

(No Model.)

2 Sheets—Sheet 1.

H. GROSS.  
BANK VAULT.

No. 370,470.

Patented Sept. 27, 1887.

Fig. 1.

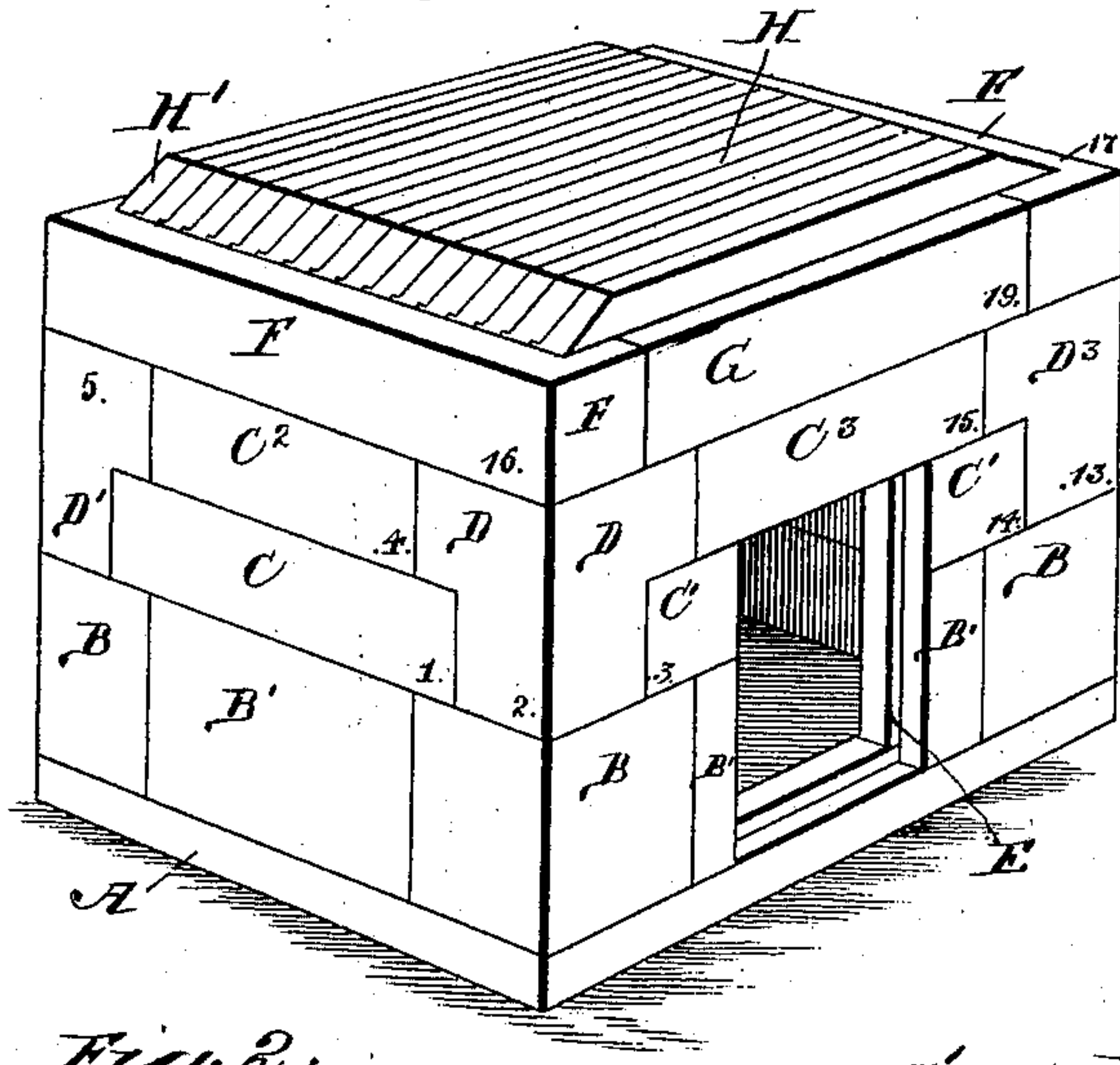


Fig. 13.

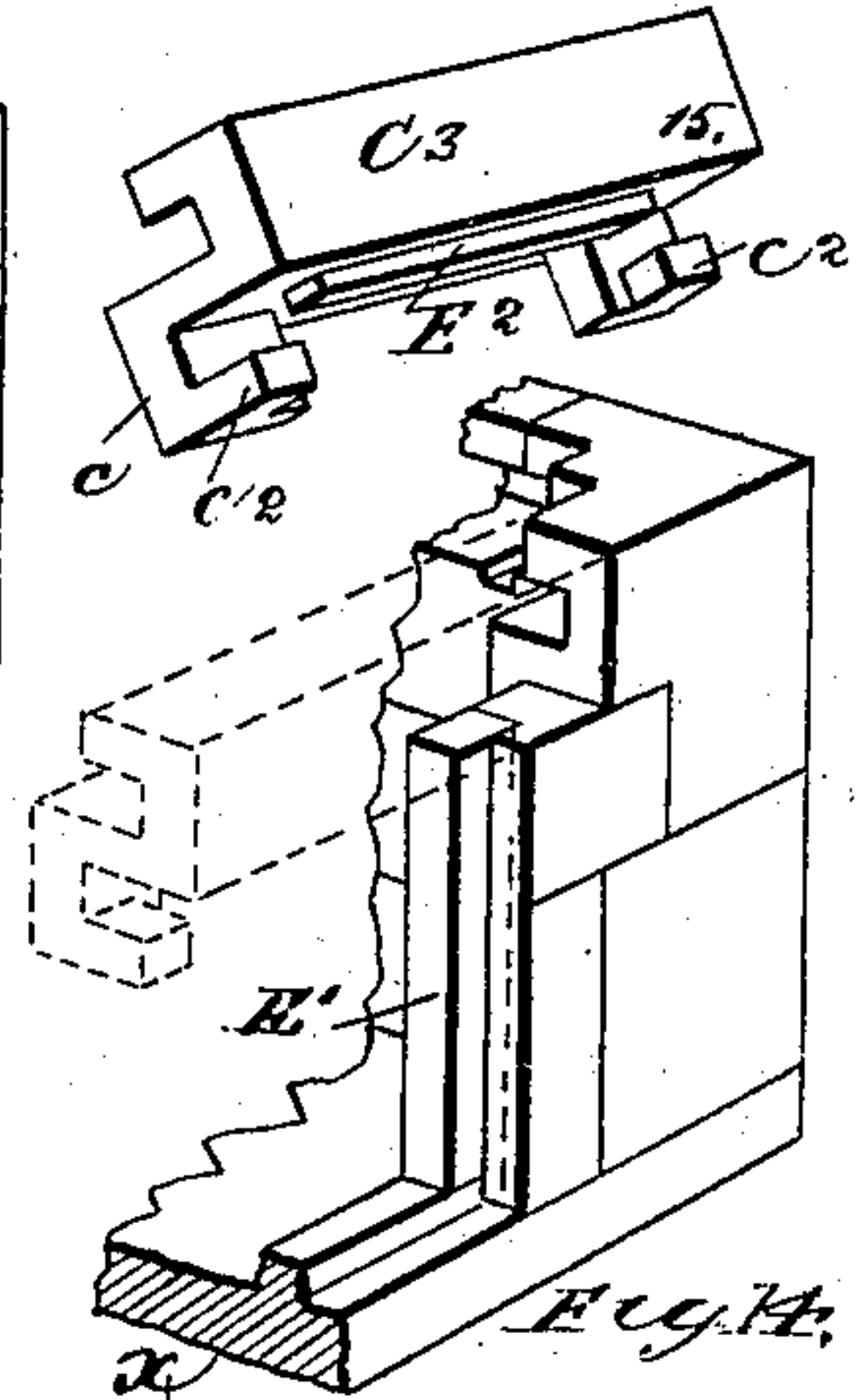


Fig. 2.

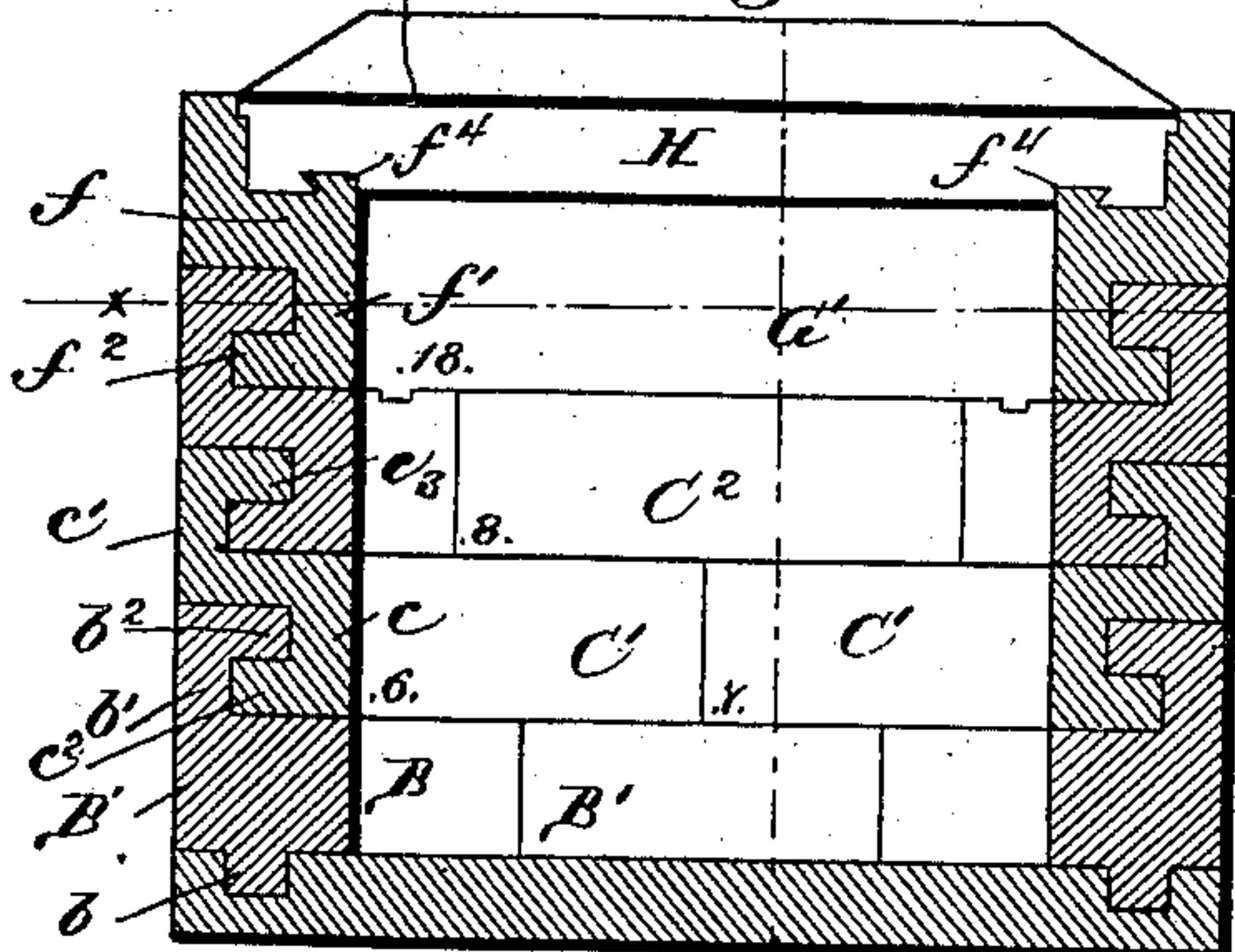


Fig. 3.

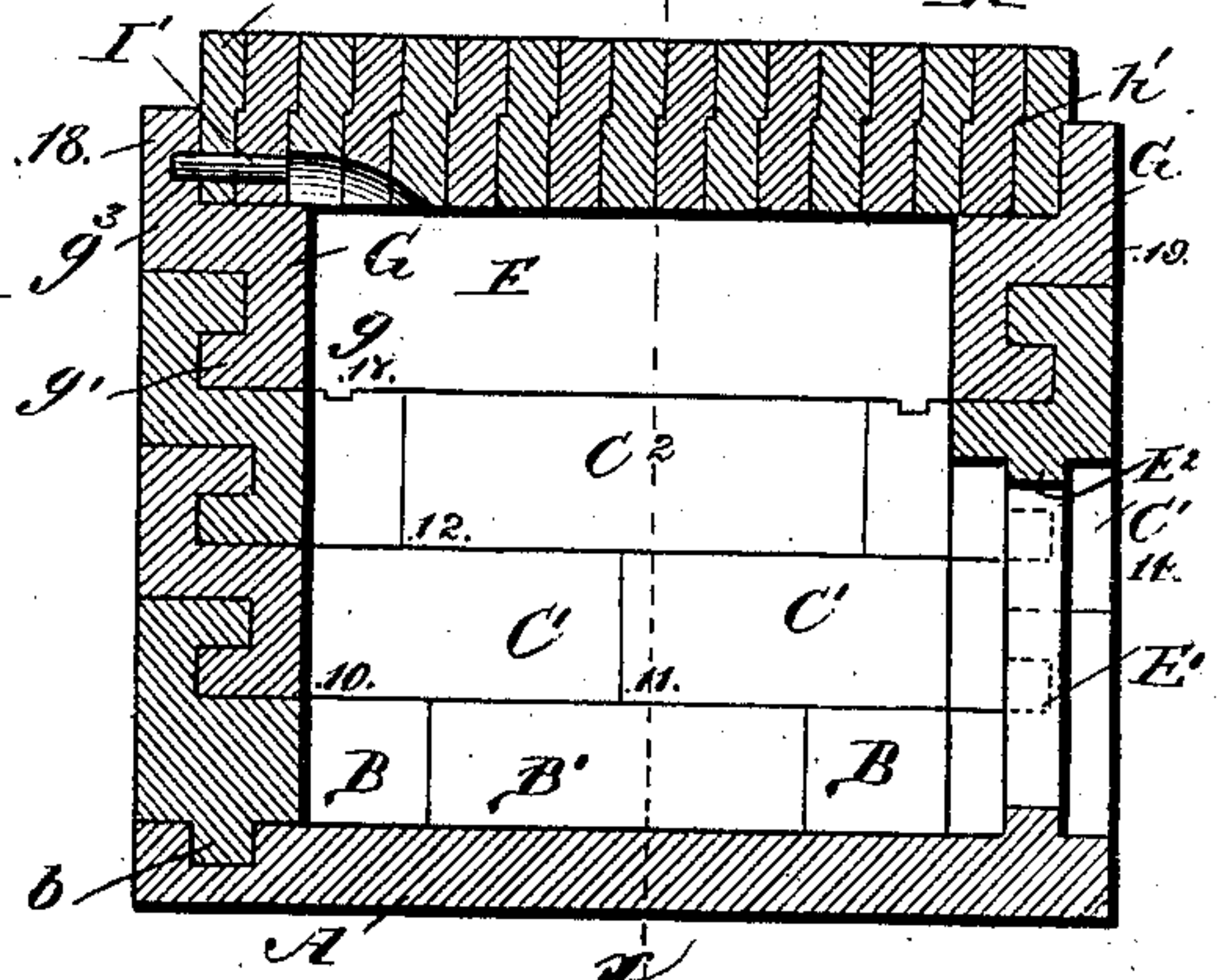


Fig. 4.

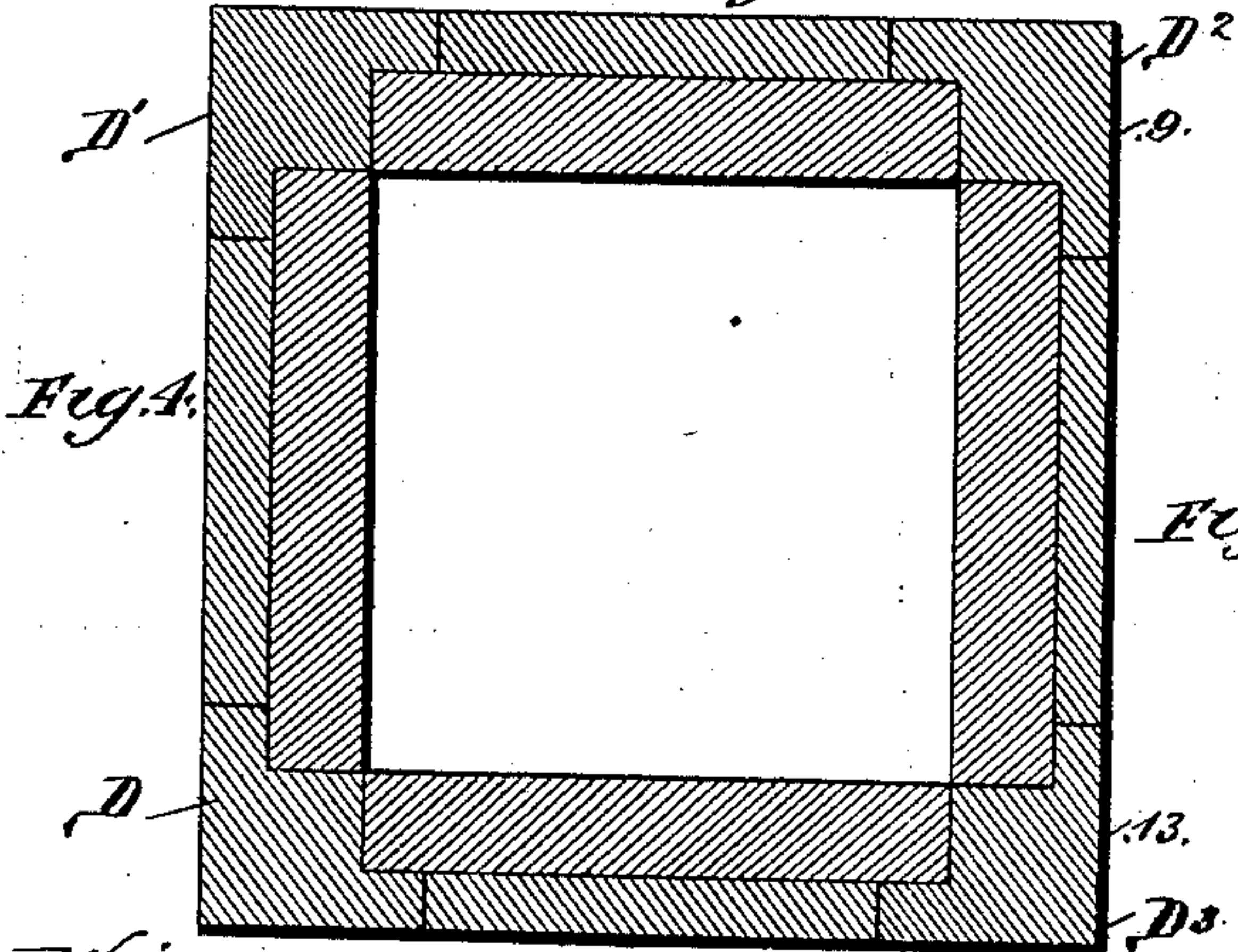
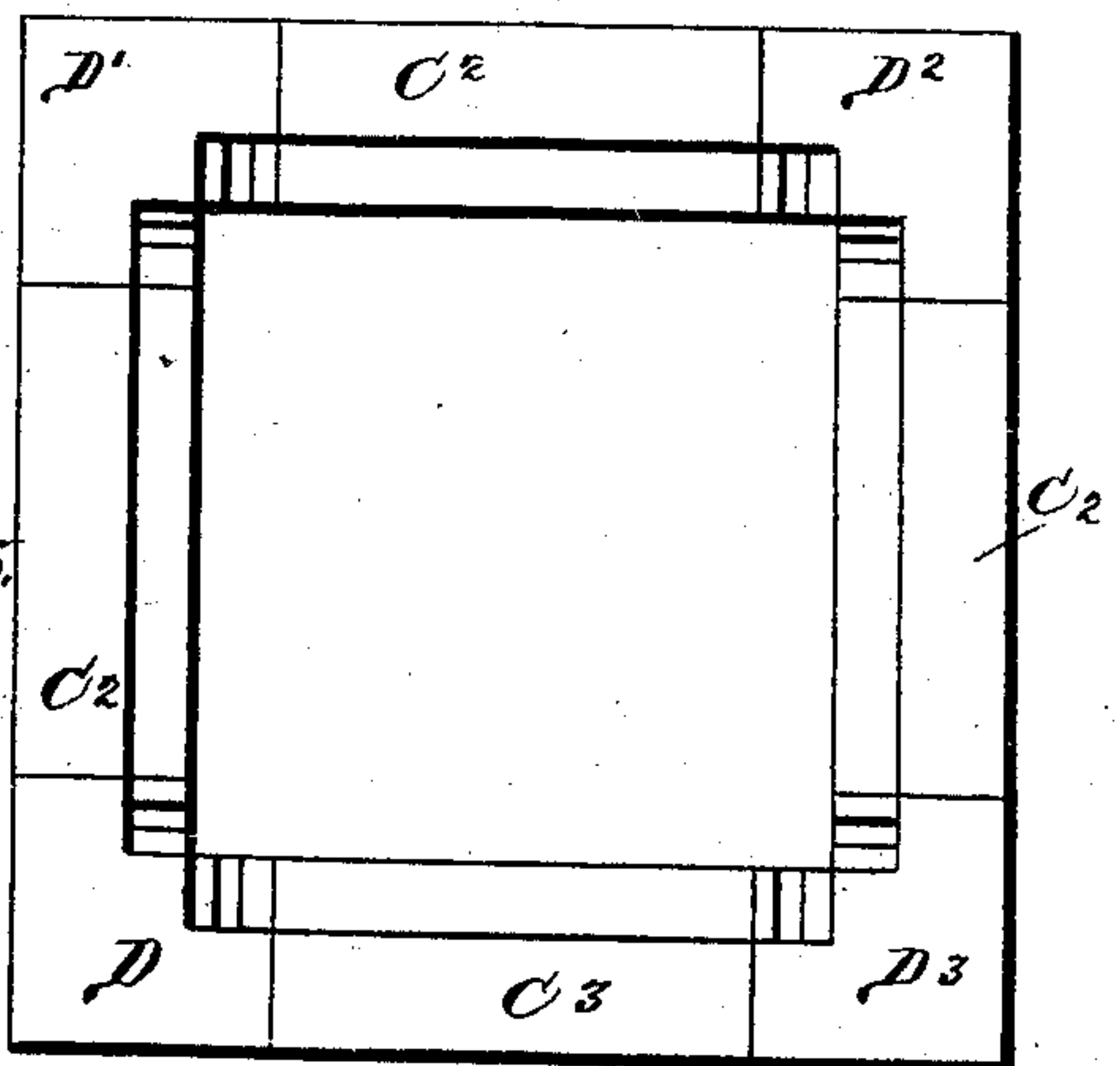


Fig. 5.



Witnesses,  
H. Ross,  
J. Mills.

Inventor  
Henry Gross  
By Price Fisher  
Atty.



(No Model.)

2 Sheets—Sheet 2.

H. GROSS.  
BANK VAULT.

No. 370,470.

Patented Sept. 27, 1887.

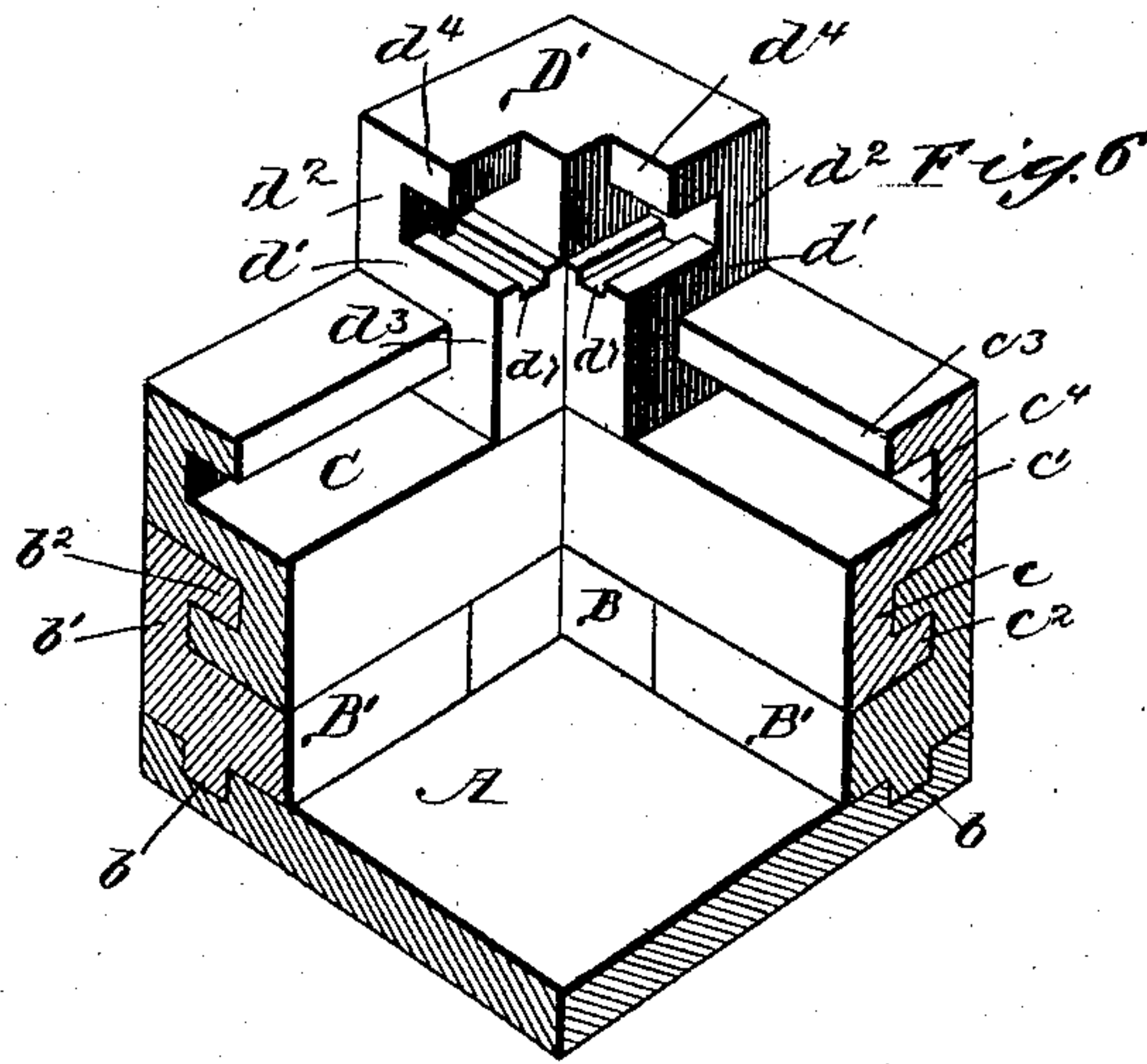


Fig. 8.

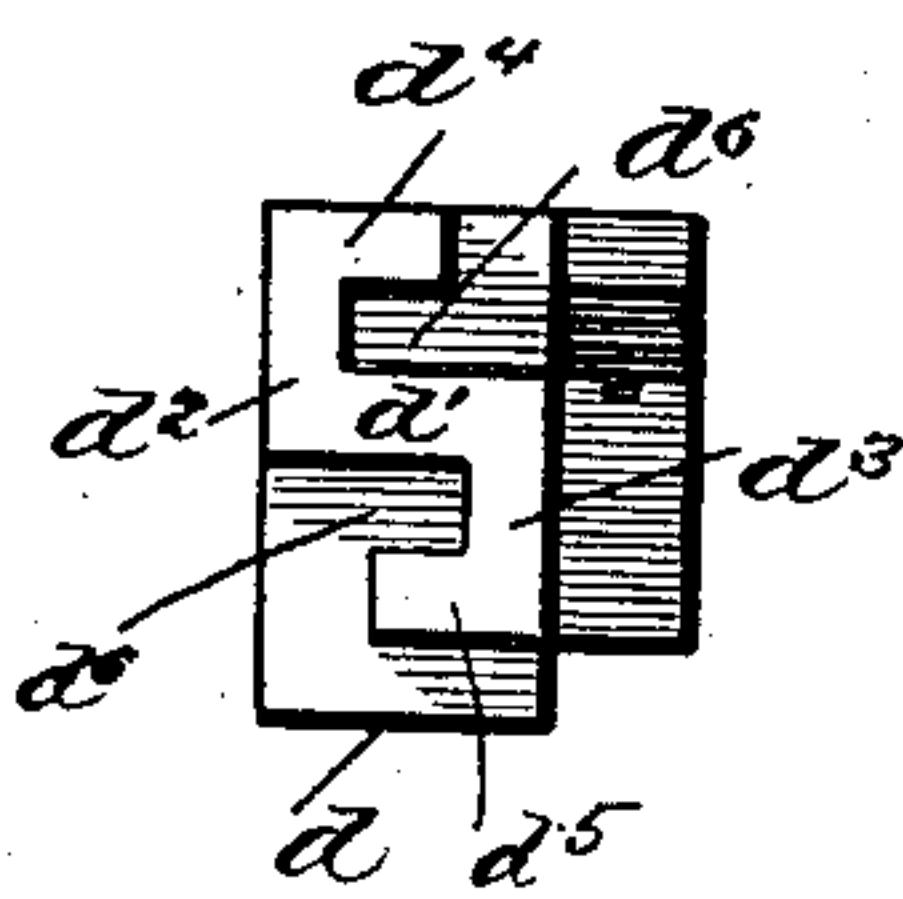


Fig. 7.

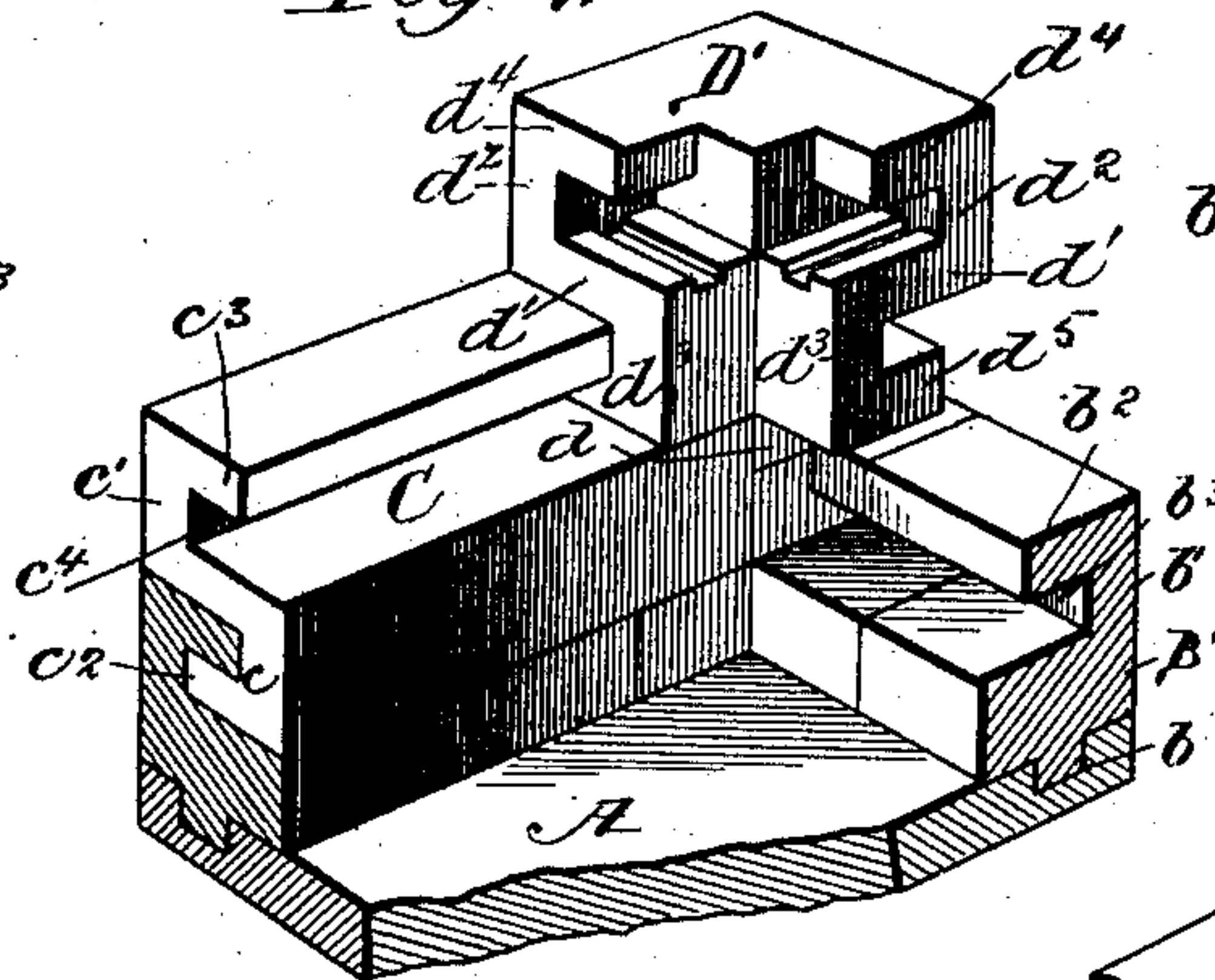


Fig. 9.

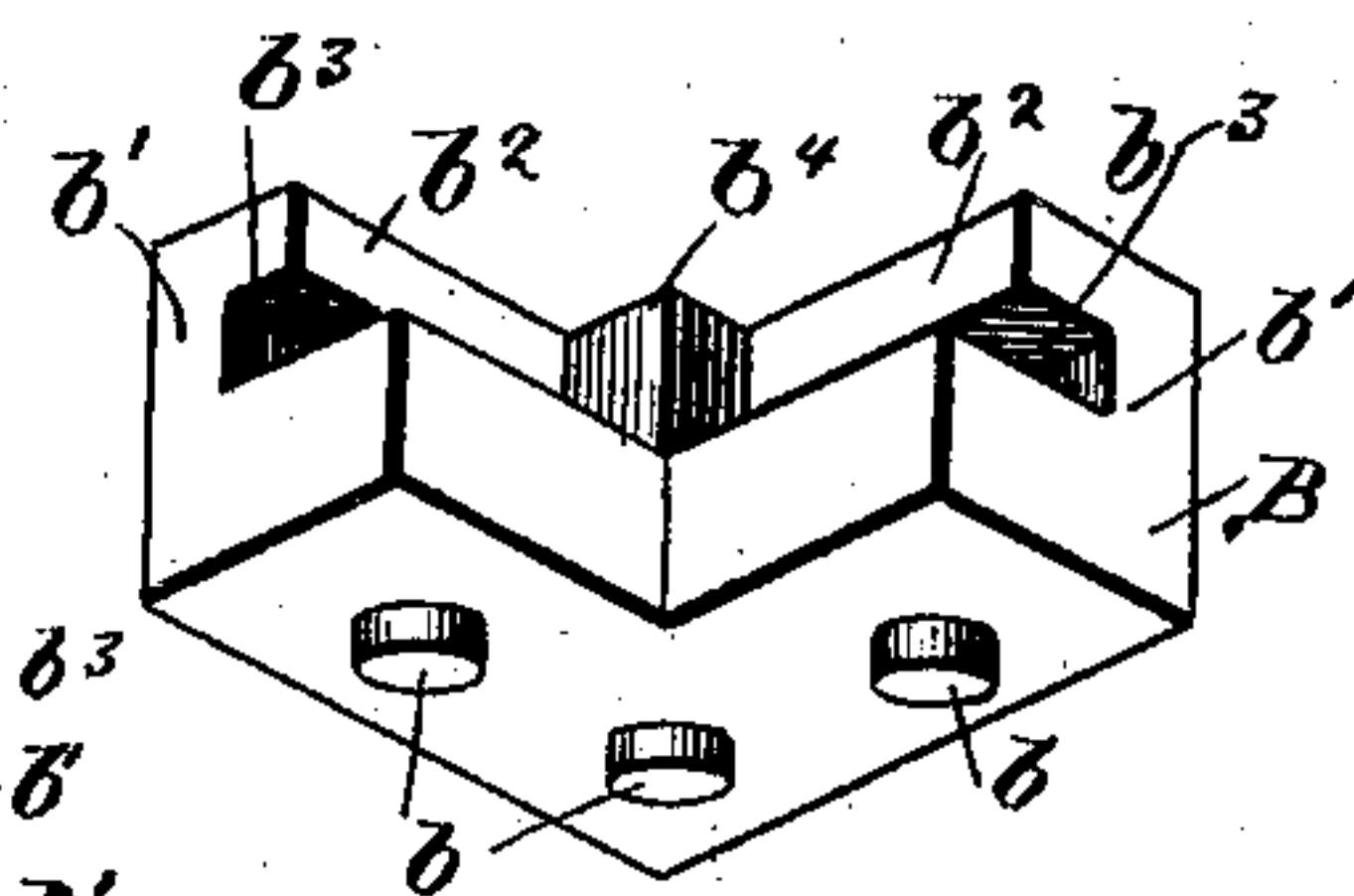


Fig. 10.

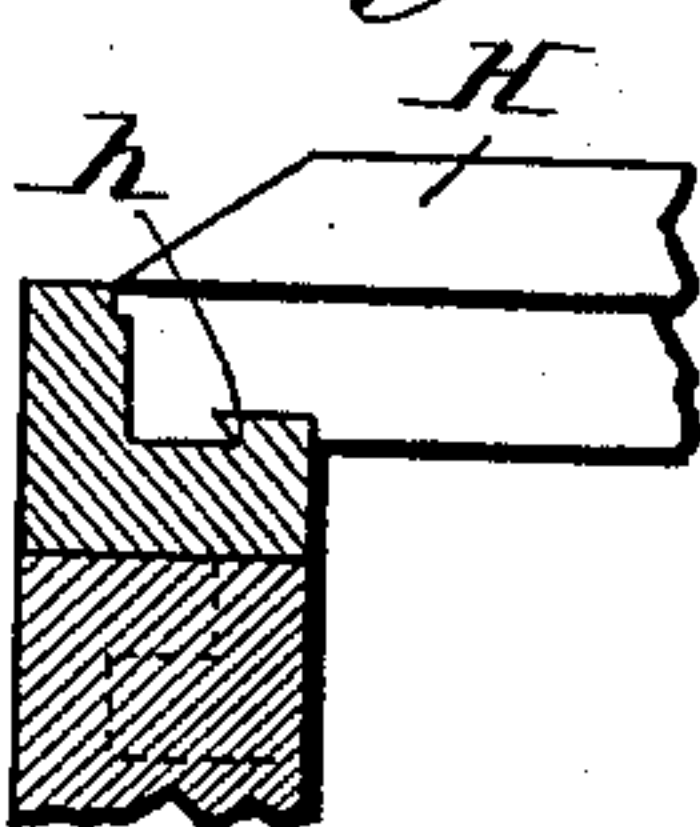


Fig. 11.

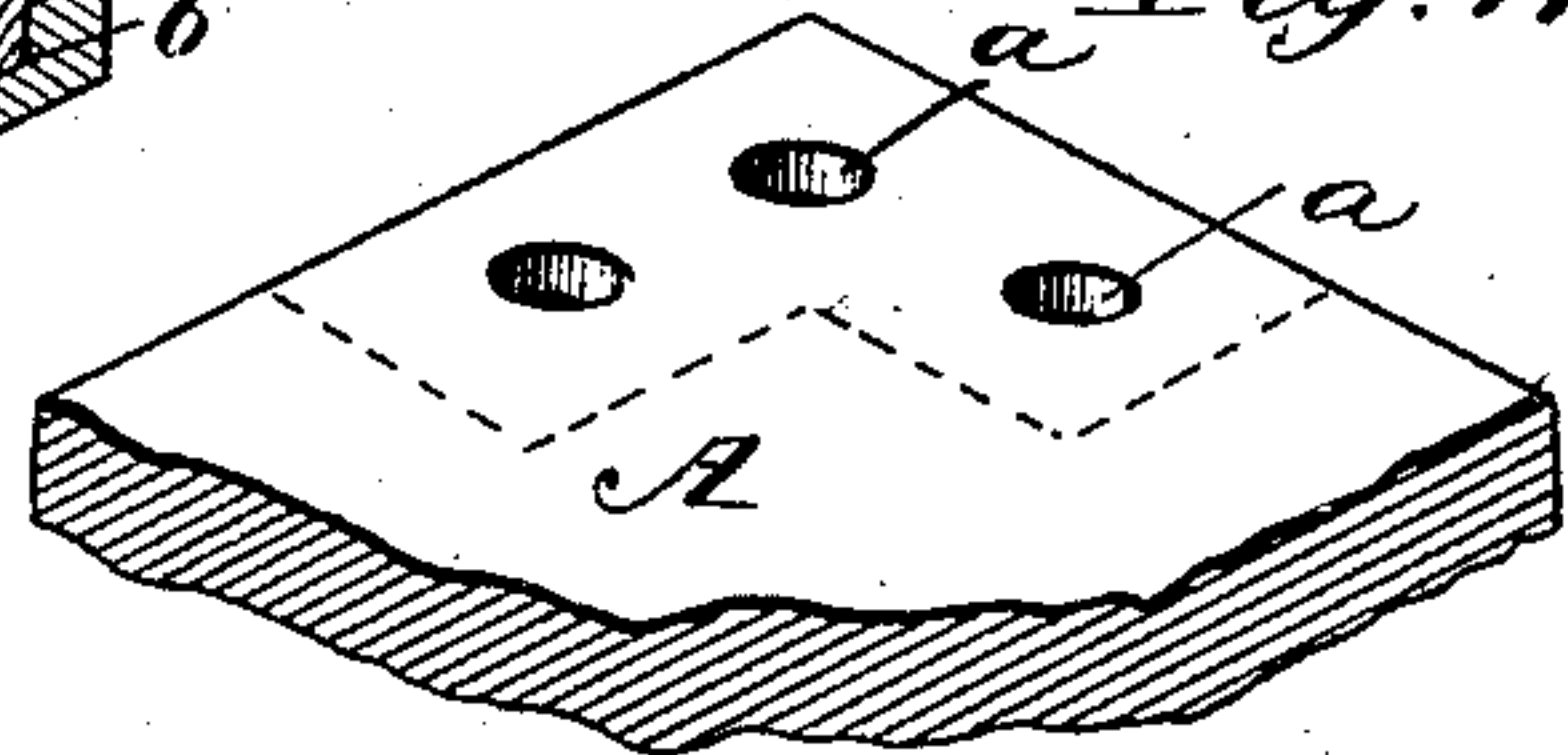
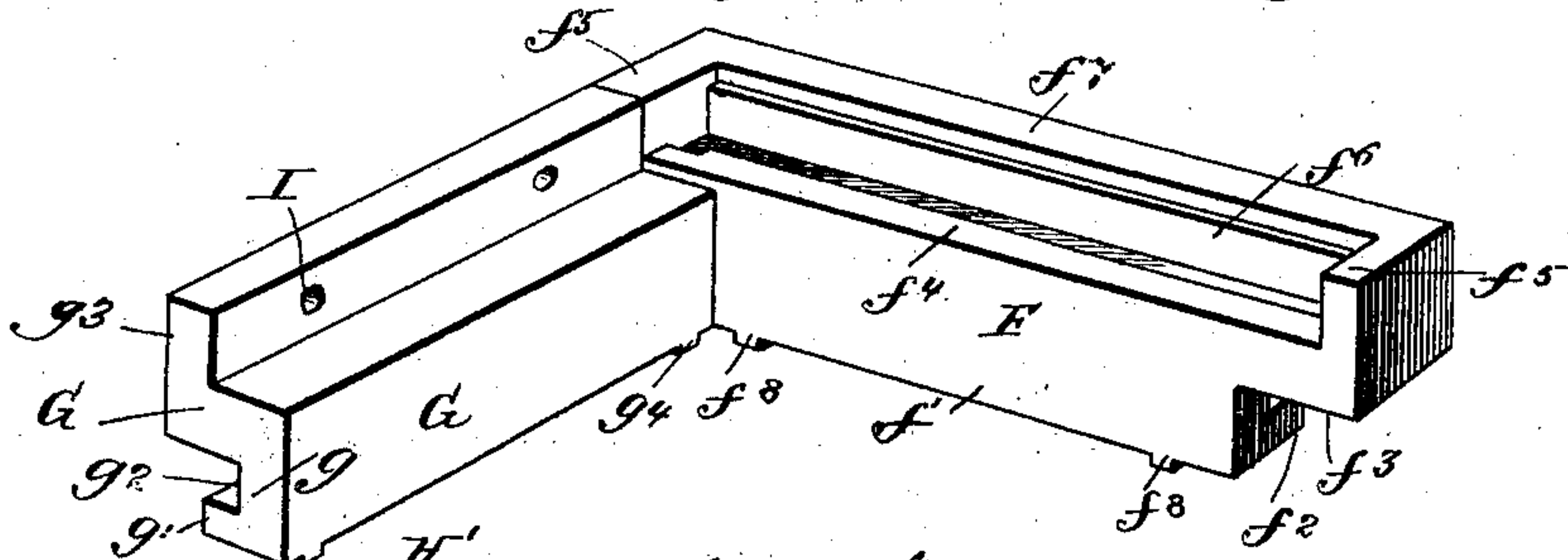


Fig. 12.



Witnesses.

W. Rossiter  
J. Mills.

Fig. 13.

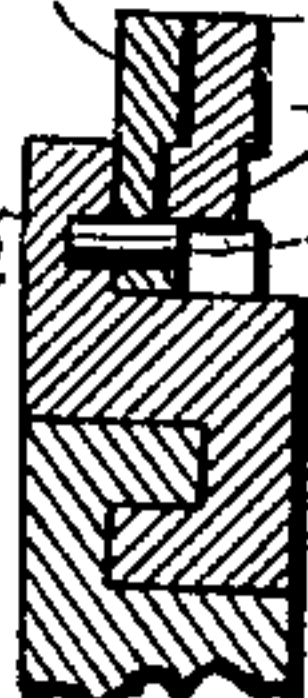
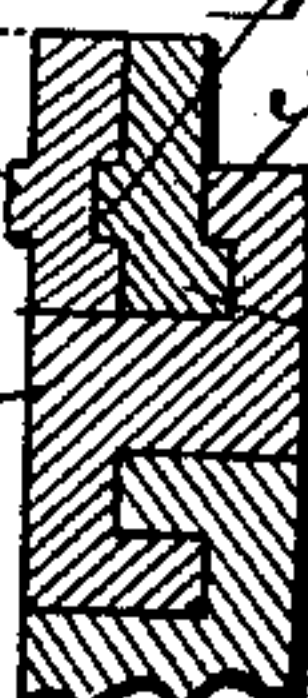


Fig. 14.



Inventor

Henry Gross  
Price & Fisher  
Attys.



# UNITED STATES PATENT OFFICE.

HENRY GROSS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE CHICAGO SAFE AND LOCK COMPANY, OF SAME PLACE.

## BANK-VAULT.

SPECIFICATION forming part of Letters Patent No. 370,470, dated September 27, 1887.

Application filed March 8, 1887. Serial No. 230,085. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY GROSS, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have  
5 invented certain new and useful Improvements in Bank-Vaults, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

10 My present invention has particular relation to the improvement in that class of bank-vaults the walls of which are composed of heavy blocks of cast-iron secured together in such manner that they cannot be separated in  
15 case attempt is made to forcibly enter the vault.

The object of my present invention is to form the blocks whereof the vault is built of such improved construction that they can be se-  
20 curely locked together, and this, too, without the necessity of employing supplemental bolts or rods for such purpose.

To this end my invention consists in a bank-vault the walls whereof comprise metal blocks  
25 having longitudinal channels and interlocking ribs, so that when the blocks are placed together their ribs shall interlock in such manner as to bind the blocks against danger of forcible displacement.

30 My invention also consists in the particular construction of blocks, and in the construction and arrangement of the corner blocks and roof, and other details of construction, hereinafter described, illustrated in the accompanying drawings, and particularly defined in the  
35 claims at the end of this specification.

Figure 1 is a perspective view from the front of a bank-vault embodying my improvements. Fig. 2 is a view in central vertical  
40 section on line  $x x$  of Fig. 3. Fig. 3 is a view in central vertical section on line  $y y$  of Fig. 2. Fig. 4 is a view in horizontal section on line  $x x$  of Fig. 2. Fig. 5 is a plan view of the wall structure with the roof-supporting blocks and  
45 roof removed. Fig. 6 is a detail perspective view of a part of one of the corners of the vault-structure, portions of the blocks being shown in vertical transverse section. Fig. 7  
50 is a similar detail perspective view of a portion of one of the corners with some of the

blocks removed. Fig. 8 is a detail side view of one of the corner blocks. Fig. 9 is a detail perspective view of one of the base corner blocks. Fig. 10 is a detail view in vertical  
transverse section through one of the side roof-supporting blocks and a subjacent block, the  
55 end portion of one of the roof-bars being shown in side elevation. Fig. 11 is a fractional perspective view of one corner of the vault-floor or base-plate. Fig. 12 is a perspective view  
60 of one of the side roof-supporting blocks and one of the end roof-supporting blocks in proper relative position. Fig. 13 is a perspective view of the block above the doorway of the vault. Fig. 14 is a fractional perspective view  
65 of one corner of the vault, parts being broken away for better illustration. Fig. 15 is a detail view, in vertical transverse section, through the rear roof-supporting block and the superposed roof-bars; and Fig. 16 is a similar view  
70 through the front roof-supporting block and roof-bars.

A designates the bottom plate or floor of the vault, near the outer edges of the upper surface of which are formed suitable holes or  
75 sockets,  $a$ , adapted to receive corresponding dowels,  $b$ , formed upon the under side of each of the base corner blocks B and the intermediate base-block, B'. The corner blocks B are  
80 each cast with the upwardly-projecting webs  $b'$ , from each of which projects the rib  $b^2$ , that extends inwardly and practically parallel with the body of the block, thereby forming the channel or groove  $b^3$ , adapted to receive a cor-  
85 responding rib of the next superposed block, as will be presently explained, and at the center of each base corner block B is formed the squared shoulder or post  $b^4$ , (see Fig. 9,) against  
90 which will bear the ends of the lower angular ribs of the superposed adjacent blocks when such blocks have been placed in position on the base-blocks to form part of the wall structure. Each of the intermediate base-blocks, B', is formed with an upright web,  $b'$ , having  
95 an inwardly-extending rib,  $b^2$ , which forms with the body of the block the groove or channel  $b^3$ , and it will be observed that the ribs  $b^2$  of the blocks B and B' are of less width than the body of the blocks, so that when the su-  
perposed blocks have been placed in position 100



thereon the inner and outer faces of such blocks will be upon the vertical plane with the faces of the blocks B and B'.

The blocks C and the shorter blocks C' and C<sup>2</sup>, which are built upon the base-blocks B and B', are formed each with the central portion, from the opposite sides of which project the webs *c* and *c'*, the lower web *c* being provided with a rib, *c*<sup>2</sup>, and the upper web *c'* being provided with a similar rib, *c*<sup>3</sup>, each of these ribs *c*<sup>2</sup> and *c*<sup>3</sup> being extended into the plane of the body of the block, so as to form therewith the upper and lower channels *c*<sup>4</sup>, one on either side of the central portion of the block. The ribs *c*<sup>2</sup> and *c*<sup>3</sup> are of less width than the body of the blocks, so that when the adjacent blocks are placed in position the inner and outer faces of the several blocks will be coincident, and it will be seen that the channels and angular ribs of each of the blocks C, C', and C<sup>2</sup> are reversely arranged with respect to each other on each side of the central web of the blocks, so as to engage with the corresponding ribs and channels of the adjacent series of blocks.

Upon each of the base corner blocks B will rest one of the corner blocks D, D', D<sup>2</sup>, and D<sup>3</sup>, (see Figs. 4, 5, 6, and 7,) which blocks will be placed in position preferably in the manner hereinafter described. Each of these corner blocks is formed with a central corner-post, *d*, from the adjacent sides of which project the angular plates or ribs *d'*, and from the central portion of each of these angular plates project the upper and lower webs *d*<sup>2</sup> and *d*<sup>3</sup>, provided, respectively, with the ribs *d*<sup>4</sup> and *d*<sup>5</sup>, which extend in horizontal direction and serve to form the channels *d*<sup>6</sup> to receive the corresponding ribs *c*<sup>2</sup> and *c*<sup>3</sup> of the adjacent blocks, as will be presently explained. The shape of the angular plates or ribs *d'* of each of the corner blocks is the same in cross-section as the shape of the blocks C, C', and C<sup>2</sup>, with which they are designed to interlock. It will be observed (see Figs. 7 and 8) that the angular plates or ribs *d'* of each corner block are formed thereon a slight distance above the bottom of the corner-post *d*, so that when either of the blocks C, C', or C<sup>2</sup> is placed upon the base-blocks the central web or body of such block C, C', or C<sup>2</sup> will pass beneath the rib *d*<sup>5</sup> of the corner block and the upper rib *b*<sup>2</sup> of the base-blocks.

Assuming the row of base-blocks and base corner blocks to be set in position on the base plate or floor A of the vault, which operation is obvious, I will now describe a simple manner of setting the remaining blocks of which the vault-structure is composed, and for greater clearness of description I have placed upon the various blocks above the base-blocks certain numbers to indicate the order in which these blocks are preferably set. A block C (No. 1) is placed upon the top of the base-blocks B and B', the lower rib *c*<sup>2</sup> of this block C entering the channel *b*<sup>3</sup> of the base-blocks B and B' and abutting against the sides of the

posts *b*<sup>4</sup> of the blocks B. The corner block D (No. 2) will now be set upon the top of the corner base-block B, and will be slipped toward the block C until the lower rib *d*<sup>5</sup> of the corner block D enters the upper channel *c*<sup>4</sup> of the block C, and the side of the corner-post *d* of this corner block abuts against the end of the block C, and by this operation, also, the rib *c*<sup>3</sup> of the block C has been caused to pass into the lower channel *d*<sup>6</sup> of the corner block, and at such time the corner block D will be in proper position, as shown in Fig. 1. The short block C' (No. 3) adjacent the doorway of the vault will next be slipped endwise into position upon the base-blocks B and B', and in thus setting the block C' its lower rib *c*<sup>2</sup> will enter the channels *b*<sup>3</sup> of the base-blocks B and B', and its upper rib *c*<sup>3</sup> will enter the lower channel *d*<sup>6</sup> of the corner block D, occupying with respect to corner block a position similar to the block C (No. 1) and abutting against the corner-post *d* of the corner block D. A block C<sup>2</sup> (No. 4) will now be placed in position upon the block C, (No. 1,) being slipped thereon from the inside of the vault, so that the lower rib *c*<sup>2</sup> of this block C<sup>2</sup> shall enter the upper channel *c*<sup>4</sup> of the block C, the upper rib of the block C at the same time entering the lower channel of the block C<sup>2</sup> and the ribs of these blocks interlocking. The corner block D' (No. 5) will next be placed in position upon a corresponding base corner block, B, and will be moved toward the blocks C and C<sup>2</sup> (Nos. 1 and 4) until the lower rib *d*<sup>5</sup> of the corner block D' enters the upper channel *c*<sup>4</sup> of the block C, (No. 1,) and the upper web *d'* and rib *d*<sup>4</sup> of the block abuts against the end of the block C<sup>2</sup>, (No. 4.) A short block C' (No. 6) will next be placed upon the base-blocks B and B' of the back wall of the vault in such manner that its lower rib *c*<sup>2</sup> shall enter the channel *b*<sup>3</sup> of the base-blocks, after which the block C' (No. 6) will be slipped toward the corner block D' (No. 5) until the end of this block C' abuts against the post *d* of the corner block and the subjacent post *b*<sup>4</sup> of the corner base-block, at which time the upper rib *c*<sup>3</sup> of the block C' (No. 6) will be within the channels *d*<sup>6</sup> of the corner block D', and the lower rib *d*<sup>5</sup> of the corner block will be within the channel *c*<sup>4</sup> of the block C', (No. 6.) Another block C' (No. 7) will now be placed upon the base-blocks B and B' in such manner that its lower rib *c*<sup>2</sup> shall enter the channel *b*<sup>3</sup> of the base-blocks, and its upper rib *c*<sup>3</sup> shall be in line with the corresponding rib of the block C' (No. 6) previously set. A block C<sup>2</sup> (No. 8) will next be placed upon the blocks C' (Nos. 6 and 7) in such manner that its lower rib *c*<sup>2</sup> shall enter the upper channel *c*<sup>4</sup> of the blocks C' (Nos. 6 and 7) and its end shall abut against the end of the angular plate or rib *d'* of the corner block D', (No. 5,) as seen in Fig. 7. The corner block D<sup>2</sup> (No. 9) will next be set in position upon its corresponding base corner block and will be moved endwise toward the blocks C' (No. 7) and C<sup>2</sup> (No. 8) until



the adjacent upper rib  $c^3$  of the block  $C'$  (No. 7) enters the lower channel  $d^6$  of the end block,  $D^2$ , and abuts against the post  $d$  of such block, at which time, also, the lower rib  $d^5$  of the corner block will be within the upper channel  $c^4$  of the block  $C'$  (No. 7,) and the central portion of the block  $C'$  will be beneath the lower rib  $d^5$  of the corner block, while the upper rib  $d^4$  and central portion,  $d'$ , of the angular plate will abut against the corresponding central portion and upper ribs  $c^3$  of the block  $C^2$ , (No. 8.) The short block  $C'$  (No. 10) will next be placed in position on top of the base-blocks  $B$  and  $B'$ , (see Fig. 3,) with its rib  $c^2$  within the channels  $b^3$  of the base-blocks, and this block  $C'$  will be moved endwise toward the corner block  $D^2$  (No. 9) until its central portion passes beneath the lower rib  $d^5$  of the corner block  $D^2$  and the rib  $c^3$  enters the lower channel  $d^6$  of the corner block and abuts against the lower portion of the post  $d$  of such block. A block  $C'$  (No. 11) will now be placed upon the tops of the base-blocks  $B$  and  $B'$  adjacent the block  $C'$ , (No. 10,) with its lower rib  $c^2$  entering the channels  $b^3$  in the upper part of the base-blocks  $B$  and  $B'$ , after which a block  $C^2$  (No. 12) will be set upon the top of the blocks  $C'$ , (Nos. 10 and 11,) with its lower rib  $c^2$  entering the upper channels  $c^4$  of said blocks  $C'$ , and its end abutting against the edge of angular plate  $d'$  of the corner block  $D^2$ . The corner block  $D^3$  (No. 13) will next be set in position upon the base corner block  $B$ , and will be slipped toward the blocks  $C'$  (No. 11) and  $C^2$  (No. 12) until the lower portion of the post  $d$  of the corner block  $D^3$  abuts against the central portion and upper rib  $c^3$  of the block  $C'$ , (No. 11,) at which time the lower rib  $d^5$  of the corner block will be within the upper channel  $c^4$  of the block  $C'$ , (No. 11,) and the central portion and upper rib  $d^4$  of the angular plate  $d'$  of the corner block will abut against the end of the block  $C^2$ , (No. 12.) The short block  $C'$  (No. 14) at the side of the doorway will now be slipped endwise into position upon the base-blocks  $B$  and  $B'$ , being moved toward the corner block  $D^3$  until the lower rib  $c^2$  and upper rib  $c^3$  of this block  $C'$  (No. 14) abut, respectively, against the posts  $b^4$  of the base corner block  $B$  and the post  $d$  of the corner block  $D^3$ , at which time the lower rib  $c^2$  of the short block  $C'$  will be within the channels  $b^3$  of the base-blocks  $B$  and  $B'$ . The central portion of this block will be beneath the lower rib  $d^5$  of the corner block  $D^3$ , and the upper rib  $c^3$  of this block  $C'$  will be within the lower channel  $d^6$  of the corner block  $D^3$ . At such time, also, it is obvious that the ribs  $b^2$  of the base-blocks  $B$  and  $B'$  will be within the lower channel  $c^4$  of the short block  $C'$ , and the rib  $d^5$  of the corner block will be within the upper channel  $c^4$  of this block  $C'$ , (No. 14.)

By reference to Fig. 1 it will be seen that the edges of the base-blocks  $B'$  and superposed blocks  $C'$  at the sides of the doorway are pref-

erably provided with the vertical grooves or channels  $E$ , and into these grooves or channels are set the bars  $E'$ , which constitute the sides of the door-frame. It will be understood, however, that if desired, the edges of these blocks may be formed without the grooves or channels  $E$ , in which case the side bars of the door-frame will be simply bolted thereto. The block  $C^3$  (No. 15,) above the doorway will be next set in position, and by reference to Fig. 13 it will be observed that this block is the same in construction as the block  $C^2$ , with the exception that the central portion of the lower web  $c$  and rib  $c^2$  are cut away to give greater space for the doorway, and with the further difference that the under side of this block  $C^3$ , where it is thus cut away, is provided with a longitudinal rib,  $E^2$ , which, when the block  $C^3$  is set in position, will abut against the side bars,  $E'$ , of the door-frame and guard the same against displacement. The block  $C^3$  has a portion of its lower rib  $c^2$  also cut away to allow space for the side bars,  $E'$ , of the door-frame when this block is in proper position above the door. In order to set the block  $C^3$ , it will be placed upon the upper surfaces of the short blocks  $C'$ , (Nos. 3 and 14,) and will be moved outward until its lower ribs  $c^2$  enter the upper channels  $c^4$  of the short blocks  $C'$ , the upper ribs  $c^3$  of said short blocks at the same time entering the lower channels  $c^4$  of the block  $C^3$ . When the lower rib of the block  $C^3$  is thus interlocked with the upper ribs of the subjacent blocks  $C'$ , the block  $C^3$  will be in proper position and the various parts will be relatively disposed, as shown in Fig. 5 of the drawings.

If the vault-structure is to have simply the height of the several rows thus far described, the roof-supporting blocks will next be set into position; but it will be obvious that any desired height can be given to the walls by simply adding the necessary number of blocks similar in construction to those already described.

Each of the side roof-supporting blocks,  $F$ , (Nos. 16 and 17,) consists of a main horizontal portion,  $f$ , from the under side of which projects the web  $f'$ , that has at the lower end the laterally-projecting rib  $f^2$ , this web  $f'$  and rib  $f^2$  being similar in construction to the webs and ribs of the blocks hereinbefore described; and it will be observed that the web  $f'$  and ribs  $f^2$  of each side block,  $F$ , terminate at a distance from the end of said block, so as to form the shoulder  $f^3$ , (see Fig. 12,) which will rest upon the corner blocks  $D$ ,  $D'$ ,  $D^2$ , and  $D^3$  in a manner to be presently described. Each of the side roof-supporting blocks,  $F$ , is provided with a dovetail rib,  $f^4$ , extending between the end flanges,  $f^5$ , of the block, and is also provided with a ledge,  $f^6$ , at the side of the upwardly-projecting side flange,  $f^7$ , and it will be seen that at one end the dovetail rib  $f^4$  is partially cut away, so as to permit the roof-bars to be inserted thereon in a manner to be presently explained.



Upon the under side of rib  $f^2$  of the side blocks, F, and upon the under side of the corresponding rib of the end roof-supporting blocks, G, are formed the transverse ribs  $f^3$  and  $g^4$ , which, when the roof-supporting blocks F are placed in position, enter the corresponding grooves  $g^1$  formed in the corner blocks, and serve to more securely lock the parts together. It will be readily understood, however, that these last-mentioned grooves and ribs may be dispensed with, if desired. The end roof-supporting blocks, G, are each provided with a central portion, from which depends the web  $g$ , that has projecting laterally therefrom the rib  $g'$ , which forms, with the body of the block, the channel  $g^2$ , and from the upper face of the central portion of each block projects the web or flange  $g^3$ .

In order to set the roof-supporting blocks in position, one of the side blocks, F, (No. 16,) will be placed upon the corner blocks D and D', its end shoulders,  $f^3$ , resting upon the tops of said blocks, and the block F will then be moved outwardly until the rib  $f^2$  enters the upper channel  $c^1$  of the subjacent block C<sup>2</sup>, (No. 4,) and at the same time enters the upper channel  $d^6$  of each of the corner blocks D and D'. When the side block, F, (No. 16,) is thus set, its outer face will be in line with the subjacent blocks, and the upper rib  $c^3$  of the block C<sup>2</sup> (No. 4) and the upper rib  $d^4$  of the corner blocks D and D' will be within the lower channel of the side roof-supporting block, F. The side roof-supporting block, F, (No. 17,) will next be set in position upon the corner blocks D<sup>2</sup> and D<sup>3</sup> and the block C<sup>2</sup>, (No. 12,) in the same manner as the side block, F, (No. 16,) was set, after which the rear end roof-supporting block, G, (No. 18,) will be placed upon the upper surface of the block C<sup>2</sup>, (No. 8,) and upon the top of the upper ribs  $d^4$  of the corner blocks D' and D<sup>2</sup>, and will be moved outwardly until the lower rib  $g'$  of the end block G enters the upper channel  $c^4$  of the subjacent block C<sup>2</sup>, and enters, also, the upper channel  $d^6$  of the corner blocks D' and D<sup>2</sup>, at which time the ends of the block G, (No. 18,) will bear against the upper portions of the posts  $d$  of the corner blocks D' and D<sup>2</sup>, and the upper ribs  $c^3$  of the block C<sup>2</sup> and the ribs  $d^4$  of the end blocks D' and D<sup>2</sup> will be within the channel  $g^2$  of the end block G. The front end roof-supporting block G (No. 19) will next be placed upon the block C<sup>3</sup> (No. 15) and the upper ribs  $d^4$  of the corner blocks D and D<sup>3</sup>, and will be moved outwardly until its lower rib  $g'$  is within the upper channels of the subjacent block C<sup>3</sup> and the channels  $d^6$  of the corner blocks D and D<sup>3</sup>, this manner of setting the block G (No. 19) being the same as that in which the rear end block G (No. 18) was previously set. The front or first of the roof-bars H will now be placed upon the side roof-supporting blocks, F, at their rear ends, so that the dovetail grooves  $h$  of the roof-bars shall set over the cut-away portions of the dovetail ribs  $f^4$  of the side blocks, F, after

which this roof-bar H will be moved to the front of the vault and will be guarded against vertical movement by reason of the fact that the dovetail ribs  $f^4$  enter the corresponding recesses near the ends of the roof-bar H. The roof-bars H will thus be successively placed in position until the last roof-bar H' is set in place, and as the ends of this bar will set over the cut-away rib of the side blocks, F, it is necessary to provide some means for guarding such bar against vertical displacement. For this reason I have provided the rear roof-supporting block G with the holes I, through which will pass the pins I', that will enter suitable holes in the rear roof-bar, H', and prevent this bar being lifted out of place.

The roof-bars H are preferably formed with the overlapping shoulders  $h'$ , so that when these bars are placed in position the joints between them will be of irregular shape, and consequently more secure against the introduction of tools or explosive compounds.

By reference to Fig. 3 of the drawings it will be seen that the roof-bars H adjacent the rear roof-bar, H', have cut-away spaces formed in their lower portions to permit the introduction of the guard-pins I'.

In the construction of roof-bars and front and rear end roof supporting blocks, (illustrated in Figs. 15 and 16 of the drawings,) the front block G is provided at the top of its web or flange  $g^3$  with the inwardly-projecting rib  $g^6$ , and in this construction the front roof-bar, H, is formed near its bottom with the longitudinal rib  $h^5$ , adapted to fit within the channel beneath said projecting rib  $g^6$  of the end block G, and the rear of this roof-supporting bar is provided with a longitudinal rib,  $h^6$ , which engages with the corresponding channels  $h^7$  in the next adjacent roof-bar, and each of the roof-bars between the front and rear bars of the series is provided with a longitudinal rib and channel, as shown, Figs. 15 and 16, whereby said blocks, when set in position, will interlock and be guarded against movement in vertical direction. These longitudinal ribs and channels of the roof-bars forming, as they do, overlapping portions, will also prevent the introduction of tools or explosive compounds.

The rear roof-bar, H', as shown in Fig. 15, is provided with one or more holes to receive the guard-pins I', and with the longitudinal channel  $h^7$ , adapted to receive the corresponding rib of the next adjacent roof-bar. It will be understood that when the roof-bars are provided with the longitudinal ribs or channels, as shown in Figs. 15 and 16, the ends of these bars are not necessarily provided with the dovetailed seats  $h$  near their ends, nor need the side roof-supporting blocks, F, be furnished with dovetail ribs, although I regard the use of these dovetail ribs and slots as preferable.

While I have shown in this application the base corner blocks B as connected with the floor or base-plate A of the vault by dowel-



pins and dowels, I do not wish to be understood as making any claim to such construction in the present application.

It will be readily understood that the details of construction above described may be varied, and that the particular size and length of the blocks and the number of blocks employed will depend upon the dimensions of the vault to be constructed.

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

1. A bank-vault the walls of which comprise metal blocks having central portions and having on each side of said central portions interlocking ribs and having channels intermediate said ribs and central portions, substantially as described.

2. A bank-vault the walls of which comprise metal blocks having reversely-arranged angular ribs and intermediate channels, whereby said blocks may interlock, substantially as described.

3. A bank-vault the walls of which comprise blocks having central portions of the full width of the blocks, having vertical angular ribs at each side of said central portions, said angular ribs having their outer faces parallel and having their inwardly-projecting portions narrower than the body of the blocks, substantially as described.

4. A bank-vault the walls of which comprise metal blocks having longitudinal channels and interlocking ribs, in combination with the corner blocks having corresponding channels and ribs, substantially as described.

5. A bank-vault the walls of which comprise metal blocks having reversely-arranged angular ribs and channels, in combination with corner blocks having corresponding reversely-

arranged angular ribs and channels, substantially as described.

6. A bank-vault the walls of which comprise base-blocks having their upper portions provided with the angular ribs and with channels, in combination with the superposed blocks having corresponding angular ribs to enter said channels and interlock with the ribs of the base-blocks, substantially as described.

7. In a bank-vault, the combination, with a series of interlocking blocks, of the side and end roof-supporting blocks having angular ribs upon their under sides to engage with the corresponding ribs of the subjacent blocks, substantially as described.

8. In a bank-vault, the combination, with a series of interlocking blocks, of a roof formed of a series of bars having longitudinal overlapping portions, substantially as described.

9. In a bank-vault, the combination, with the side and end roof-supporting blocks, of the roof-bars provided with longitudinal ribs and channels, whereby said bars interlock, substantially as described.

10. In a bank-vault, the combination, with the side and end roof-supporting blocks, of the roof-bars, one of said roof-bars and one of the end blocks having a hole to receive a guard-pin, and a guard-pin for locking said parts, substantially as described.

11. In a bank-vault, the combination, with the walls, of the side and end roof-supporting blocks, the side roof-supporting blocks being provided with dovetail ribs, and the roof-bars having dovetail grooves to engage with said ribs, substantially as described.

HENRY GROSS.

Witnesses:

GEO. P. FISHER, Jr.,  
JAMES H. PEIRCE.