

(No Model.)

2 Sheets—Sheet 1.

G. L. H. MUEHE.
WINDOW.

No. 428,851.

Patented May 27, 1890.

Fig. 2.

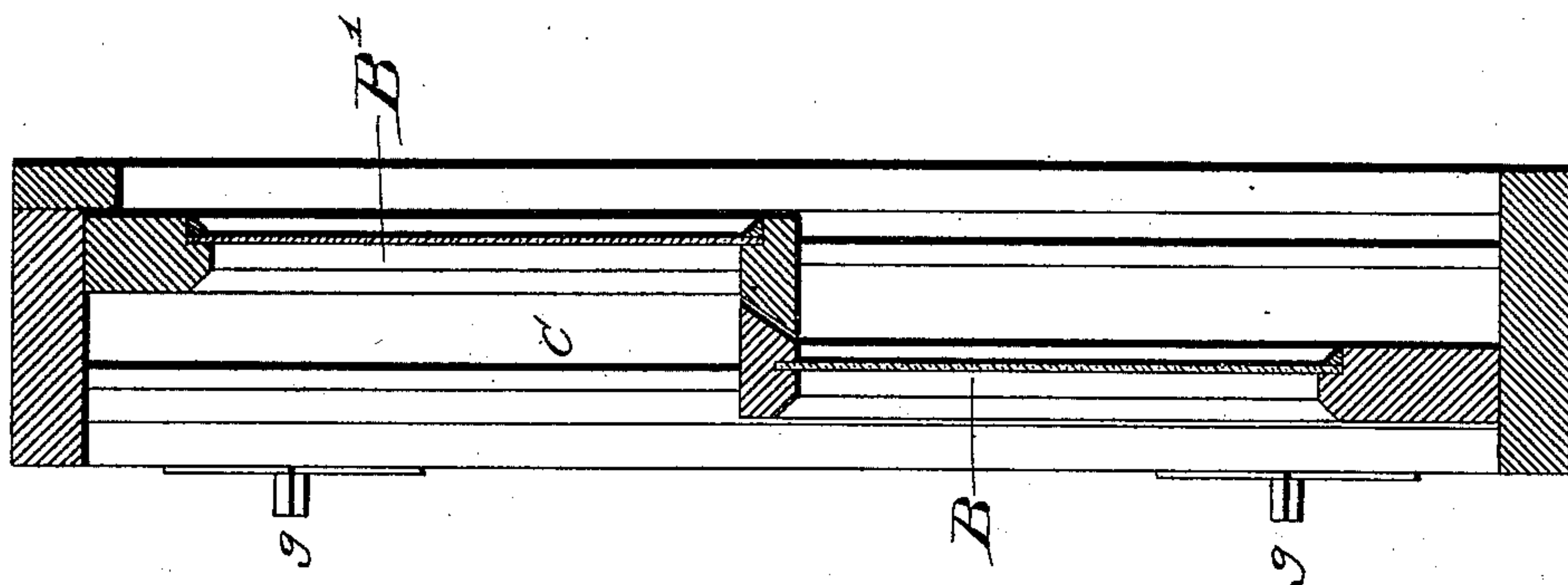
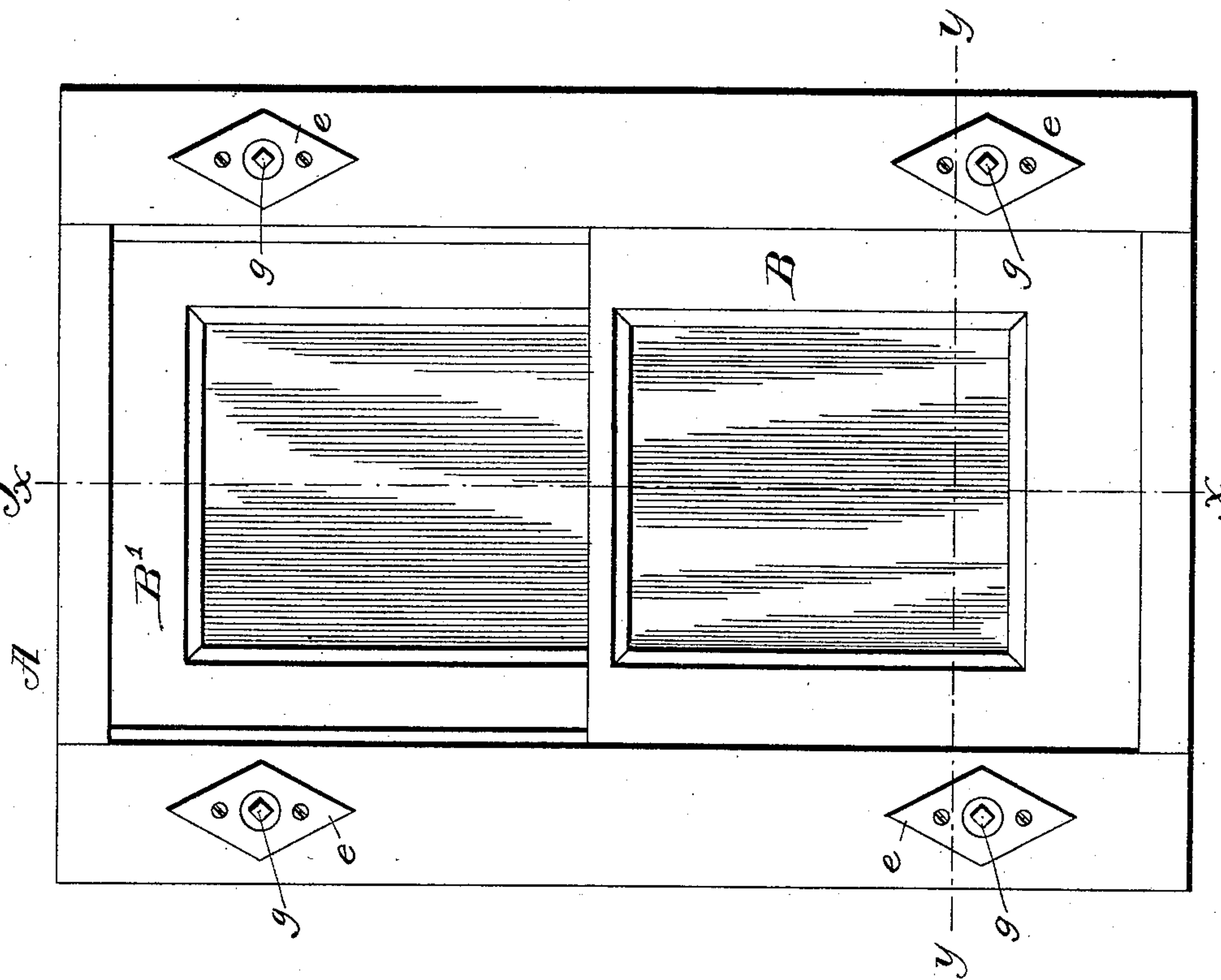


Fig. 1.



Witnesses:
 Mrs. Donovan
 Tho. Fife.

Inventor:
George L. Human Neuche

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Fig. 3.

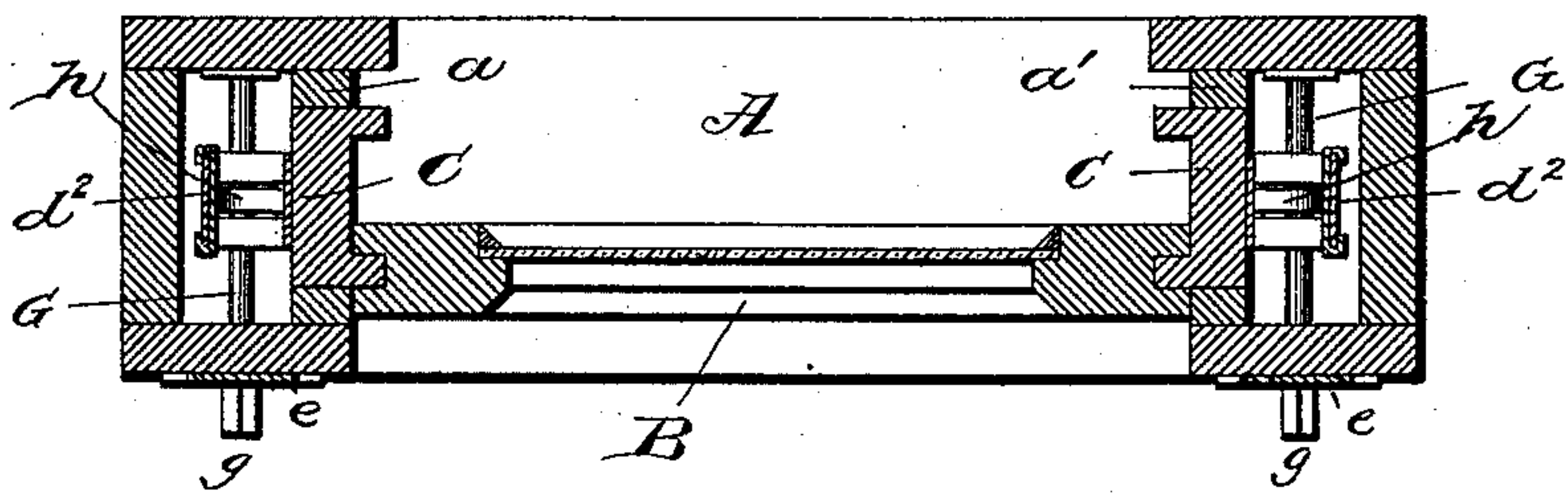


Fig. 4.

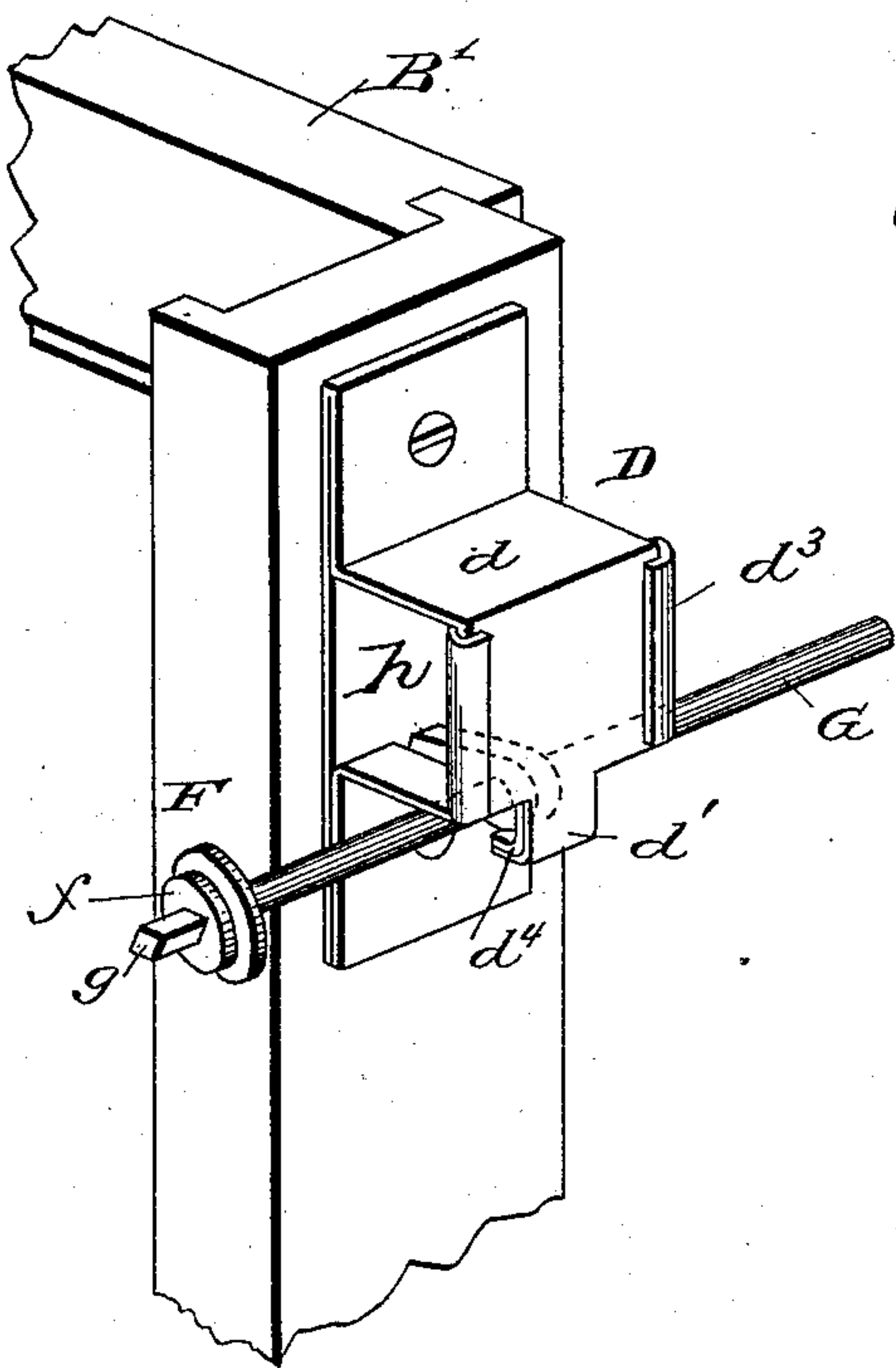
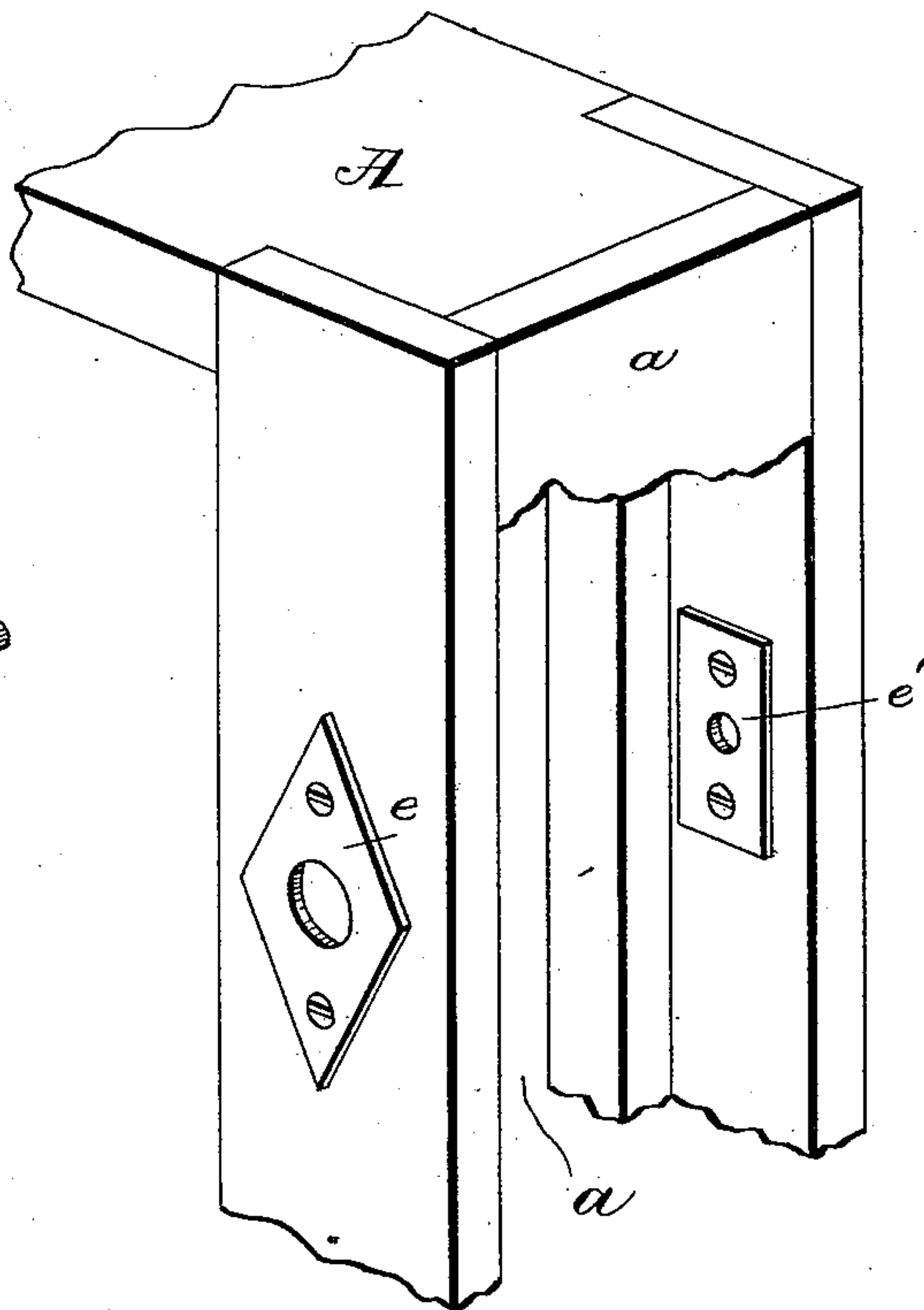


Fig. 5.



Witnesses:
Jno. Donovan
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Inventor:

George L. Herman Muehe

UNITED STATES PATENT OFFICE.

GEORGE L. HERMAN MUEHE, OF ST. JOSEPH, MISSOURI.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 428,851, dated May 27, 1890.

Application filed November 18, 1889. Serial No. 330,822. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. HERMAN MUEHE, a citizen of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented certain new and useful Improvements in Windows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to windows; and it consists in the improved construction hereinafter fully described and set forth, whereby the sash-guides may be readily operated to release the window-sashes and permit their ready removal.

In the accompanying drawings, forming part of this specification, Figure 1 is a front view of a window frame and sashes embodying my invention. Fig. 2 is a vertical section of the same on the dotted line $x x$, Fig. 1. Fig. 3 is a horizontal section on the line $y y$, Fig. 1; and Figs. 4 and 5 are detail perspective views, respectively, of a portion of one of the guides and of the frame.

Within the frame A are the upper and lower sashes B' B, which slide vertically upon ribs located at each side upon vertical guide-strips C, movable horizontally in slots in the inner side portions $a a'$ of the window-frame.

On the rear side of each strip C is located an upper and lower bracket D, of metal, having a rectangular portion d , the base of which is cut away and bent to present a depending ear d' , as seen most clearly in Fig. 4. A supplemental plate d^2 has its edge portions d^3 bent to embrace the outer wall of the rectangular portion d , and is also provided with a depending portion d^4 , bent to coincide with the ear d' and strengthen the same. The front and rear sides of the frame A are each provided with upper and lower bearing-openings, re-enforced by metal plates $e e'$, the open-

ing in the former being the larger to receive the shouldered portion f of a disk F, formed on a shaft G, which extends transversely through the frame and adjacent to the ears $d' d^4$. One end g of each shaft G projects beyond the inner side of the frame and is square-ended for the reception of a key to effect the rotation of the shaft. Each shaft G carries rigidly a cam-block h , which bears adjacent to the ears $d' d^4$. The larger portion of the disk F bears against the inner face of the adjacent side portion of the frame and serves to prevent the lateral movement of the shaft.

As will be apparent, it will only be necessary to successively turn the several shafts in order to cause the cams thereof to bear against the ears and force the brackets and their guides away from the sashes, so that the ribs will be withdrawn entirely from the slots in said sashes, and thereby permitting the latter to be removed from the frame. A reverse movement of the several shafts will restore the engagement of the ribs with the sashes.

Of course under some circumstances the movement of one of the guides will be sufficient to secure the engagement or disengagement of the ribs with the sashes, in which event the other guide may be stationary and its operating devices be dispensed with.

The relative location and operation of the cam are such that the brackets will be rigidly held, and hence there will be no rattling or looseness of the guides.

I claim—

The combination, with a window-frame, of a horizontally-movable vertical guide-strip provided with a metal bracket having a depending ear, bent as described, a shaft bearing in said frame, and provided with a cam located adjacent to said ear, substantially as set forth.

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

GEORGE L. HERMAN MUEHE.

Witnesses:

O. W. BEARES,
E. T. EVANS.