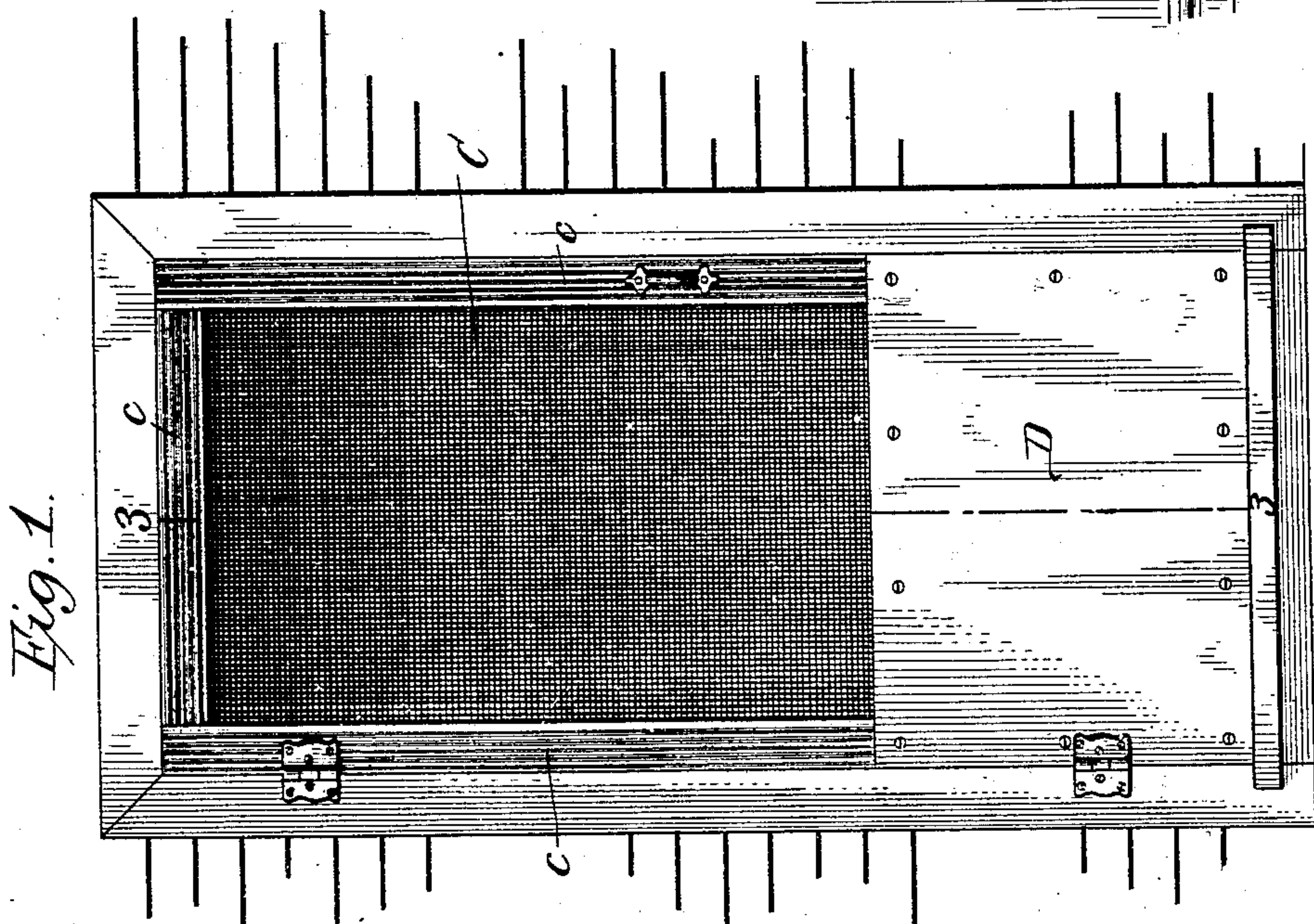
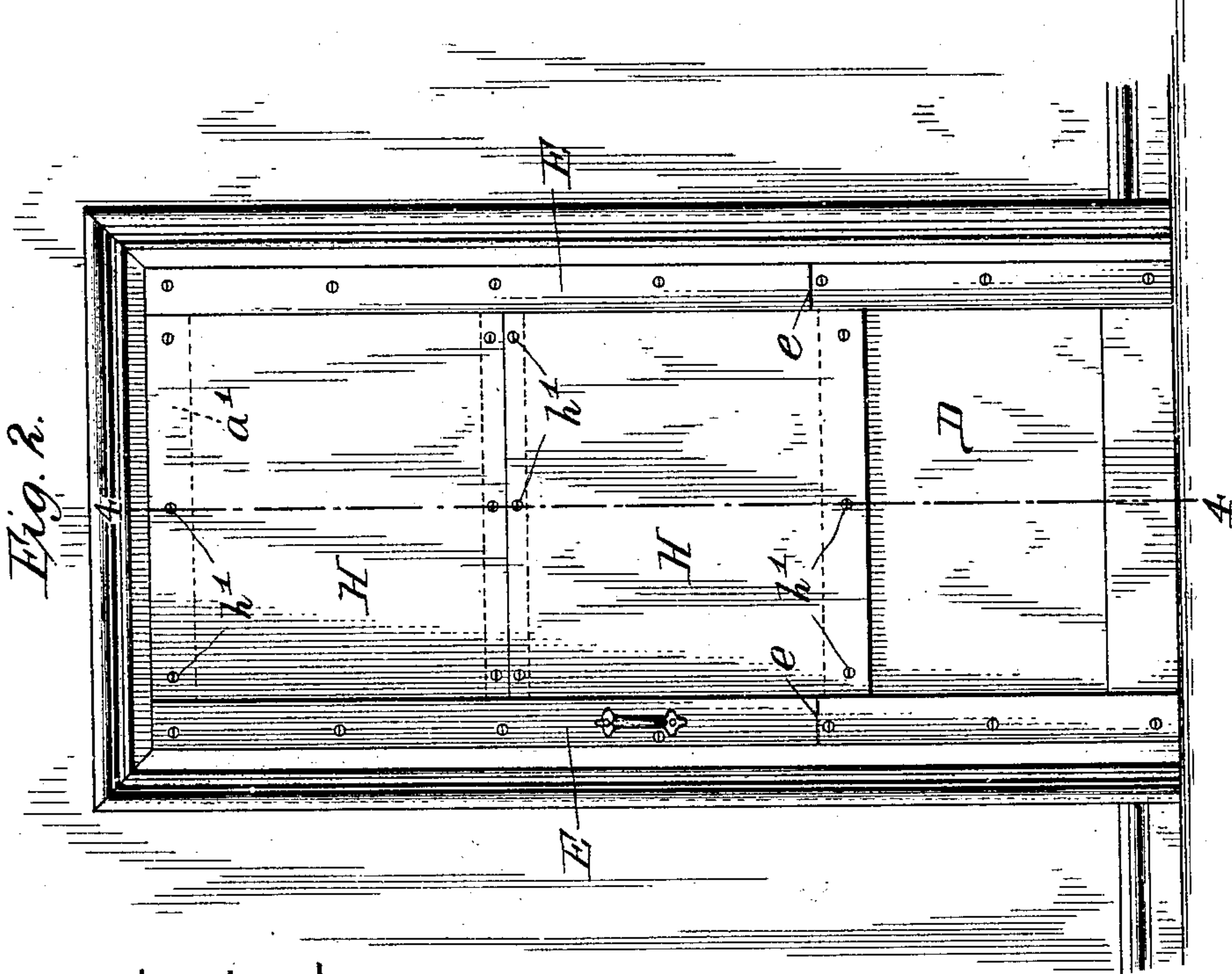


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 COMBINED SCREEN AND STORM DOOR.  
 APPLICATION FILED APR. 17, 1908.

917,605.

Patented Apr. 6, 1909.

2 SHEETS—SHEET 1.



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Fig. 3

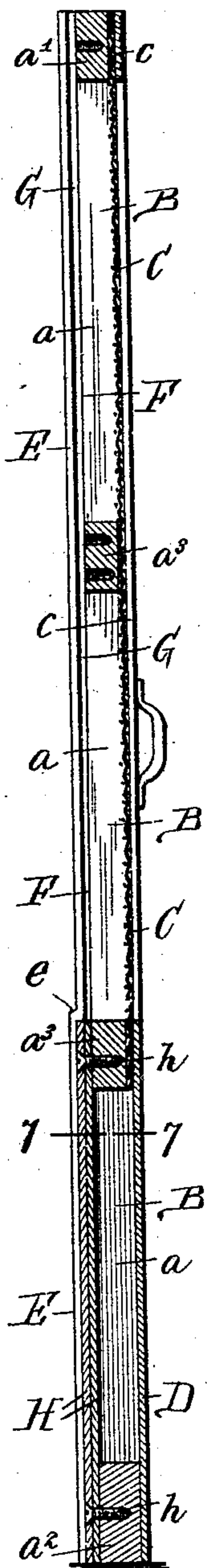


Fig. 4.

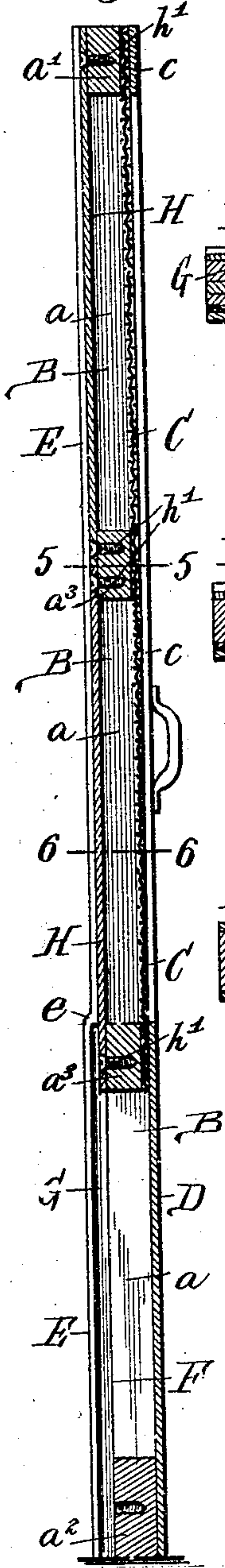


Fig. 5.

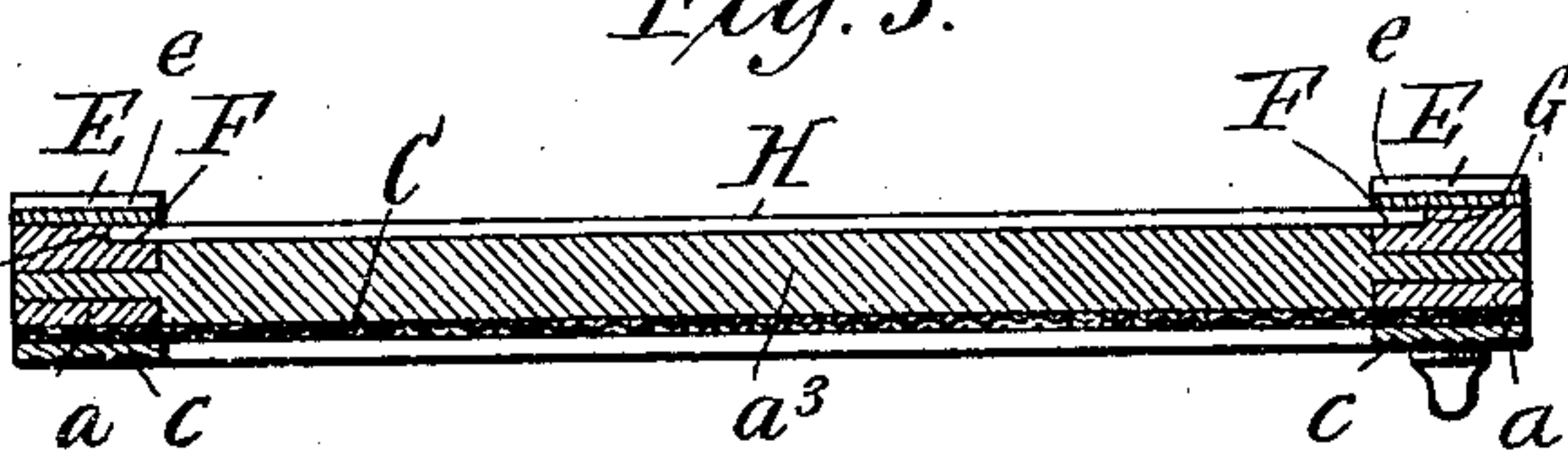


Fig. 6.

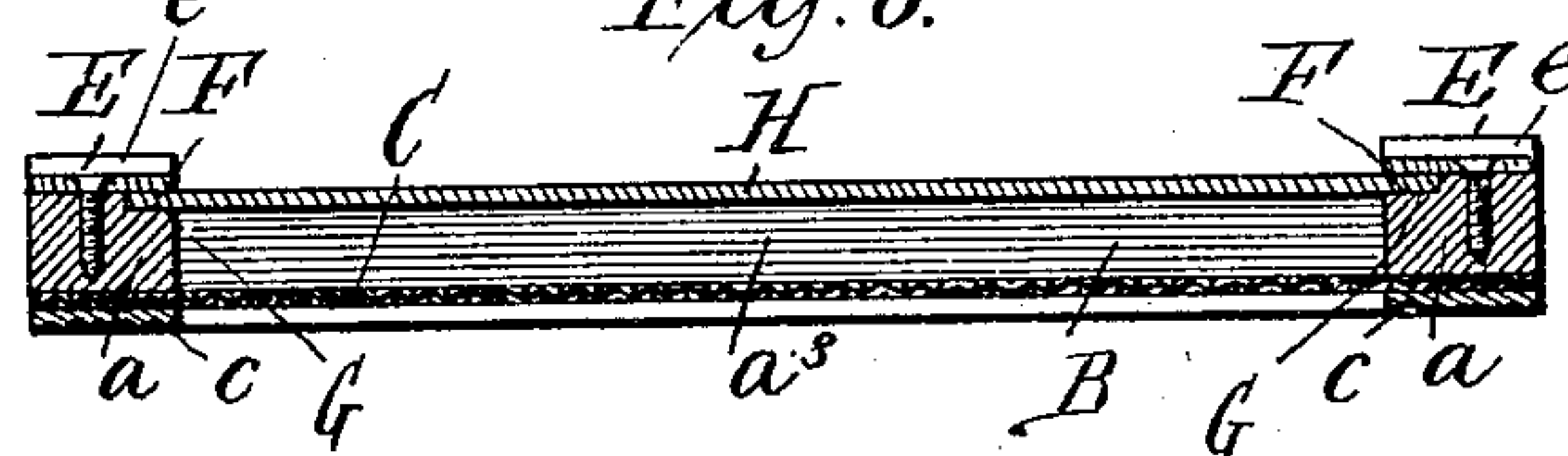


Fig. 7.

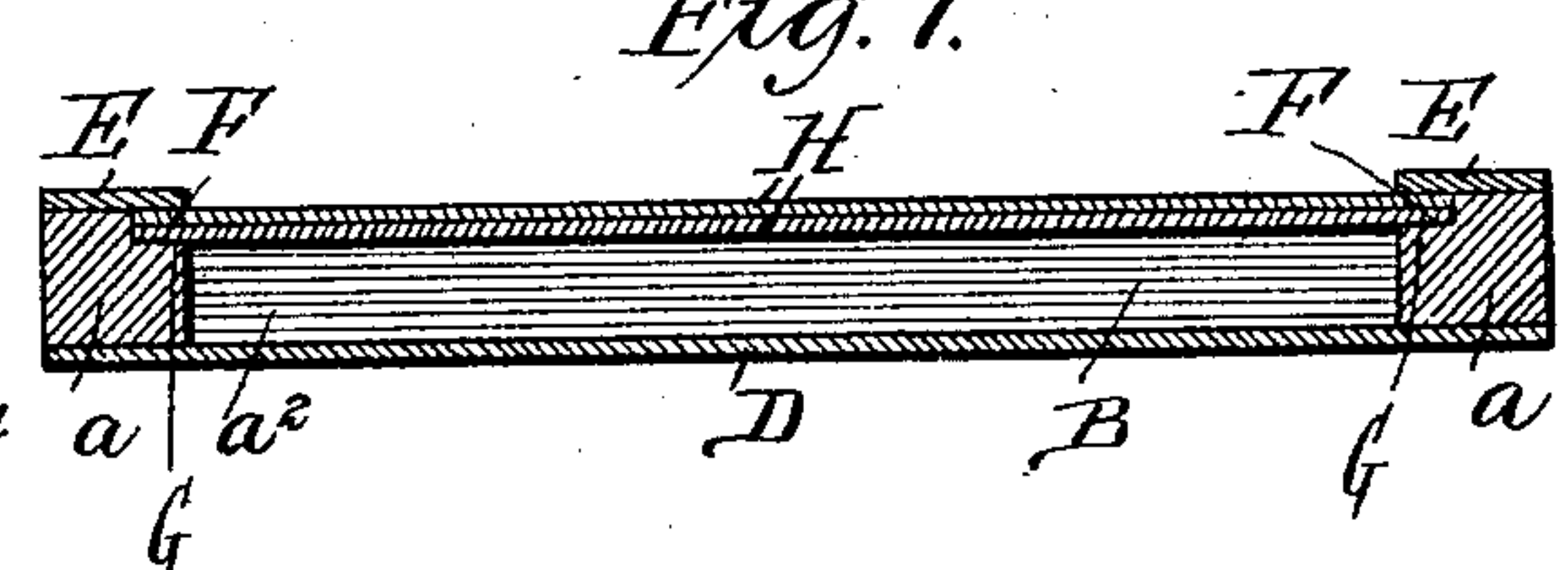
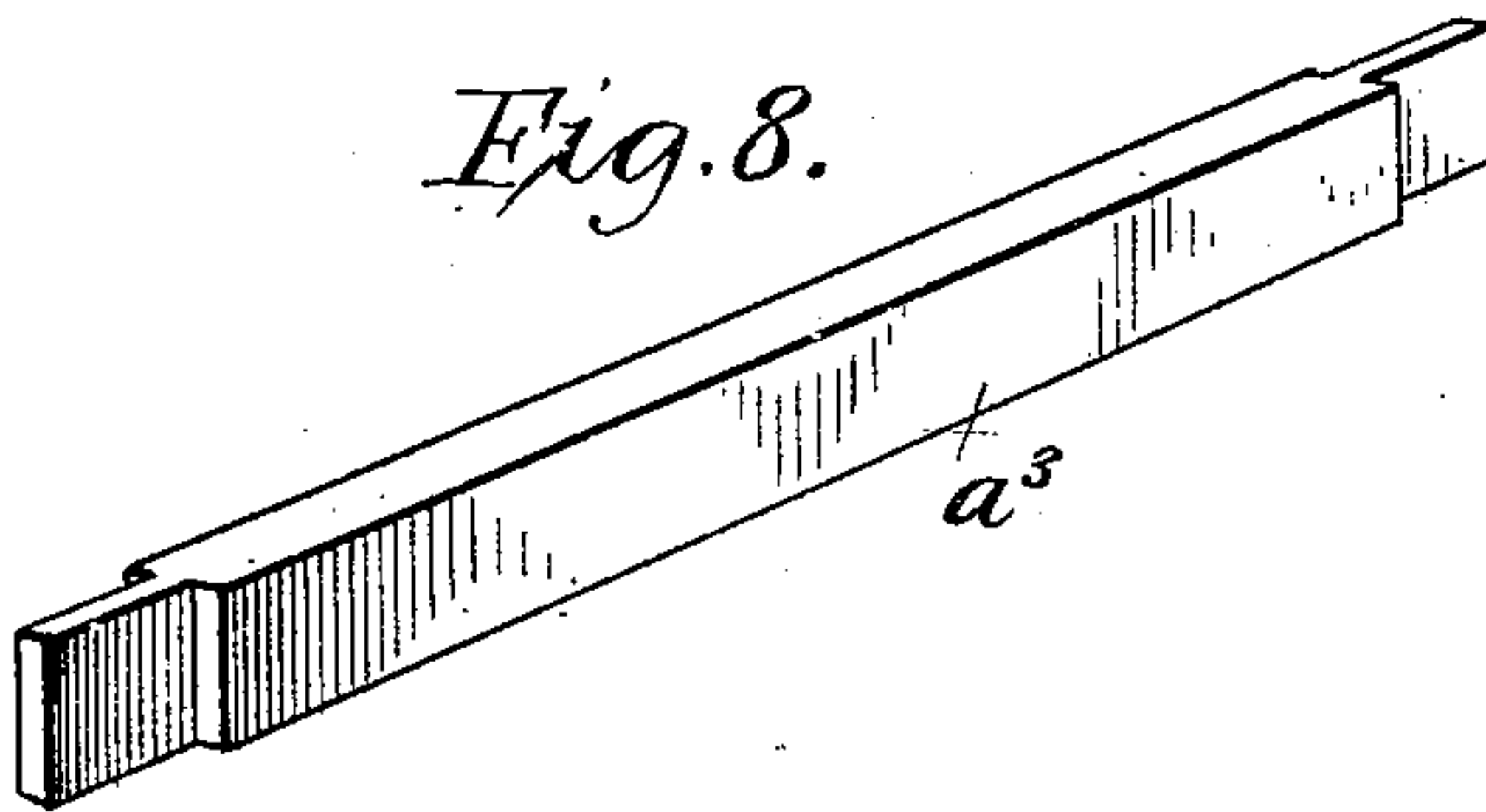


Fig. 8.



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# UNITED STATES PATENT OFFICE.

GEORGE HESSLER, OF BUFFALO, NEW YORK.

## COMBINED SCREEN AND STORM DOOR.

No. 917,605.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed April 17, 1908. Serial No. 427,726.

*To all whom it may concern:*

Be it known that I, GEORGE HESSLER, a citizen of the United States, and resident of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in a Combined Screen and Storm Door, of which the following is a specification.

My invention relates to combined screen and storm-doors, and it has for its object the production of a light, inexpensive and durable door, which can be quickly and conveniently converted from a screen door into a storm-door, or vice versa, without removing any of the parts.

To this end the invention consists in the construction, arrangement, and combination of parts to be hereinafter described and particularly pointed out in the appended claims.

In the drawings,—Figure 1 is an elevation of a door viewed from the outer side, showing it converted into a screen-door, the door being hinged to a door frame. Fig. 2 is an elevation of the same viewed from the inside; it being converted into a storm-door. Fig. 3 is an enlarged vertical section taken on line 3—3, Fig. 1. Fig. 4 is an enlarged vertical section taken on line 4—4, Fig. 2. Fig. 5 is a horizontal section through the door, taken on line 5—5, Fig. 4. Fig. 6 is a horizontal section through the door, taken on line 6—6, Fig. 4. Fig. 7 is a horizontal section of the door taken on line 7—7, Fig. 3. Fig. 8 is a perspective view of one of the cross-bars.

Referring now to the drawings in detail, corresponding letters of reference refer to corresponding parts in the several figures.

The reference letter A designates the skeleton frame comprising stiles  $a$ , and a head cross-bar  $a^1$ , a foot cross-bar  $a^2$  and intermediate cross-bars  $a^3$  which provide three panel-openings B. The upper and intermediate panel-openings are covered with suitable screening material C on the outer side of the door which is permanently held thereon by facing strips  $c$  covering its upper and side marginal portions and secured to the upper cross-bar  $a^1$  and stiles  $a$ , respectively, by means of screws, brads or other practicable fastening devices. The lower panel-opening is covered permanently on the outer side of the door by a tin or sheet metal panel or plate D whose upper marginal portion overlaps the lower marginal portion of the screening-material, said panel or plate is secured to the stiles  $a$ , the lower

intermediate cross-bar  $a^3$  and the foot-cross-bar  $a^2$  with screws or in any other practicable manner. It is therefore to be understood that, the screening-material and said plate are permanently attached to one side of the frame of the door, and that the means employed for converting the door from an open or screen-door to a closed or storm-door must be employed on the opposite side of said frame. It is also apparent that the screening-material does not extend the full length of the door, which is a very desirable feature of my invention for the reason that with the panel or plate D covering the lower panel-opening, all possibility of wearing a hole through the door by forcing the same open with a foot or by pressing the knees against the door is entire obviated, while the two remaining panel-openings allow a sufficient circulation of air.

Secured to the inner sides of the stiles  $a$  are retainer and guide-strips E which cover the rabbeted inner edges F of said stiles and serve with said rabbets to form guide-grooves G in which panels or plates H made of tin, sheet-metal or any other suitable material are slidably retained. Said guide-strips are bulged outward, as at  $e$ , to enlarge the groove from the lower intermediate cross-bar  $a^3$  to the lower edge of the door, so that two panels or plates may be held therein, as clearly shown in Fig. 3, wherein the plates H are shown as lowered and closing the lower panel-opening on the inner side of the door. The panels H are held in this position when the door is converted into a screen-door and they are secured in place by screws  $h$  passing through coinciding openings at the upper ends of said panels and threaded into the lower intermediate cross-bar. The lower enlarged portions of the guide-grooves G may therefore be termed storage grooves, since in them the panels or plates H are stored when not in use.

In order to convert the door into a screen-door, it requires only that the panels or plates H be elevated in the guide-grooves so as to close the upper screen-covered panel-openings, the said panels or plates being of such size that when slid upward into superposed relation, their adjoining edges abut at the longitudinal center of the upper intermediate cross-bar. Said panels or plates are secured to the cross-bars  $a^1$  and  $a^3$  by means of screws  $h^1$ , or they may be secured in any other approved manner. When the door is



converted into a storm-door, the lower panel-opening is closed by the panel D on one side of the door and the remaining panel-openings are closed by the panels H on the other side of said frame.

Although three panel-openings are shown herein, my invention is as readily applicable to doors having two or more than three such openings.

10 Having thus described my invention, what I claim is,—

1. In a combined screen and storm-door, the combination of a frame having a plurality of panel-openings, a panel secured to one side of said frame and closing the lower panel-opening, screening covering the remaining panel-openings on the same side of said frame, and a plurality of panels slidably held to the opposite side of said frame, said last-mentioned panels being normally held one upon the other and secured to said frame to close the lower panel-opening on the last-mentioned side of said frame and being slidable lengthwise of the door to close the remaining panel-openings.

2. In a combined screen and storm-door, the combination of a frame having a plurality of panel-openings and guide-grooves at one side thereof, panels slidable in said

30 grooves and normally arranged one upon the other and closing the lower panel-openings, said panels being adapted to be moved upward in said grooves to close the remaining panel-openings, a panel secured to the opposite side of the door to permanently close the lower panel opening, and screening closing the remaining panel-openings.

3. In a combined screen and storm-door, the combination of a frame having a plurality of panel-openings, screening closing all but the lower of said panel-openings, and panels corresponding in number to the panel-openings, one of said panels permanently closing the lower panel-opening and the remaining panels being slidable on said frame and normally positioned at the lower end of the latter and adapted to be moved upward to close the screen-covered panel-openings to convert the door from a screen-door into a storm-door.

In testimony whereof, I have affixed my signature in the presence of two subscribing witnesses.

GEORGE HESSLER.

Witnesses:

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