716,132. (No model.)

To all whom it may concern:

Be it known that I, JOHN THOMPSON HOUGH, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented new and useful Improvements in Bank-Vaults, of which the following is a specification.

My invention relates to vaults for banks, safe-deposits, and the like, one object of the same being to provide a structure for this purpose made up of plates which are so connected together that they cannot be separated one from the other and in which the locking means is hidden from view.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be set forth in the claims.

In the drawings forming part of the specification, Figure 1 is a side elevation of a vault-casing constructed in accordance with my invention. Fig. 2 is a horizontal section of the same. Fig. 3 is a vertical section of the same. Fig. 4 is a similar section at right angles to Fig. 3, and Fig. 5 is a detail perspective view of one of the clamping-plates.

Like reference-numerals indicate like parts in the different views.

The frame or casing of the vault is made up of a number of metallic plates 1 1, the horizontal rows of which are arranged in staggered relation, as shown—that is, the vertical joint or line of connection between the plates of the different horizontal rows are out of line with the vertical joints or lines of connection of the rows adjacent thereto. The upper and lower edges of the plates 1 are formed, respectively, with ordinary tongues 2 and grooves 3, the tongues of one set of plates fitting within the grooves of the adjacent set. The opposite ends of said plates are formed, respectively, with dovetailed tongues 4 and corresponding grooves 5, the tongues 4 on one set of plates fitting within the grooves 5 on the adjacent set. In building up the structure it will of course be understood that the lower horizontal row is first laid, the different plates making up said row being interlocked one with the other by slipping the tongues 4 thereon into the grooves 5 by a vertical movement. When the lower

row has been completed, the second row is put in place upon the top thereof in a similar manner, it being of course understood that the tongues 2 and grooves 3 on the horizontal edges of the respective plates will fit into each other without the necessity of a sliding or longitudinal movement of the plates with respect to each other. The dovetailed tongues 4, fitting in the correspondingly-shaped grooves 5, serve to effectually lock the plates in each horizontal row together without other securing means. In order, however, to provide means whereby the members of each horizontal row may be secured to the members of the adjacent horizontal rows, I form in the inner surface of the plates, adjacent to the upper and lower edges thereof, grooves 6 6, in which are fitted clamping-bars 7 in the form of channel-iron, the flanges of said iron fitting within said grooves and the web or body which connects said flanges overlapping the horizontal joint and lying flush with the inner surfaces of said plates. The clamping-bars themselves are secured against lateral movement by means of screws 8, as shown.

The means of assembling and locking the plates 1 of which the vault is made up, which I have described above, is extremely simple and effective and at the same time can be carried out at a minimum expense.

The roof or top of the vault is made up of a plurality of plates or blocks 9 9, which are connected to the upper ends of the plates 1 in a manner similar to that above set forth. Lap-joints are provided between the adjacent members of the plates or blocks 9 and the same are supported by I-beams 10, which extend from one end or side of the vault to the other. Flanges 11 11 are also formed on the under side of the plates or blocks 9, through which securing or locking bolts 12 pass.

It will be observed that the corner-plates 1 are L-shaped—that is, they extend around and form parts of two sides of the vault. The front corner-plates 13 are provided with vertical dovetailed grooves 14, in which are secured the vertical blocks 15, constituting the door-frame. These blocks are further secured in place by means of angle-iron braces 16, which extend entirely around the vault

on the inside. The door 17 is formed with dovetailed side edges, which fit and move within corresponding sockets or grooves in the blocks 15 15.

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

10 1. A vault casing or shell made up of plates having joints preventing lateral or crosswise separation of said plates, and recesses on opposite sides of said joints, clamps having projections thereon fitting within said recesses, and means for preventing displacement of said clamps.

15 2. A vault casing or shell made up of plates having tongue-and-grooved joints, channel-iron clamping-bars overlapping the joints, with the flanges thereof fitting within recesses

on opposite sides of the joints, and means for preventing displacement of said bars. 20

3. A vault casing or shell having L-shaped corner-plates in front, vertical blocks constituting the door-frame having a tongue-and-grooved connection with said corner-plates, and angle-iron braces engaging the outer side 25 edges of said blocks within the casing, and extending entirely around the casing engaging the inner surface of the walls thereof.

In testimony whereof I have hereunto set my hand in presence of two subscribing wit- 30 nesses.

JOHN THOMPSON HOUGH.

Witnesses:

H. J. GRAHAM,
M. B. BATES.