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EDW.^d K. HALL.

Class C

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Burglar Proof Safe..

PATENTED JUL 11 1871

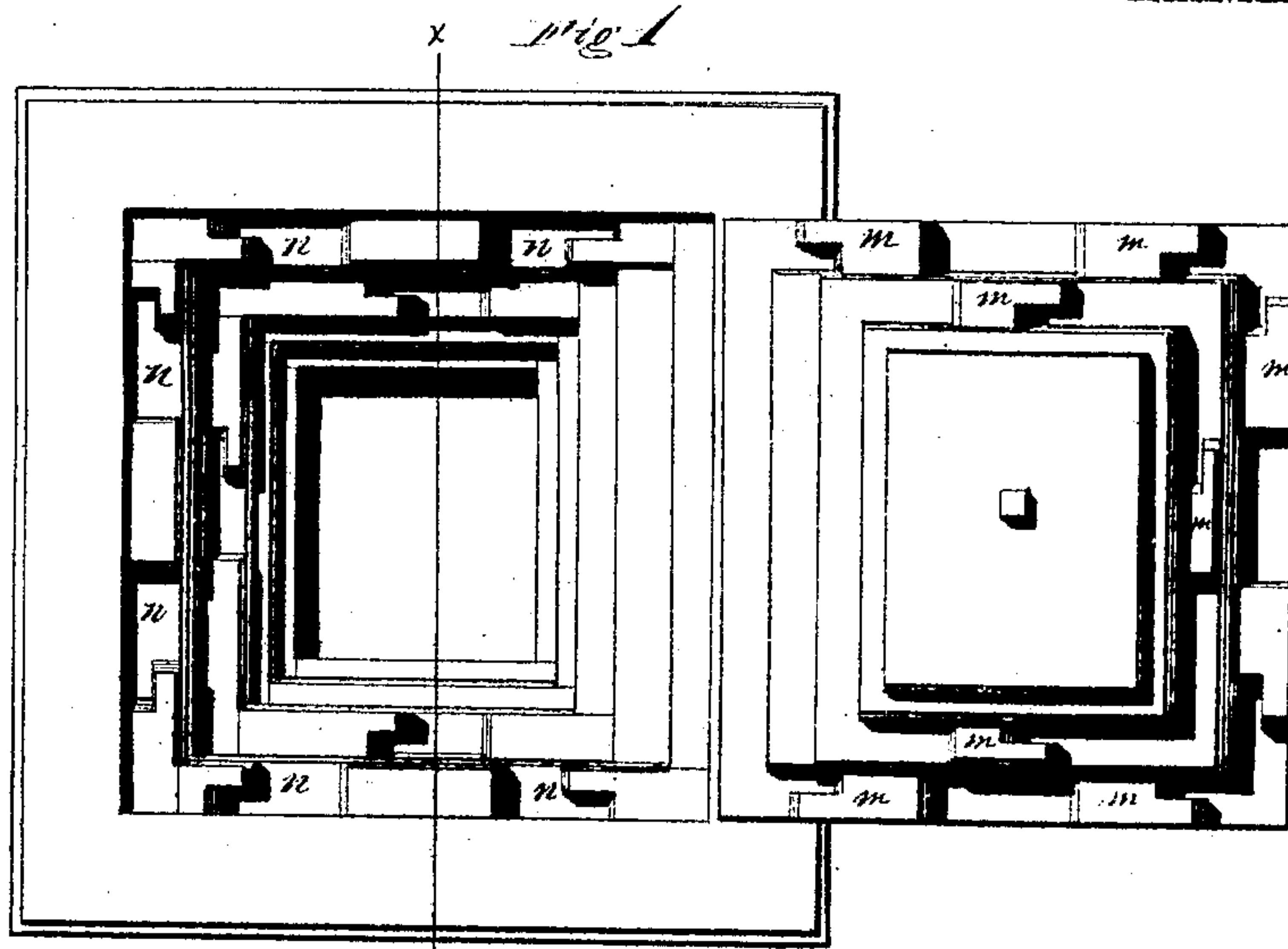


Fig 2

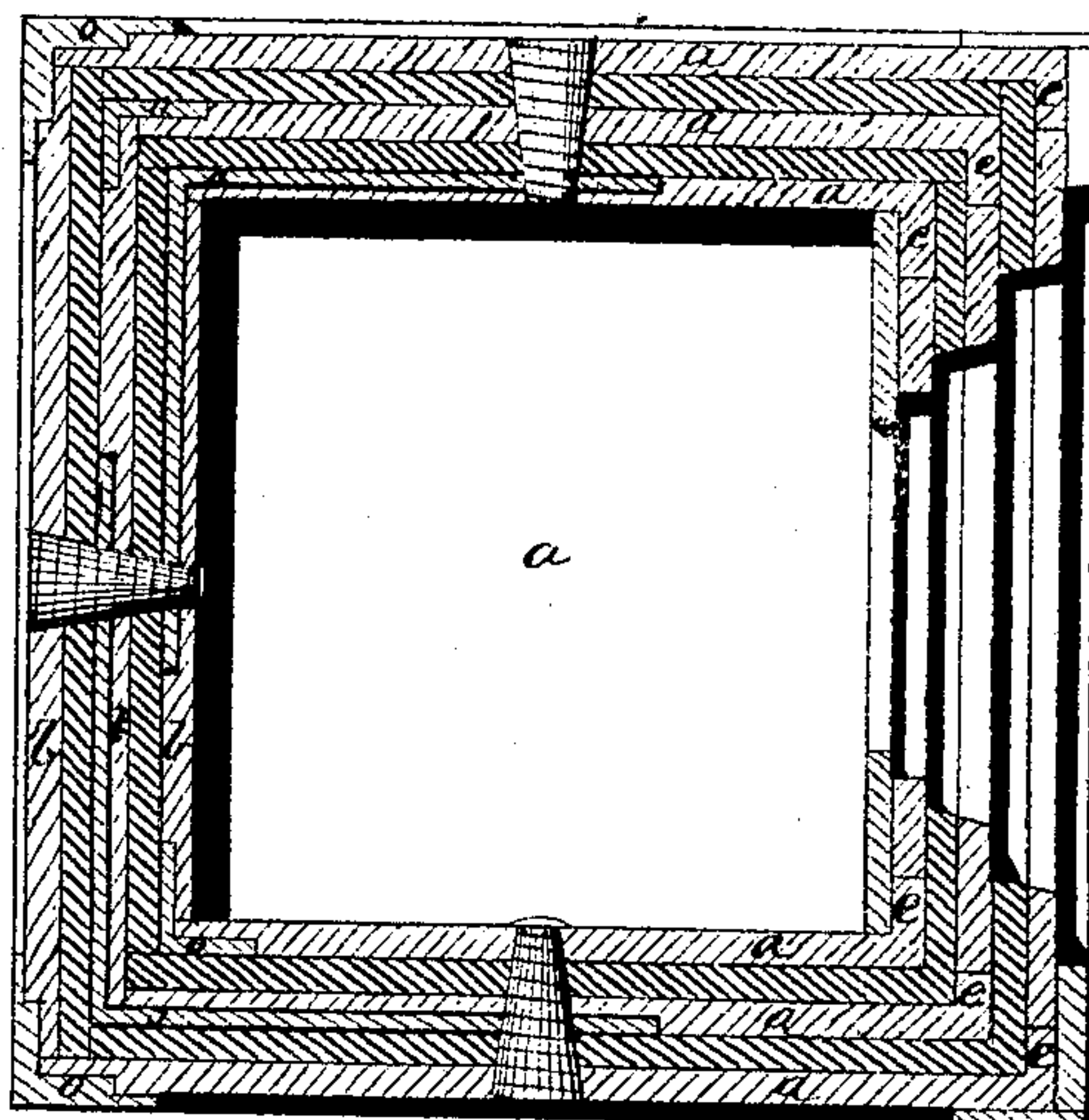


Fig 3

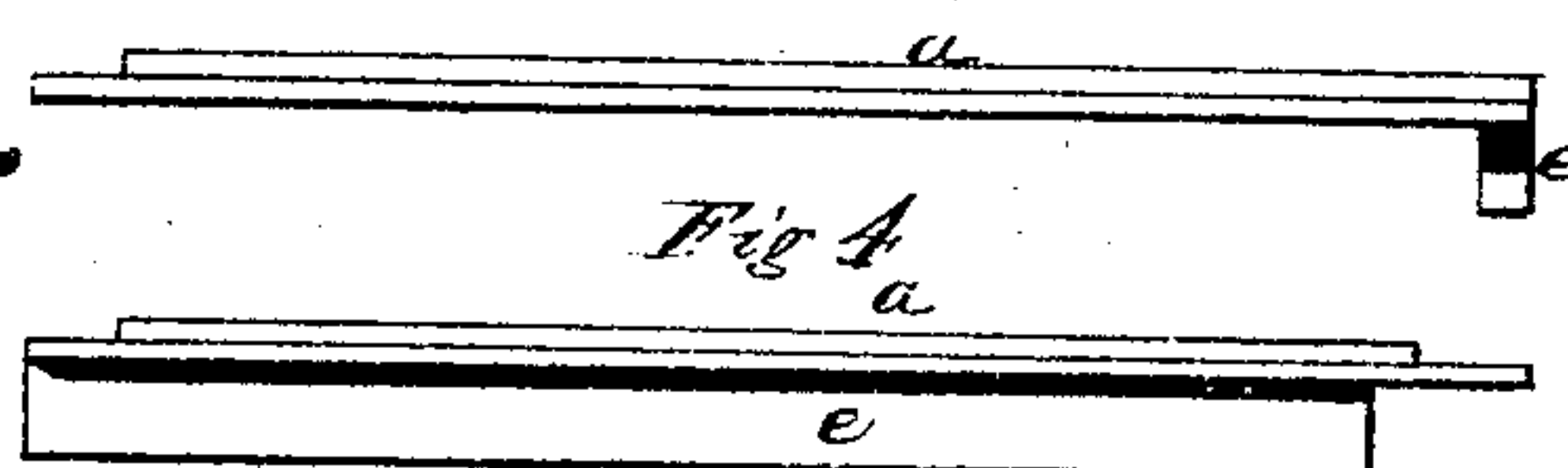


Fig 5

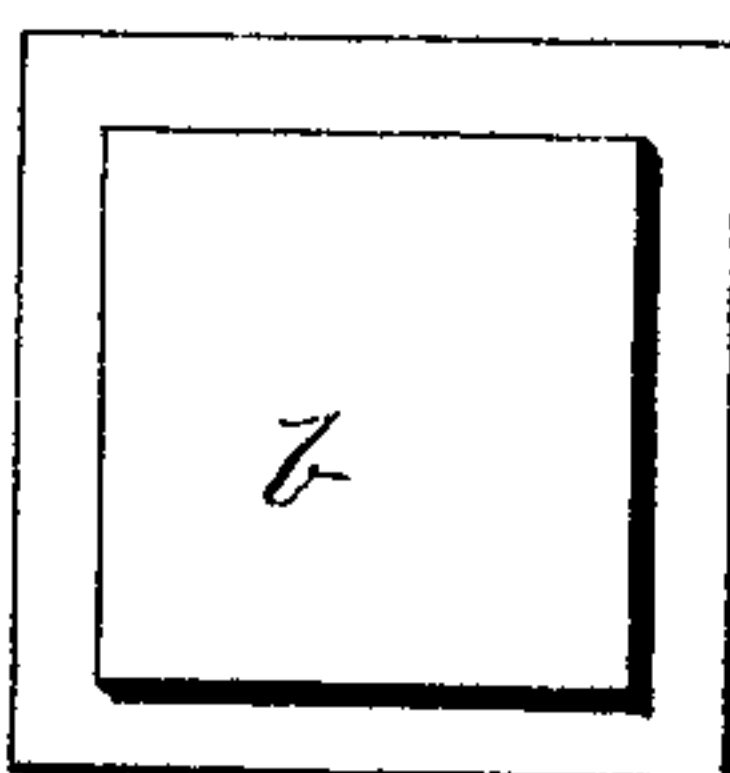
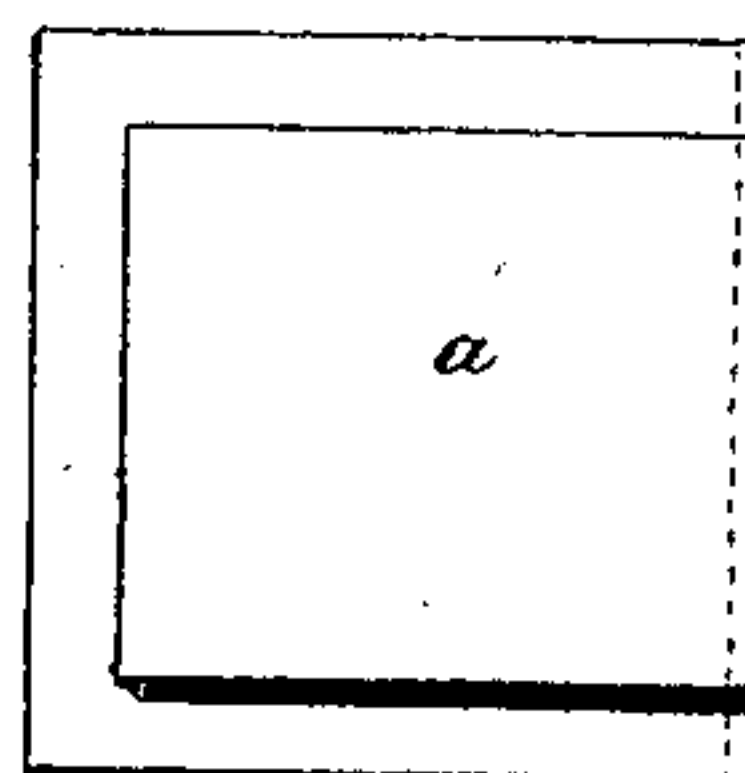


Fig 6



Witnesses.

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116,954

UNITED STATES PATENT OFFICE.

EDWARD K. HALL, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN BURGLAR-PROOF SAFES.

Specification forming part of Letters Patent No. 116,954, dated July 11, 1871.

To all whom it may concern:

Be it known that I, EDWARD K. HALL, of Louisville, in the county of Jefferson and State of Kentucky, have invented certain Improvements in Safes, Vaults, and Cells, of which the following is a specification, reference being had to the accompanying drawing.

My invention relates to the construction of safes, vaults, or cells; and it consists: 1st, in a peculiar manner of preparing and uniting the plates to form the body; and 2d, in a peculiar method of securing the door to the body when closed.

Figure 1 is a front view of a safe open. Fig. 2 is a vertical section taken on a line through the center from front to rear. Figs. 3, 4, 5, and 6 are views of the plates, shown detached.

In constructing a safe on the plan of my present invention, I form the body of a series of iron and steel plates—*a* representing the former and *b* the latter. The iron plates I prepare as follows: I take a plate of iron, and after cutting it to the required size I then bend over one edge so as to form a flange, *e*, as represented in Figs. 3 and 4. I then form a rabbet on the outer or opposite side, along the three remaining edges, as shown in plan in Fig. 6. All the iron plates for the top, bottom, and two sides are made in this manner. The back plate consists of a plain rectangular plate with a rabbet formed on its back side along all four of its edges, as clearly shown in Fig. 5, all these rabbets in the various plates being of uniform depth, which may be one-half the thickness of the plates, and of any desired width. I then construct a series of corner pieces, *o*, usually denominated angle-irons, of a suitable size to fit into and fill the rabbets along each corner, as shown in Fig. 2. The body is built up by taking a back plate, *b*, and placing around it four of the plates *a*—one at the bottom, one at the top, and one at each side—these plates *a* all being arranged with their flanges *e* at the front, as shown in Fig. 2, so as to lock over the steel plates inserted there, and also for the purpose of affording means of securely bolting or riveting thereto the plates which form the door-frame or jambs. When these plates *a* and *b* are thus arranged it will be seen that there will be formed along each of the four edges or angles of the back, and also along the side angles at both top and bottom, a recess equal to half the thickness of the plates,

and into these recesses I then secure the angle-irons *o*, thus filling up these recesses flush with the outer surfaces of the plates, these angle-irons thus covering the joint along each of these eight angles with a solid unbroken corner piece, which will be a perfect bar to the insertion of wedges. Having thus formed the inner shell of the body, I then place over these a layer of steel plates, *b*, and then over them another series of the iron plates and angle-irons, and so on to any desired extent; the drawing representing a safe composed of five thicknesses of plates, three of iron and two of steel.

It is obvious that the recesses or rabbets in the iron plates may be made of any desired width, and that they may be of different widths on the various plates forming a single layer, or differing in width in the different layers, as shown in Fig. 2. They may, if desired, be so made that the angle-irons shall extend more than half-way across the plates, as represented in Fig. 2, or they may be arranged so that the angle-irons on opposite sides of any plate may each extend half-way across and meet at the center, in which case the plate instead of having recesses or rabbets will simply be a plain plate of but half the regular thickness; the great object to be accomplished in all cases being to form the angles of a solid unbroken piece of metal, so that there shall be no crack left for the insertion of a wedge. To save time and labor required to plane away the metal to form the recesses or rabbets the plates may be rolled of the proper width with the rabbets already formed along two of its edges, which will leave but two shorter ones to be cut out; and even they may be subsequently rolled down, leaving only the finishing to be performed by the planer.

To secure the door to the body when closed, I form on the door a series of L-shaped projections, *m*, as shown in Fig. 1, and in the face of the frame or jambs I form a corresponding series of similarly-shaped recesses, *n*, into which the projections fit when the door is closed, thus locking the door to the body of the safe all around its edges in a very secure manner, so that they cannot be separated by wedges.

It will be seen that these projections and recesses are somewhat similar to those described in my former application, but it will be observed that in these there is a less number of corners

or angles, and that they are therefore easier to be made, and there is less liability of cracking the metal in punching them in the plates. The former style, being more difficult and expensive to make, is adapted to the higher-priced safes, while these are adapted to those of a lower price.

It is obvious that these improvements are well adapted to the construction of vaults and cells as well as to safes, and I so intend to apply them.

Having thus described my invention, what I claim is—

1. A safe, having its body built up of the plates *a* and *b*, constructed as herein described, in com-

bination with the corner pieces *o*, all arranged as herein set forth.

2. The plates *a*, having a flange, *e*, formed along one edge, and having a recess or rabbet formed along their remaining three edges on the opposite side from the flange, substantially as set forth.

3. In combination with the plates *a*, the back plate *b*, recessed along its four edges, as described.

EDWARD K. HALL.

Witnesses:

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