

G. A. DOWLING.

SASH HOLDER.

APPLICATION FILED AUG. 27, 1908.

912,653.

Patented Feb. 16, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

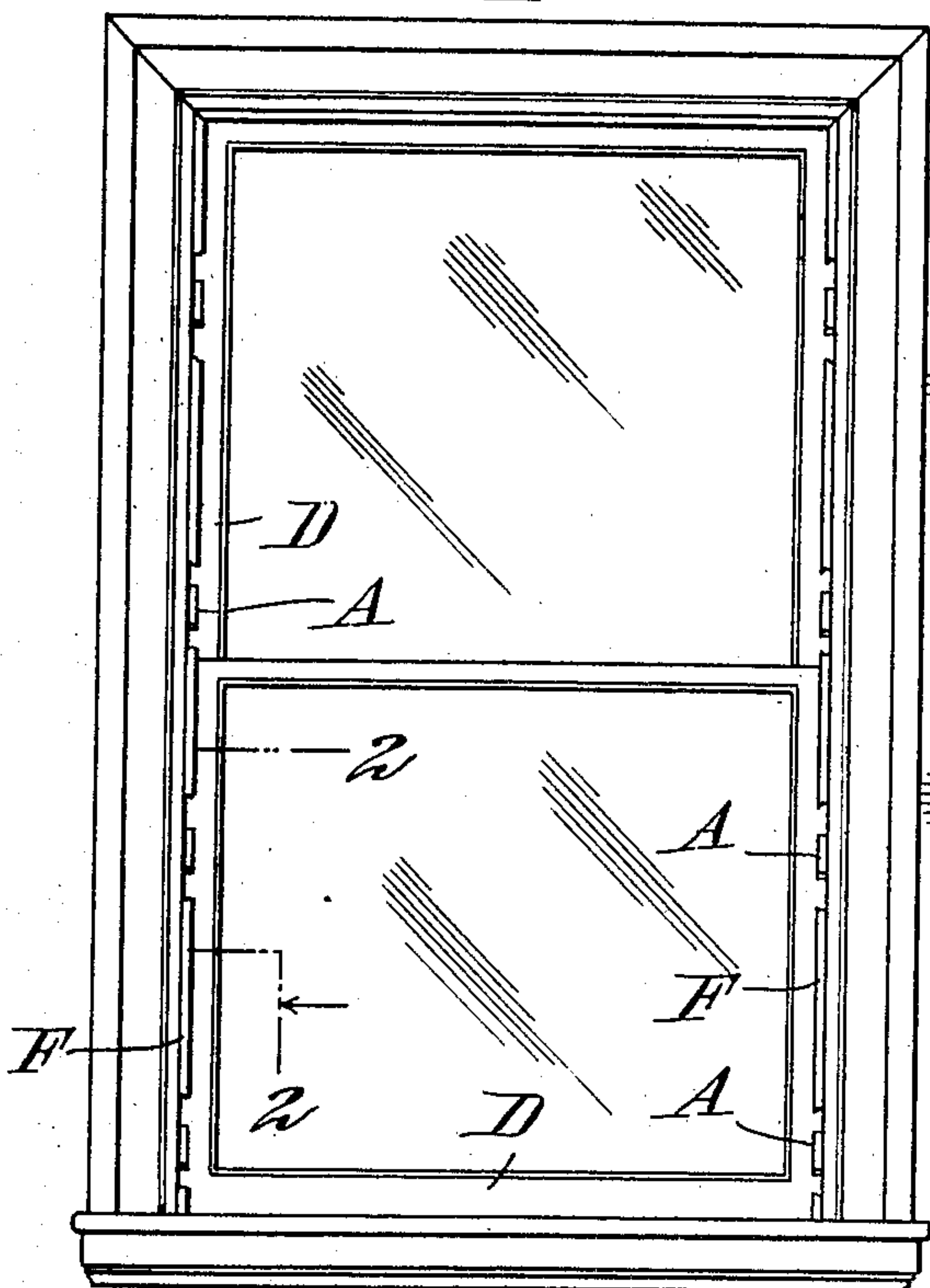


Fig. 2.

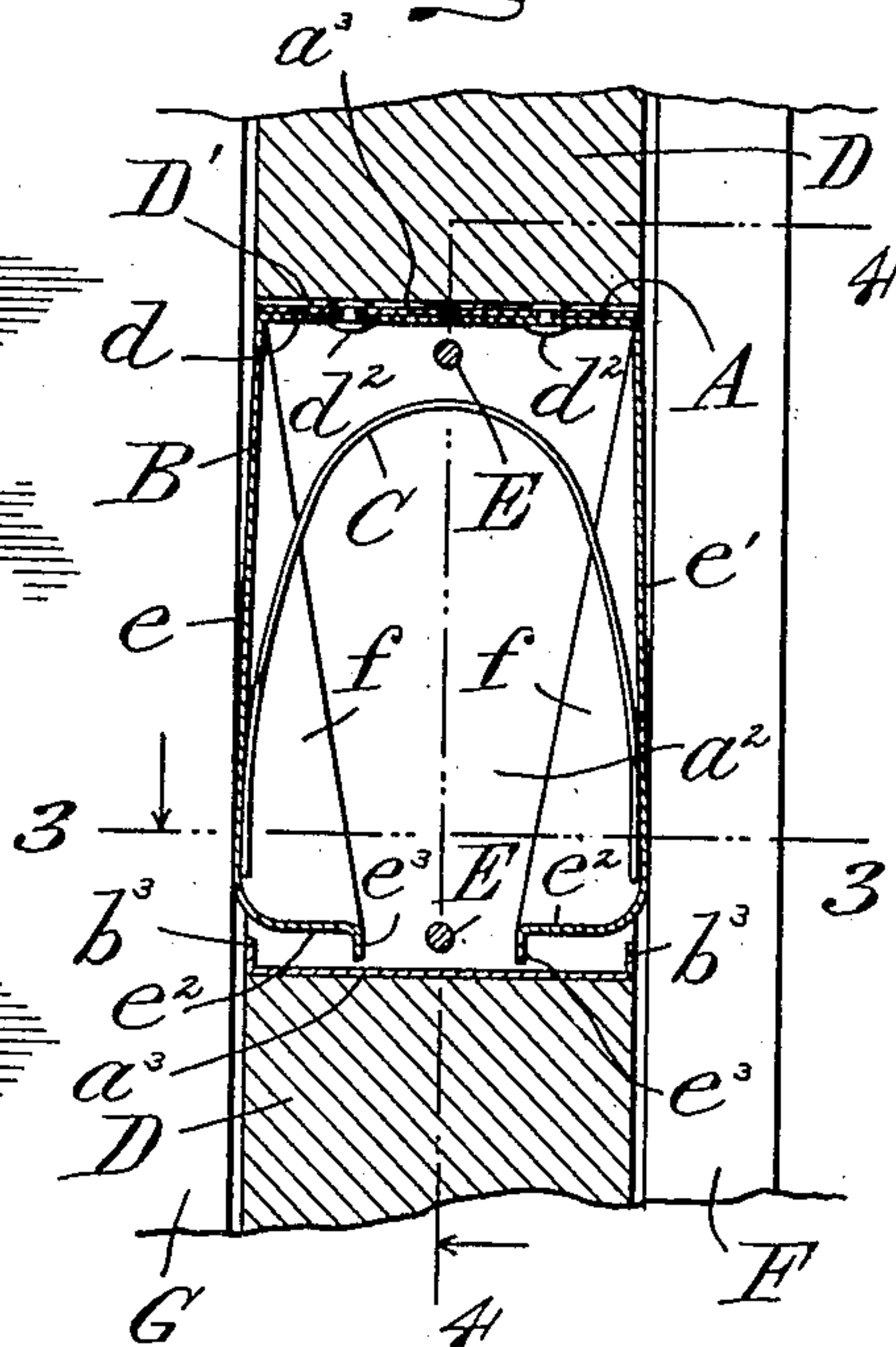


Fig. 3.

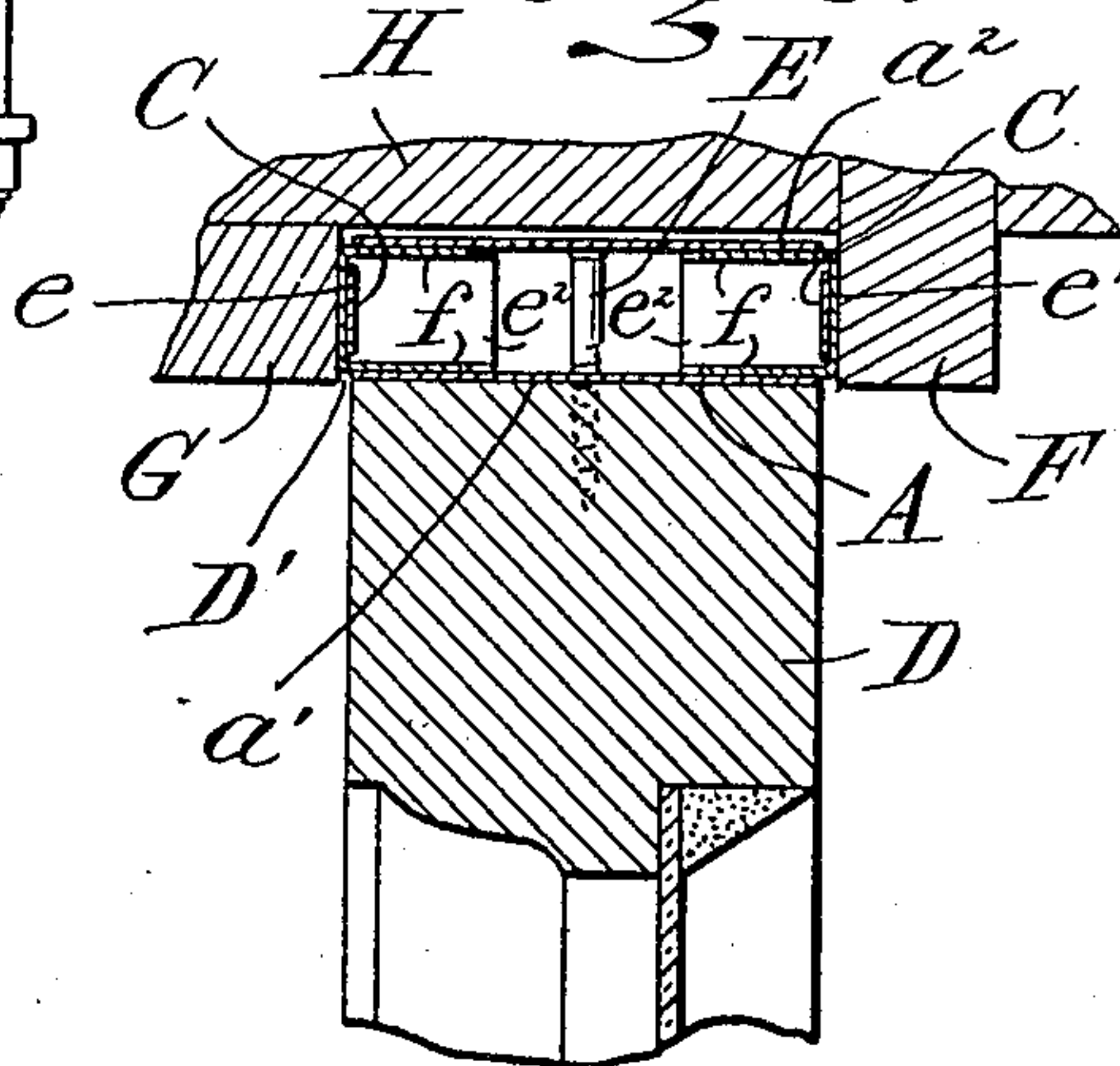
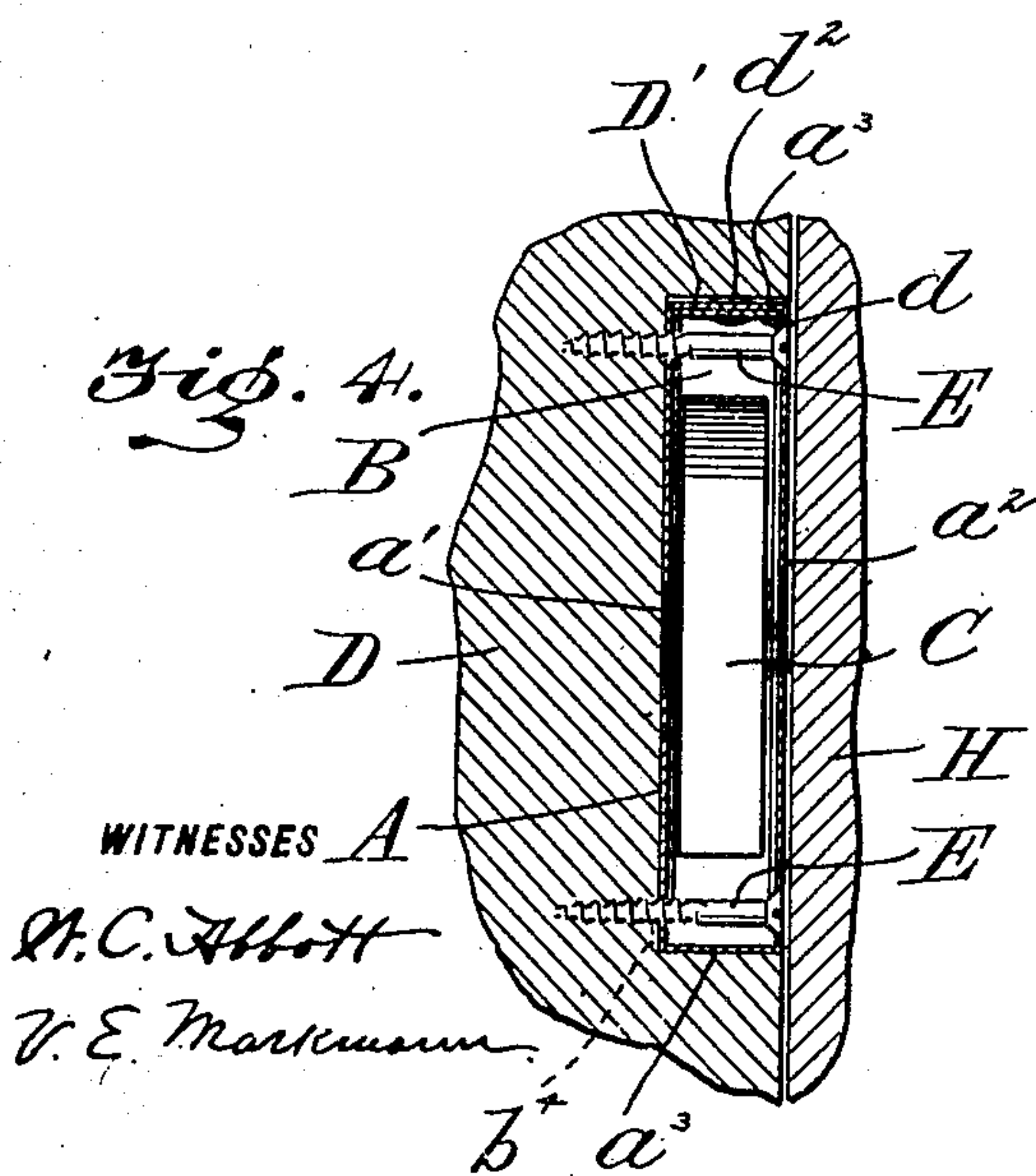


Fig. 4.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 5.

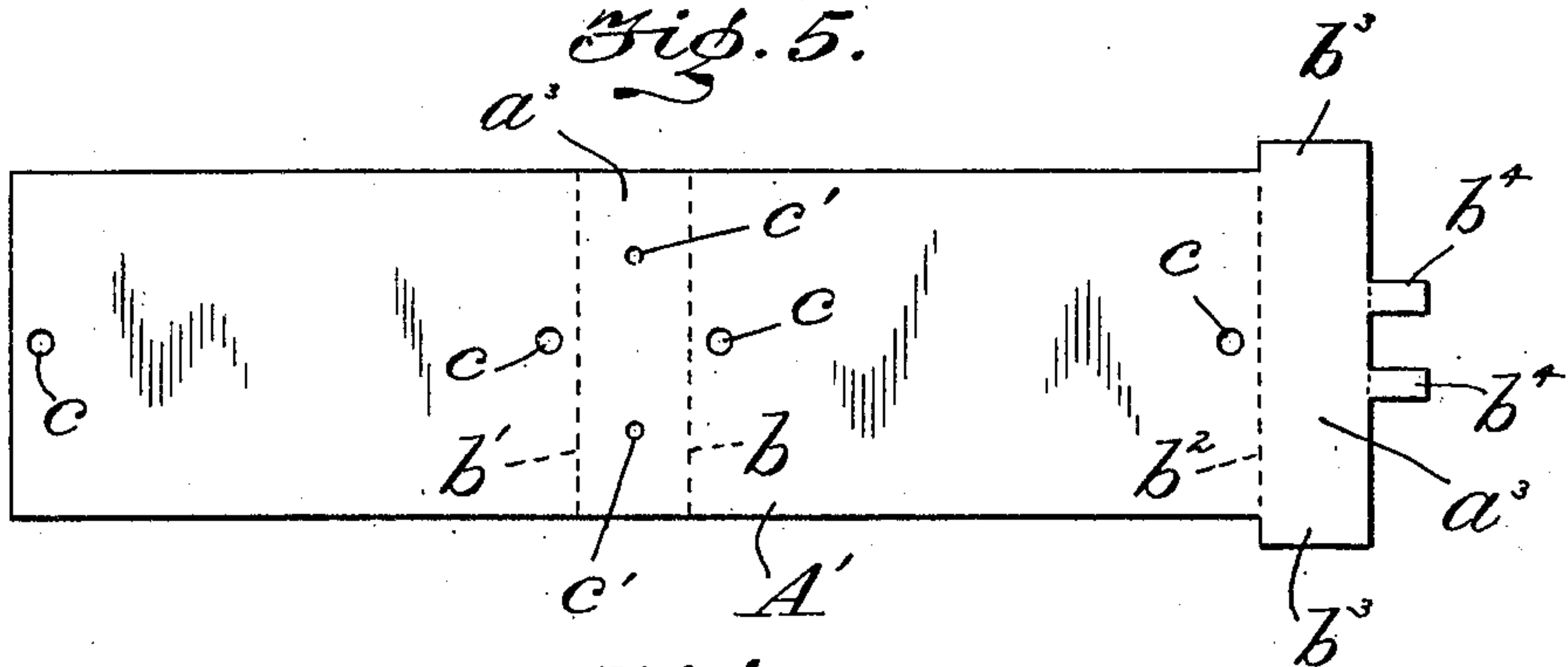


Fig. 6.

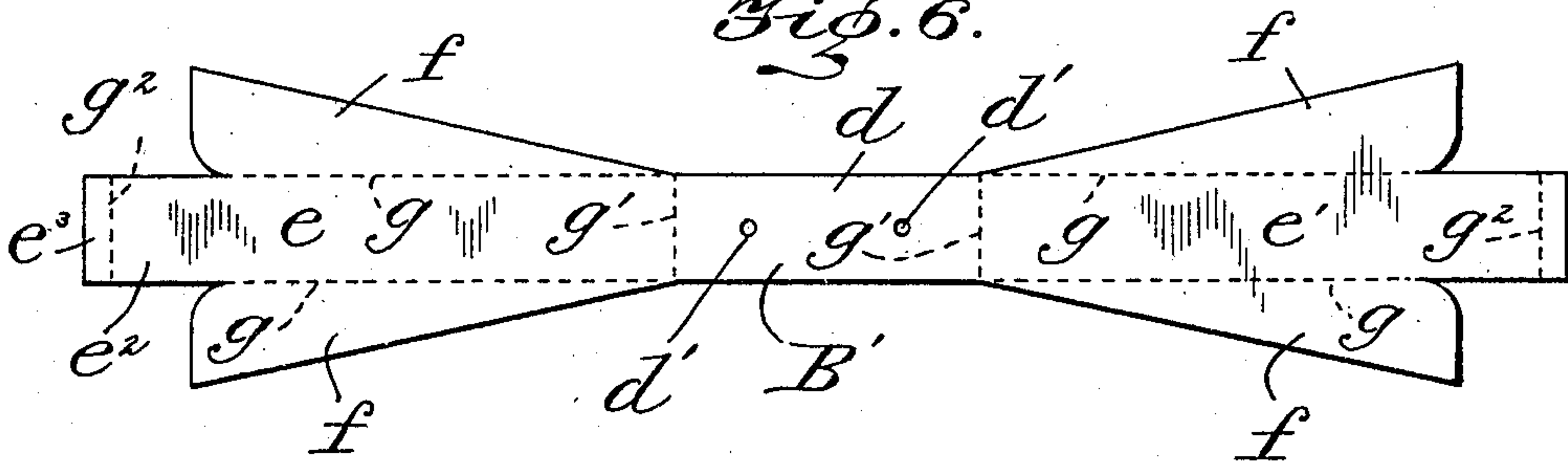


Fig. 7.

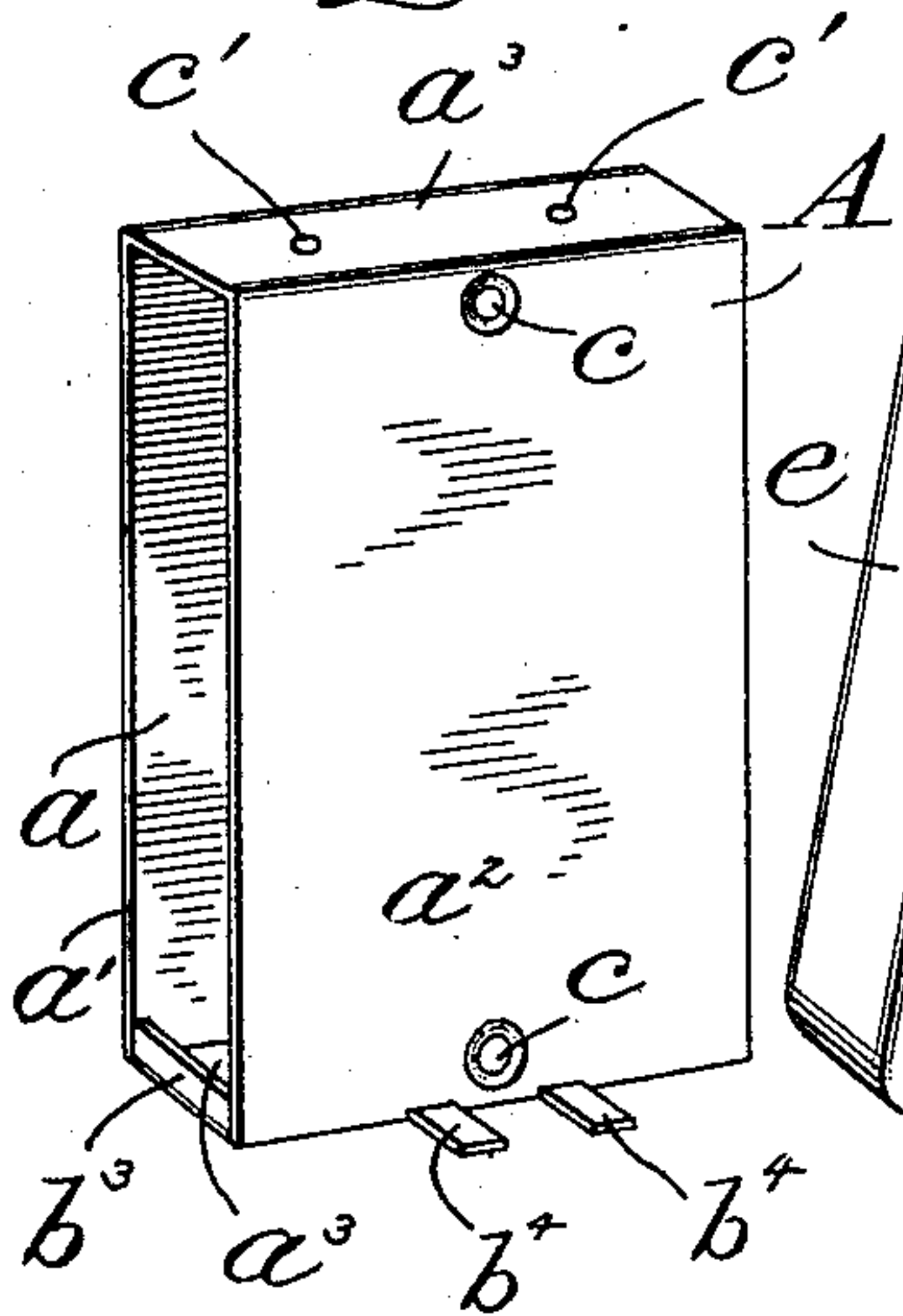


Fig. 8.

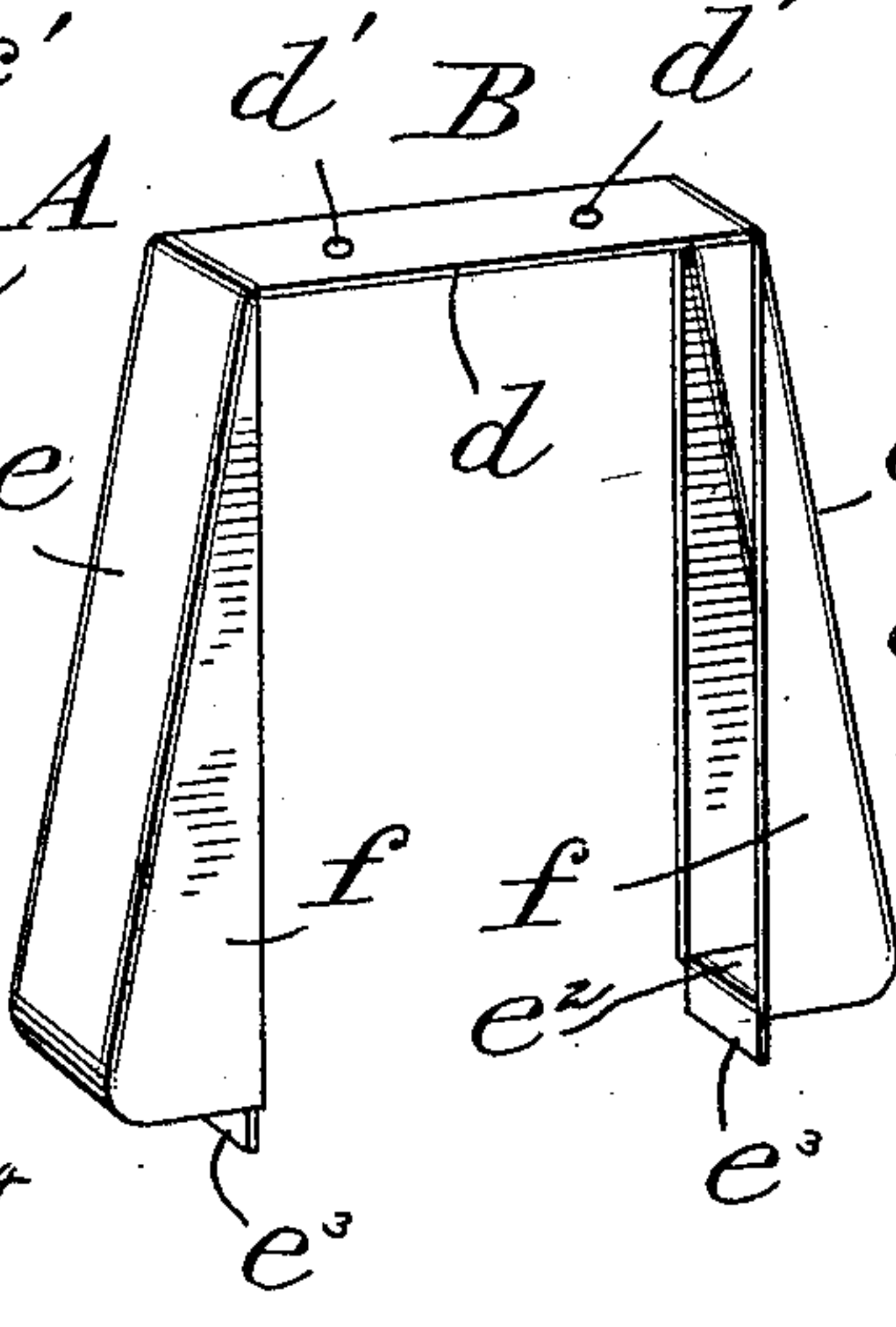
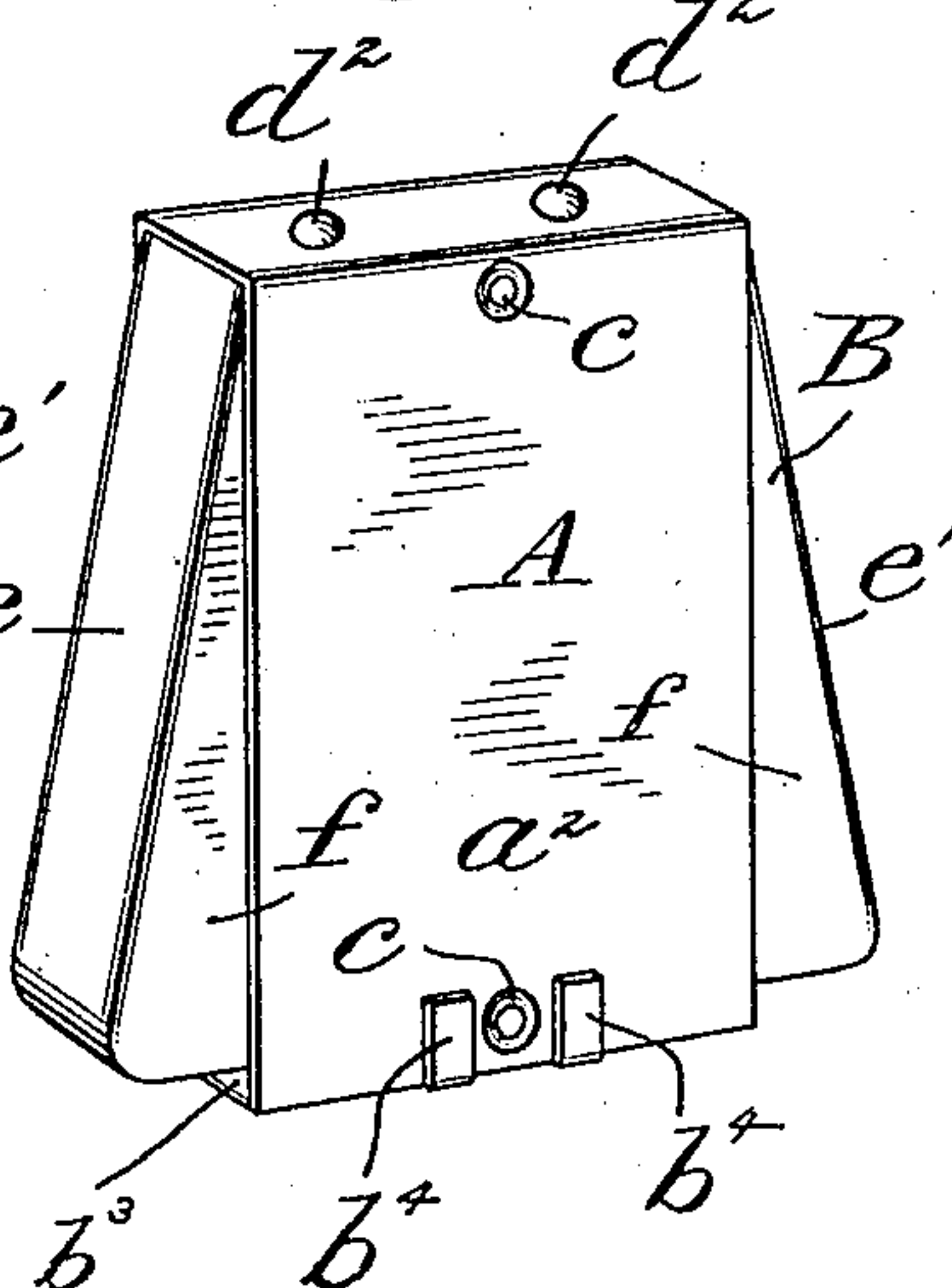


Fig. 9.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE A. DOWLING, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO JULIUS ELIAS, OF NEW YORK, N. Y.

SASH-HOLDER.

No. 912,653.

Specification of Letters Patent.

Patented Feb. 16, 1909.

Application filed August 27, 1908. Serial No. 450,414.

To all whom it may concern:

Be it known that I, GEORGE A. DOWLING, a citizen of the United States, residing in the city of New York, borough of Manhattan, county and State of New York, have invented a certain new and useful Sash-Holder, of which the following is a specification.

This invention appertains to means for holding the sashes of windows, and the like.

10 An object of the invention is to retain a window sash firmly in position within a frame without resorting to the employment of the weights, cords and pulleys usually employed as sash balances.

15 According to this invention the sash is equipped with a plurality of frictional devices, say two or four in number, which are set in recesses of the sash, each device having means for engaging frictionally with the stop beads of the window frame. These devices operate to hold the sash at any point of adjustment by frictional engagement with the beads of the window frame, while permitting the sash to be raised or lowered by hand with very little effort on the part of the operator.

20 An important advantage secured by my invention is that the sash is so confined in the window frame as to preclude rattling under the pressure of the wind, thus obviating the employment of extra devices for locking the sash against rattling.

25 One practical embodiment of the invention consists of a box or casing, a frictional member attached to said box or casing, and composed of two leaves adapted for engagement with the stop beads, and a pressure device acting on the leaves of said friction grip to normally expand said leaves thereof, thus pressing the leaves into engagement with the stop beads.

30 My new sash holder comprises, in a preferred practical form, three main parts, to wit, a pressure device in the form of a U-shaped spring, and two sheet metal parts, the box or casing and the friction member. For economy of manufacture, the box or casing and the friction member are each stamped out of a single piece of sheet metal, either sheet steel or sheet brass, and subsequently these parts are bent into the required shape, said parts being assembled and attached very quickly during the process of manufacture.

35 In the accompanying drawings, I have

illustrated one practical embodiment of the invention, but the construction shown therein is to be understood as illustrative, only, and not as defining the limits of the invention.

60 Figure 1 is a front elevation of an ordinary window with the stop bead broken away in order to show the holding devices applied to the sashes. Fig. 2 is an enlarged vertical section on the line 2—2 of Fig. 1 showing one of the holding devices seated in a sash, and adapted to operate in conjunction with the parting strip and the stop bead. Fig. 3 is a cross section on the line 3—3 of Fig. 2. Fig. 4 is a vertical section on the line 4—4 of Fig. 2. Fig. 5 is a detail plan view of the blank adapted to be bent and produce the box or casing. Fig. 6 is a detail plan view of the blank which is bent to produce the frictional gripping member. Fig. 7 is a perspective view of the box or casing. Fig. 8 is a perspective view of the gripping member. Fig. 9 is a perspective view of the completed device formed by assembling the gripping member within the box or casing.

The box or casing, A, shown in detail in Fig. 7 is open at its sides at *a*, and it comprises a back wall, *a'*, a front wall *a*², and end walls, *a*³. Said box is adapted to be made, preferably, by stamping a blank, A', from a single piece of metal, such as sheet steel or sheet brass, substantially as shown in Fig. 5. The blank is adapted to be bent on the lines, *b*, *b'*, *b*², and at one end said blank is provided with lips, *b*³, and tongues, *b*⁴. The blank is folded on the lines, *b*, *b'*, *b*², so as to produce the front, rear and end walls, the front wall, *a*², and one end wall, *a*³, being held in rigid relation by bending the tongues, *b*⁴, into locking engagement with one part of the box, substantially as shown in Fig. 9. The blank is provided with screw holes, *c*, and with rivet holes, *c'*.

100 A frictional gripping member, B, shown in Fig. 8, is adapted to be positioned within box or casing, A. Said member consists of the connecting bar, web or plate, *d*, and leaves, *e*, *e'*. The leaves extend downwardly from connecting bar, *d*, preferably on divergent lines with respect to said bar. As shown, said leaves are provided with wings, *f*, and the lower ends of said leaves are bent or turned inwardly at *e*², the free ends of

the leaves being provided with lips, e^3 , the purpose of which will presently appear.

The gripping member of Fig. 8 is, preferably, produced by stamping a blank, B' , from a single piece of sheet metal substantially in the form shown in Fig. 6. The blank comprises the connecting bar or web, d , the leaves, e, e' , the wings, f , on the respective edges of each leaf, and the extended portions, e^2, e^3 . The blank is adapted to be bent on the dotted lines, g, g', g^2 , in order to fold the leaves, e, e' , at angles to the bar, d , to fold the wings, f , inwardly with respect to the leaves, e, e' , and the ends, e^2, e^3 , so as to produce the inwardly extending portions, e^2 , and the lips, e^3 . The bar, d , is provided with openings, d' , which openings are adapted to register with openings, c' , in one end, a^3 , of box or casing, A.

The gripping member, B, is assembled relative to box or casing, A, by placing connecting bar, d , against the inner side of one end, a^3 , thus bringing openings, d', c' , into register, after which member, B, and box, A, are united by rivets, d^2 . Leaves, e, e' , of the gripping member extend outwardly from the open sides of box, A, whereas the wings, f , normally close the space between the edges of said box and leaves, e, e' .

C designates a spring which is shown in Fig. 2 as being bent or doubled so as to resemble, approximately, an inverted U. Said spring is housed within box, A, and its end portions engage with leaves, e, e' , of gripping member, B. The spring acts on leaves, e, e' , to normally press them outwardly, but such outward movement, beyond a normal working position, is arrested by lips, e^3 , of the leaves engaging with stops, b^3 , formed by bending the corresponding parts of the blank, A' , upwardly as shown in Fig. 2.

The holding device is applied to a sash, D, by seating said device in an opening or recess, D' , the latter being provided in a vertical stile of the sash. Preferably, each sash, D, is provided with four of the holding devices, two of said devices being inserted in recesses near the top and bottom portions of each vertical sash stile, as shown in Fig. 1. It is to be understood, however, that the invention is not limited to the use of four holding devices on each sash, because any desired number of devices may be provided thereon. For example, a sash may be provided with only two holding devices, one near the top of one stile, and the other near the bottom of the other stile. The sash having been recessed at D' , the holding device is fitted in said recess, and screws, E, are passed through the openings, c , in box or casing, A, whereby said box is held securely in the sash.

In operation, spring, C, acts to press leaves, e, e' , outwardly with reference to box, A, thus securing frictional engagement

of said leaves with stop bead, F, and parting bead G, of window frame or casing, H. The friction between the leaves of a number of holding devices and the parting and stop beads is sufficient to retain sash, A, firmly in any position to which said sash may be adjusted, but when it is desired to raise or lower the sash, the application of comparatively slight pressure to the sash will be sufficient to move it up or down as desired.

From the foregoing description, taken in connection with the drawings, it will be seen that I have provided a frictional holding device which is adapted to securely retain the sash in a raised or partly raised position, said result being secured entirely by the frictional engagement of the holding devices with the window frame. My new construction dispenses with the sash weights, cords and the pulleys, ordinarily used in sash balances, and it, also, obviates the provision of weight boxes in the sash frame, thus materially simplifying and cheapening the construction.

An important advantage of my invention consists in holding the sash firmly between the beads against movement by pressure of the wind, thus overcoming rattling of the sash and avoiding the use of external devices to preclude such rattling.

One of the chief merits of my device is that it is composed of three parts, to wit: the blanks, A', B' , and the spring, C. By making the box and the gripping member each of a single piece of sheet metal, by stamping them in the form of blanks, A', B' , I am enabled to secure great economy in the manufacture of the new holding device. It is evident that the blanks can be folded in suitable dies to the required form, that the parts A and B may be easily assembled and riveted, that spring, C, may be placed in position prior to closing box, A, and that prongs, b^4 , may readily be bent to confine the several parts in proper positions.

When the holding device is made for the market, it presents the appearance of Fig. 9. The spring, C, tends to force leaves, e, e' , outwardly, but such movement is arrested by lips, e^3 , engaging with stops, b^3 , thus retaining the parts in a condition suitable for packing.

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

1. In a sash holder, a box or casing, a gripping member composed of leaves adapted to be exposed beyond said box or casing and to have frictional engagement with the stop beads of a window frame, and pressure means acting on said leaves of the gripping member.

2. In a sash holder, a box or casing, a gripping member struck up from a single piece of sheet metal and attached inter-

mediate its ends to said box or casing, said member being composed of leaves which are exposed at the respective sides of the box or casing, and an inclosed spring coöperating with said leaves of the gripping member.

5 3. In a sash holder, a box or casing, a gripping member composed of leaves normally inclined relative to the sides of the box or casing, and a spring positioned between, and engaging with, said leaves of the gripping member.

10 4. In a sash holder, a box or casing, a gripping member composed of leaves which are partially exposed at the sides of the box or casing, each leaf being provided with side wings adapted to overlap the box or casing, and a pressure device coöperating with said leaves of the gripping member.

15 5. In a sash holder, a box or casing, a gripping member attached thereto and pro-

vided with an exposed inclined leaf, said leaf having side wings adapted to play in the side of the box or casing, and a pressure device coöperating with said leaf.

6. In a sash holder, a box or casing open 25 at its respective sides, a gripping member fastened to the box or casing and provided with inclined leaves arranged to work in the open sides of said box or casing, and a doubled leaf spring the end portions of 30 which are in engagement with said leaves of the gripping member.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE A. DOWLING.

Witnesses:

H. I. BERNHARD,
MARGARET C. POWELL.