

(No Model.)

2 Sheets—Sheet 1.

G. L. REMINGTON.

SAFE OR VAULT.

No. 368,781.

Patented Aug. 23, 1887.

Fig. 1

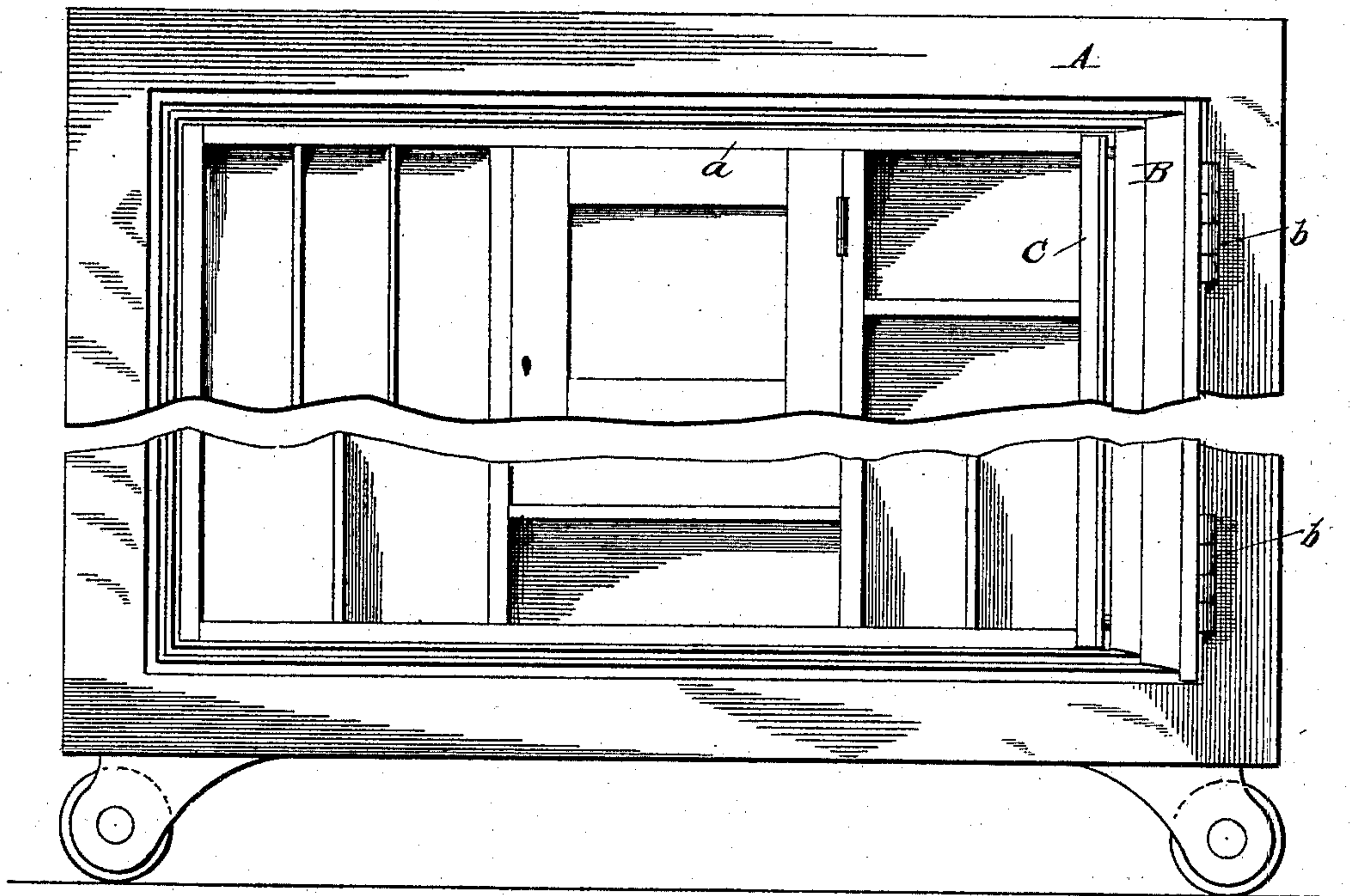
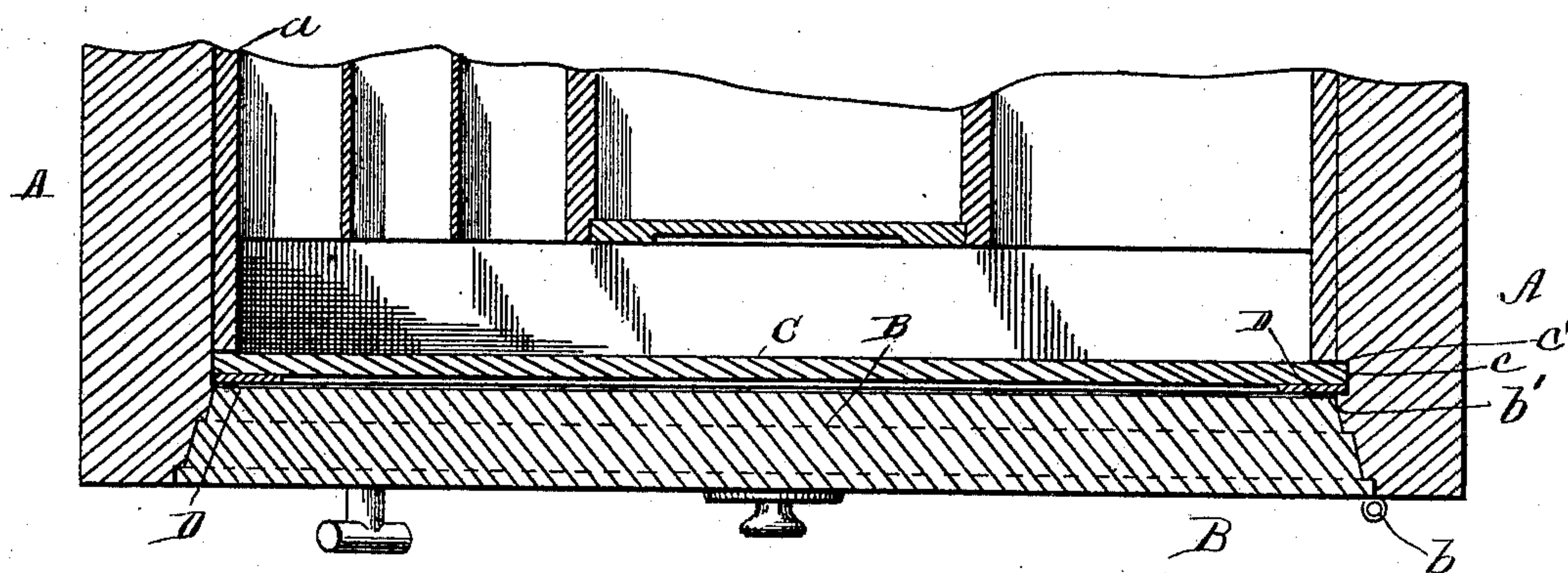


Fig. 2.



Attest:

W. Beruhard
Frank P. Remick

Inventor:

Georges Remington
By his Attorney
Edson Bros.

(No Model.)

2 Sheets—Sheet 2.

G. L. REMINGTON.

SAFE OR VAULT.

No. 368,781.

Patented Aug. 23, 1887.

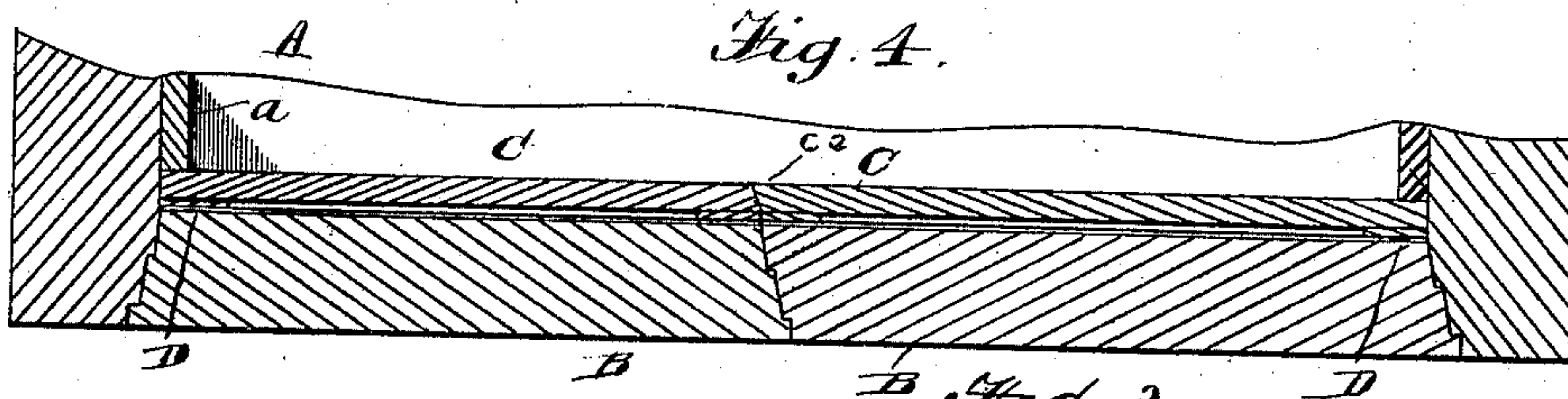


Fig. 4.

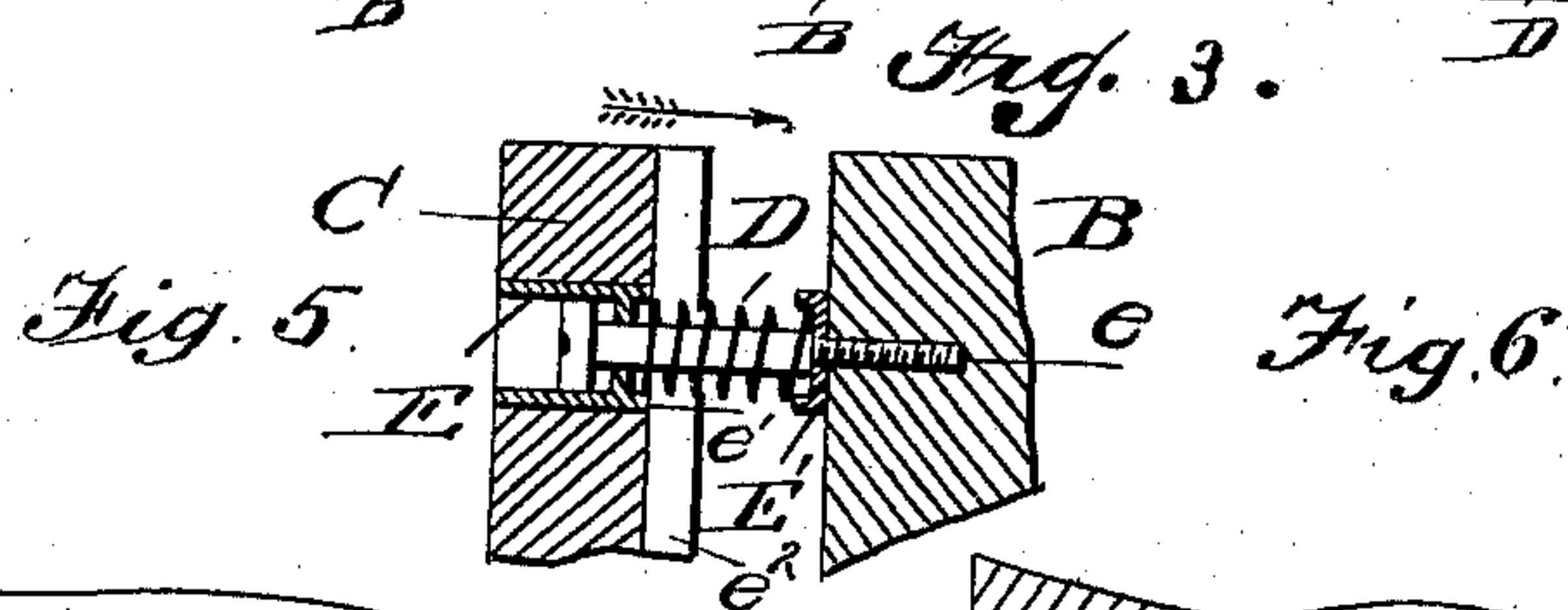


Fig. 3.

Fig. 5.

Fig. 6.

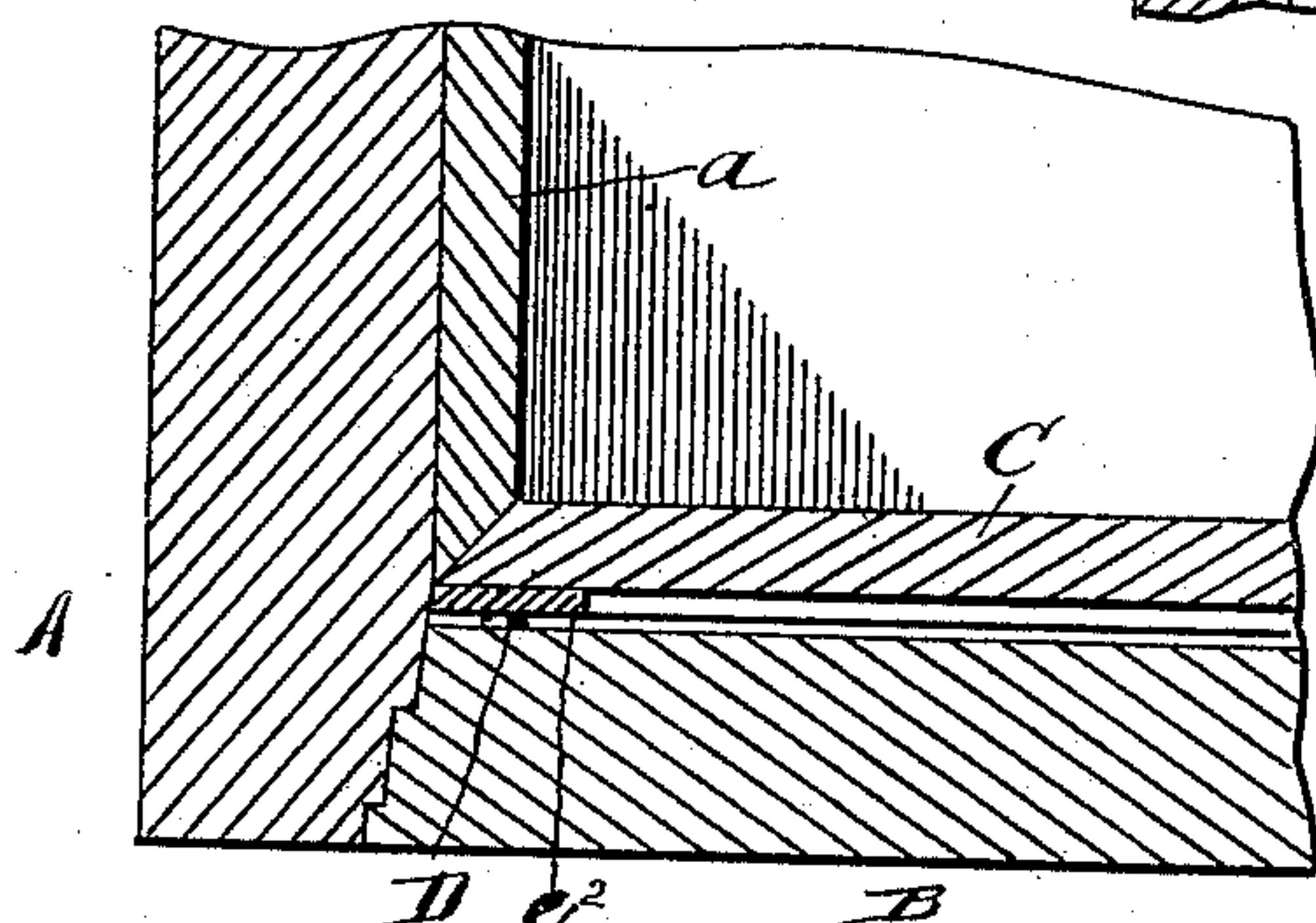


Fig. 7.

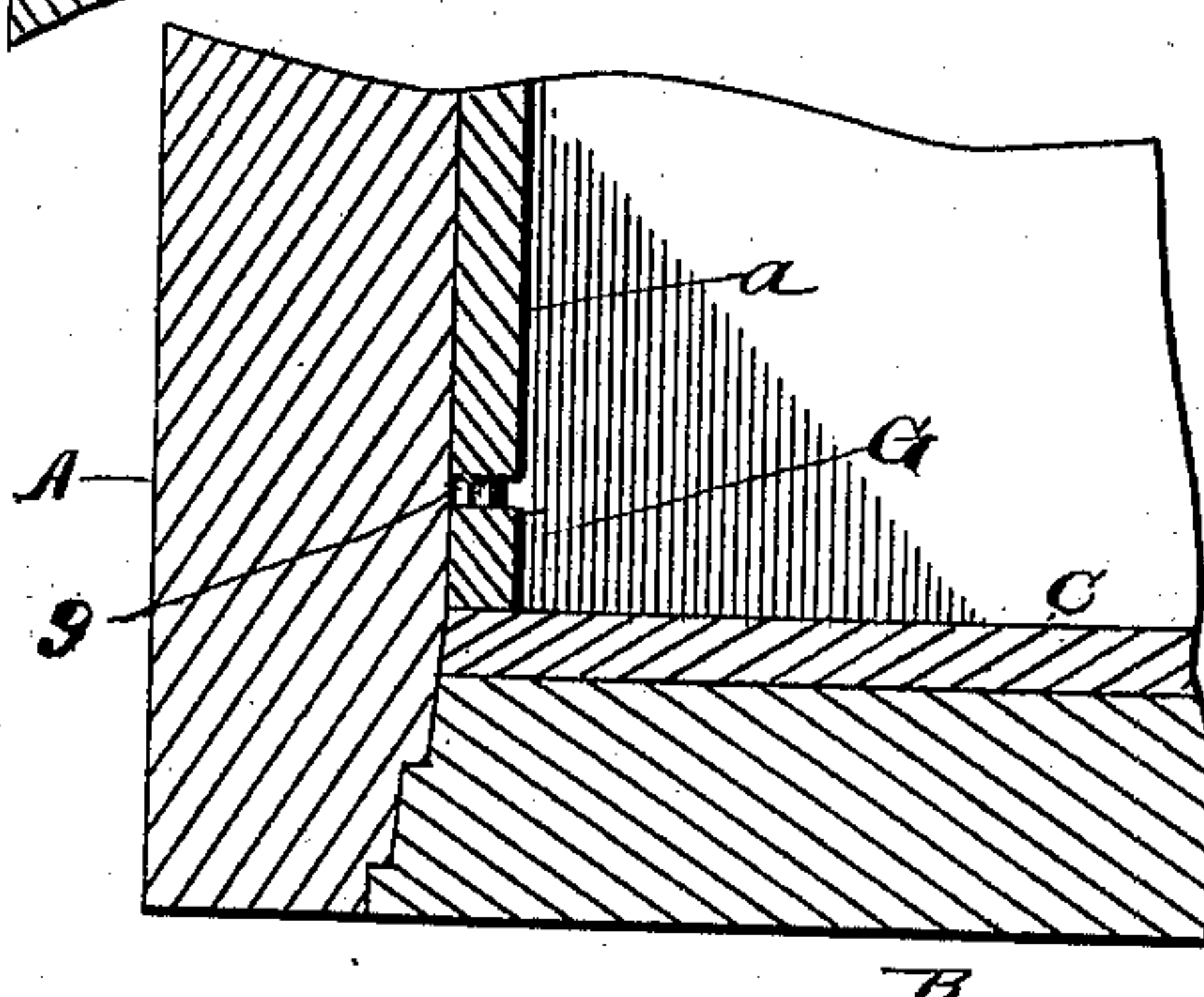


Fig. 8.

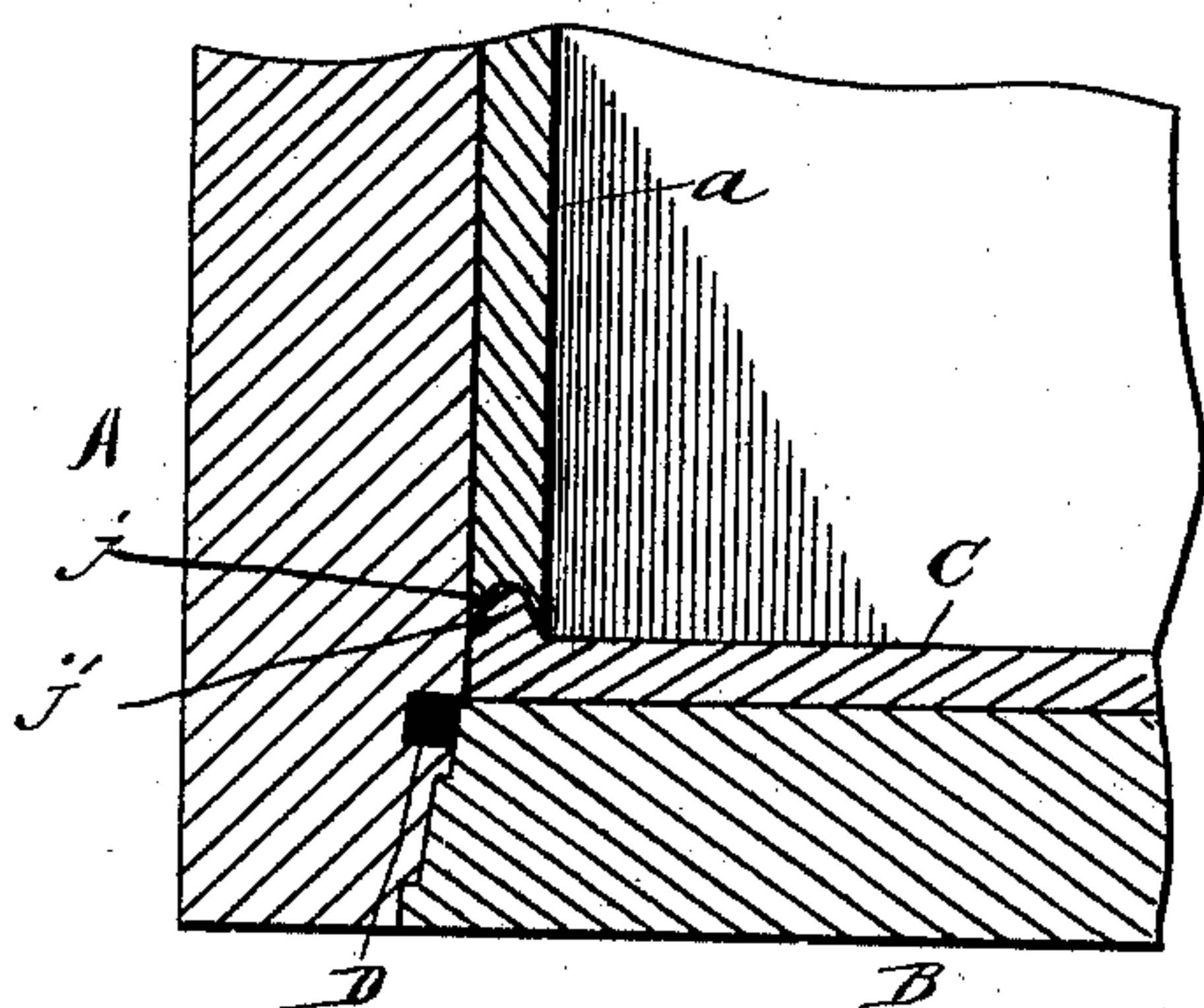
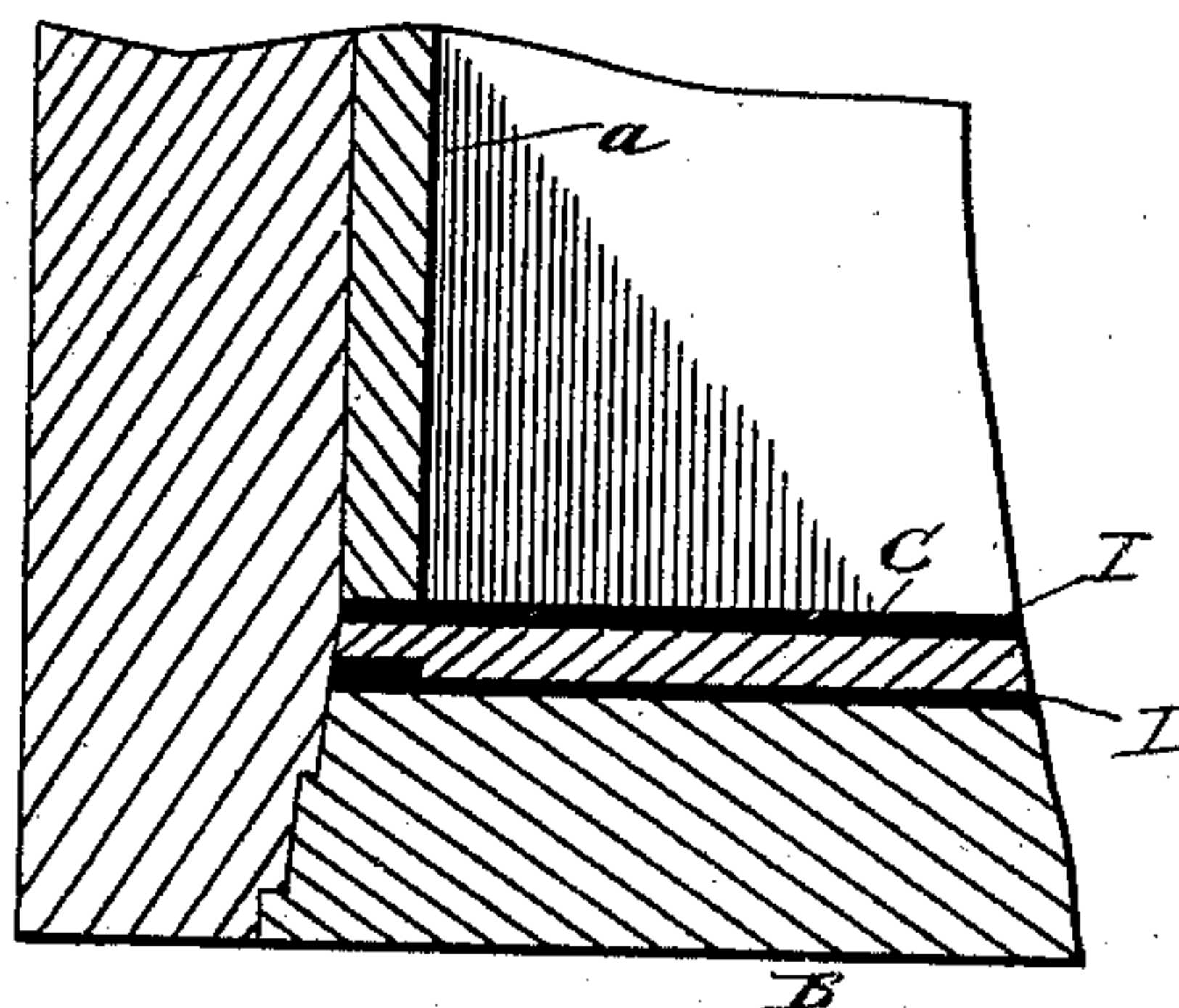
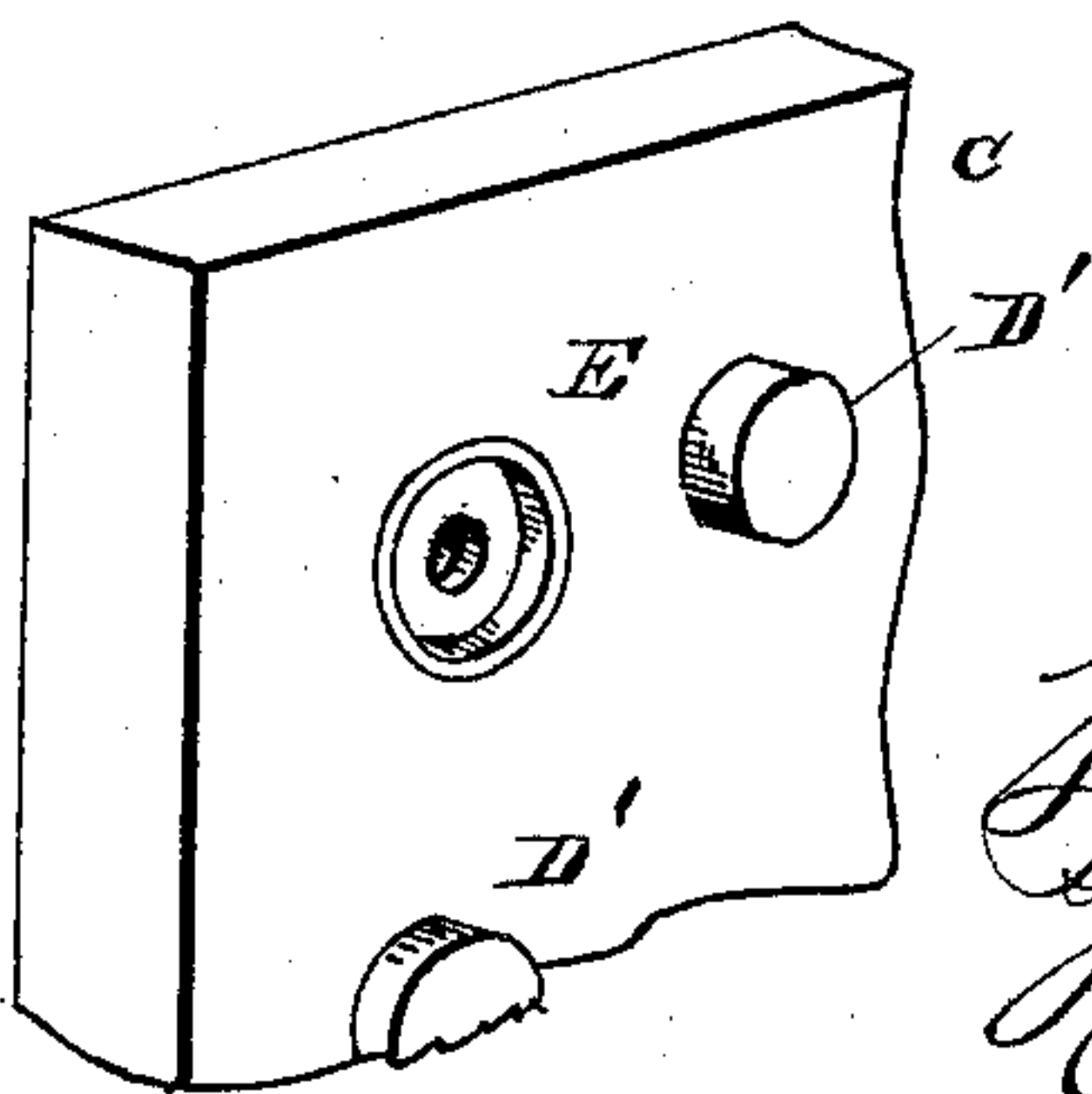


Fig. 9.



Attest:
W. L. Perichard
Frank T. Reine



Inventor:
George L. Remington
By his attorney
Edson & Co.

UNITED STATES PATENT OFFICE.

GEORGE L. REMINGTON, OF PHILADELPHIA, PENNSYLVANIA.

SAFE OR VAULT.

SPECIFICATION forming part of Letters Patent No. 368,781, dated August 23, 1887.

Application filed December 23, 1886. Serial No. 222,398. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. REMINGTON, a citizen of the United States, residing at Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Safes or Vaults, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in safes and vaults; and it consists of the peculiar combination and novel construction and arrangement of the various parts, substantially as hereinafter fully described, and particularly pointed out in the claims.

The object of my present invention is to provide a safe or vault with improved means for effectually cutting off communication between the inner compartment or chambers of the safe and vault with the outer surrounding air, and thereby prevent the contents of the chamber or chambers from being damaged when the safe or vault passes through a conflagration.

In the manufacture of safes it has been found impractical to build or construct a safe which will entirely exclude smoke and water from entering the chambers or compartments through the joints between the door and safe, and consequently important papers, documents, and other valuables stored in the safe are more or less damaged.

With these ends in view I propose to place a movable strip or sheet between the door and safe, and to interpose between this movable strip or sheet and the door or body of the safe resilient resisting devices or cushions—such as springs, blocks of rubber, and the like—so that when the door is closed the sheet or strip will abut against a fixed flange or ledge on the safe or door to compress the cushions, and thereby form a joint between the safe and its door which will be practically air-tight.

My invention consists, further, in the details of construction, that will be specifically pointed out and claimed.

In the accompanying drawings, which illustrate a safe embodying my improvements, Figure 1 is a front elevation of the safe or vault with the door partly swung open. Fig. 2 is a horizontal sectional view of the safe or vault with the door closed. Fig. 3 is a vertical detail sectional view through a portion of the

door and the casting-sheet thereof. Fig. 4 is a horizontal sectional view showing the safe provided with a pair of folding doors having means for securing the air-tight joint. Figs. 5 and 6 are sectional views of another form of my invention, showing a movable strip between the door and safe. Figs. 7 and 8 are horizontal sections of modified forms of my invention, and Fig. 9 is a detached perspective view of a portion of the casting-sheet.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A designates the safe, which is provided with the usual opening for the door B, which is hinged at one edge, as at b, or the safe may have the folding doors, as seen in Fig. 4.

I will first describe my improvements as applied to a safe having a single door, as seen in Figs. 1 and 2, and afterward the construction adapted for folding doors.

The safe and its door are of the ordinary or any preferred pattern; but in Figs. 1 to 3, inclusive, I have shown the inner sheet, C, of the door, which is known to the art as the "casting-sheet," loosely connected to the door, so that it is free to have a limited movement toward and from the body of the door independently of the swinging movement thereof. This casting-sheet C of the door is of the ordinary form, and between the body of the door and the casting-sheet is interposed a series of two or more compressible cushions, D. These cushions are arranged at the angles or corners of the casting-sheet, or between the corners thereof, as may be found desirable, and the said cushions are connected or secured in any suitable manner at their extremities to the door and the casting-sheet to support the latter.

I prefer to provide the movable casting-sheet with a tube or thimble, E, at each corner, and through these tubes or thimbles are passed headed guide-pins or screws, which are rigidly affixed or connected to the body of the door. The tubes or thimbles are secured in the casting-sheet in any suitable manner, and the inner ends of the passages or openings in the said tubes are enlarged, as shown in the sectional views, to provide abrupt shoulders e' in each thimble, this enlargement and shoulder forming a socket in the thimble for the recep-

tion of one end of one of the compressible cushions. The guide-pins or screws serve to securely support the casting-sheet on the door of the safe, while permitting it to move freely back and forth thereon, and the tubes through which the guide-pins are passed take up the wear which would otherwise come on the casting-sheet. The enlargements or heads on the inner ends of the guide-pins or screws serve to limit the outward movement of the casting-sheet under the pressure exerted thereon by the compressible cushions, and when the latter are formed of coiled wire they encircle the guide-pins or screws, which, in connection with the sockets formed in the tubes therefor, serve to prevent displacement of the said cushions. If preferred, a metallic socket, E' , may be secured to the body of the door by the screw E , and in this fixed socket is fitted the inner end of the cushion.

The casting-sheet is strengthened by a strip, e^2 , which is rigidly affixed to the inner side thereof. This strip may extend entirely around the edges of the casting-sheet or only along one edge thereof, and the function of this strip is to prevent the casting-sheet from being compressed against the body of the door, which might injure the cushions.

The compressible cushions D may be made of coiled or curved metallic springs, or they may be made of elastic rubber blocks, which are suitably held in place.

The safe A is provided with a fixed flange or ledge, a , which may be formed by the interior cabinet-work to the safe, and which extends entirely around the door-opening therein, and it projects into the space or chamber of the safe, so that the edges of the casting-sheet will abut or impinge against the ledge when the door is closed, and thereby prevent the farther inward movement of the casting-sheet to compress the elastic cushions D thereof, thereby forming a tight and close joint between the door and safe, which effectually cuts off communication between the chamber of the safe and the surrounding air.

The outer edge of the fixed flange or ledge a of the safe may be beveled or inclined, and the edges of the casting-sheet may be likewise beveled, but in the reverse direction, to form a tight lap-joint, as shown in Fig. 5.

The vertical side edges of the casting-sheet C , which adjoins the hinged edge of the door, is extended beyond the corresponding edge of the inner smaller offset, b' , of the door. The extended edge c of the casting-sheet is adapted to enter a vertical recess or channel, c' , formed at a suitable point in one of the sides of the safe A , and thereby more effectually prevent smoke from entering the inner chamber of the safe through the joint at the hinged edge of the door.

As seen in Fig. 4 of the drawings, each of the folding doors B of the safe is provided with one of the movable casting-sheets and the series of compressible cushions therefor, and the adjoining edges of the said casting-sheets

are beveled or inclined in reverse directions, as at c^2 , so as to form a lap-joint, which effectually prevents the admission of smoke, &c., between the joint of the folding doors, and also force the outer edges of the sectional casting-sheet against the vertical walls of the safe.

In the modified form of my invention shown in Fig. 6 of the drawings I employ a movable strip, G , which is fitted in a recessed portion, g , of the body of the safe, and is free to move back and forth therein. This movable strip extends entirely around the opening for the door, and it projects inwardly into the chamber or compartment of the safe, so that the area inclosed by the inner edges of the strip is less than the area of the casting-sheet of the safe-door. The movable strip is normally pressed outwardly by the compressible cushions, which are placed in rear of the same, and the said strip is guided and limited by the headed fixed guide-pins or screws. When this continuous movable strip is employed, the casting-sheet may be rigidly affixed or connected to the door of the safe in the ordinary manner.

I would state that while I deem the mechanism and devices herein shown and described as best adapted for carrying my invention into practice, still I do not desire to be limited to the exact details of construction and form and proportion of parts, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit of my invention. My invention can also be readily adapted to vaults and other structures of a like nature.

A sheet or piece of asbestos cloth, I , is secured or affixed in any suitable manner to the inner or outer or both sides of the casting-sheet, as shown in Fig. 8, to thereby protect the casting-sheet from becoming charred or burned.

The fixed ledge or flange a of the safe may be provided with a longitudinal groove, j , in its front side, and in this groove is adapted to fit a fixed tongue, j' , on the casting-sheet, and thereby form a tongue-and-groove joint between the safe and casting-sheet, which will assist in excluding smoke, &c., from the main compartment of the safe.

In lieu of the continuous strip for limiting the inward movement of the casting-sheet, I may employ the blocks D' , (shown in Fig. 9,) which are rigidly secured to the inner side of the casting-sheet, and are adapted to come in contact with the body of the door.

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

1. In a safe or vault, a door carrying a movable sheet, compressible cushions interposed between the door and sheet, and fixed strips on the inner surface of said sheet to limit the inward movement of the latter, substantially as described.

2. The combination, with a safe or vault having the continuous fixed ledge or flange

projecting inwardly from the sides thereof, of a door, a movable sheet carried by the door, and the compressible cushions intermediate of the door and sheet, the edges of the casting-sheet 5 being beveled or inclined in reverse directions, as and for the purpose set forth.

3. The combination, with a safe or vault having the flange or ledge and the vertical recess or channel in one of its sides, of a door, a 10 movable casting-sheet carried by the door, and having the extended edge *c*, adapted to enter the said channel or recess, the walls of the safe, not the lining thereof, and the elastic cushions intermediate of the door and sheet, 15 substantially as described, for the purpose set forth.

4. In a safe or vault, a pair of folding doors, each having a movable casting-sheet on its innerside, and the compressible cushions inter- 20 posed between the door and its sheet, the contiguous edges of the said casting-sheets being beveled, whereby the outer edges of the sec-

tions of the casting-sheet are forced against the inner vertical walls of the safe, and a tight lap-joint is made at the meeting edges of said sec- 25 tions.

5. In a safe or vault, a movable strip or sheet having the fixed tubes or thimbles provided with the shoulder, the pins passing through the tubes and secured in the door, 30 and the cushions fitted at one end in the tubes and bearing against the shoulder therein, substantially as described, for the purposes set forth.

6. In a safe, the fixed flange *a*, having a longitudinal groove, and a casting-sheet on the 35 door, having a tongue adapted to fit in the groove when the door is closed, as and for the purpose set forth.

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

GEORGE L. REMINGTON.

Witnesses:

JOS. FORREST,
JOS. R. EDSON.