

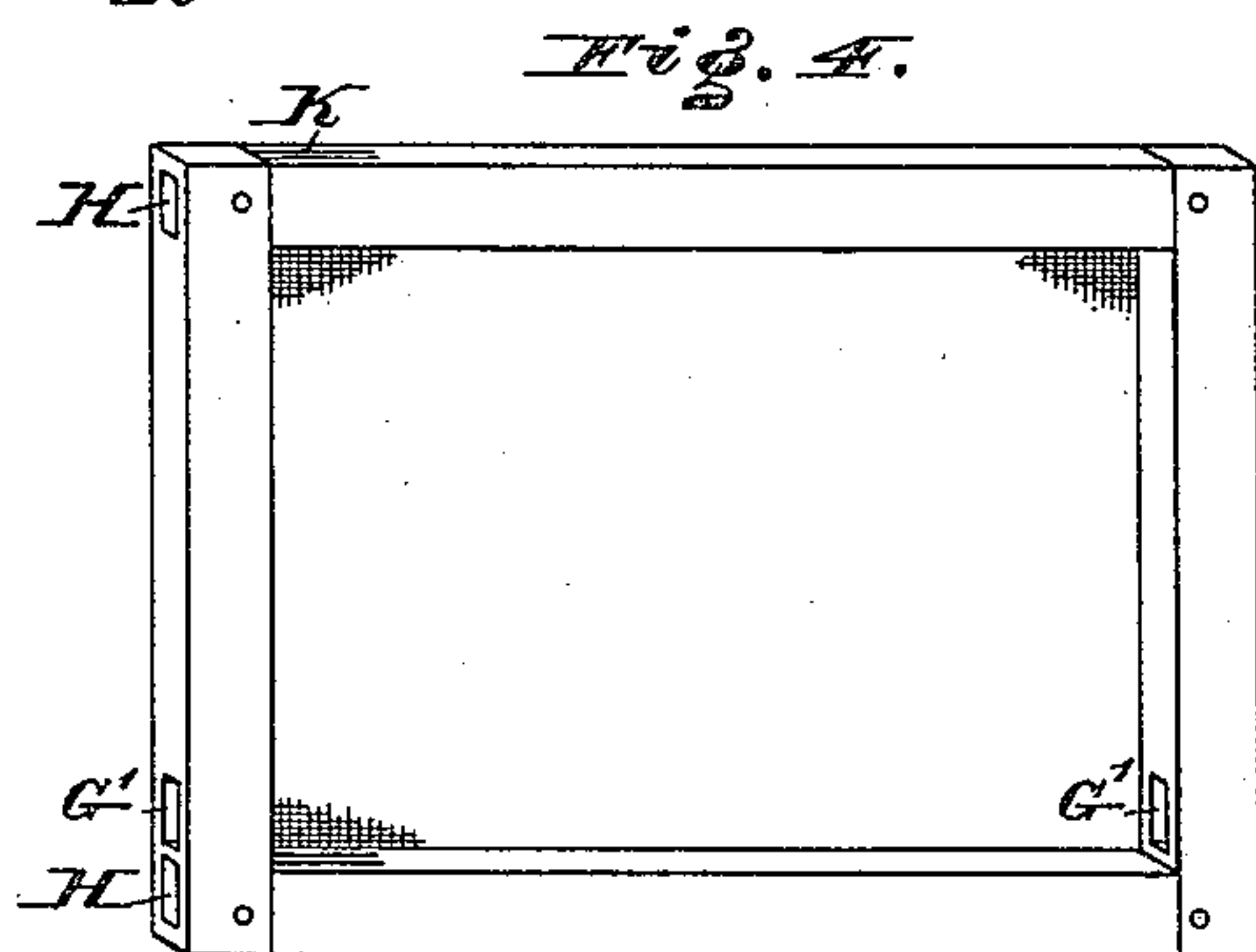
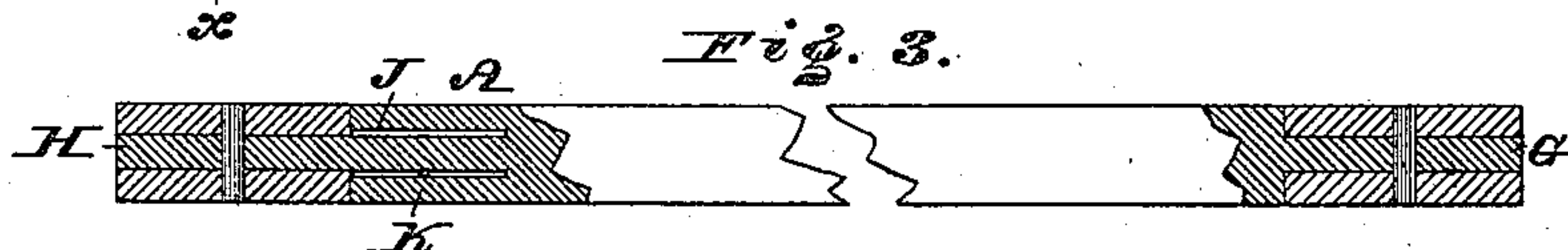
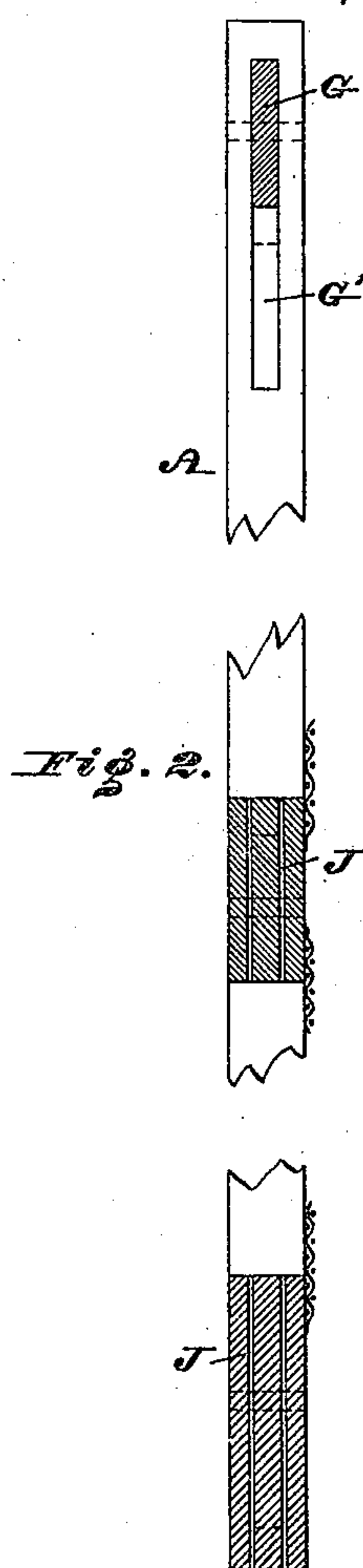
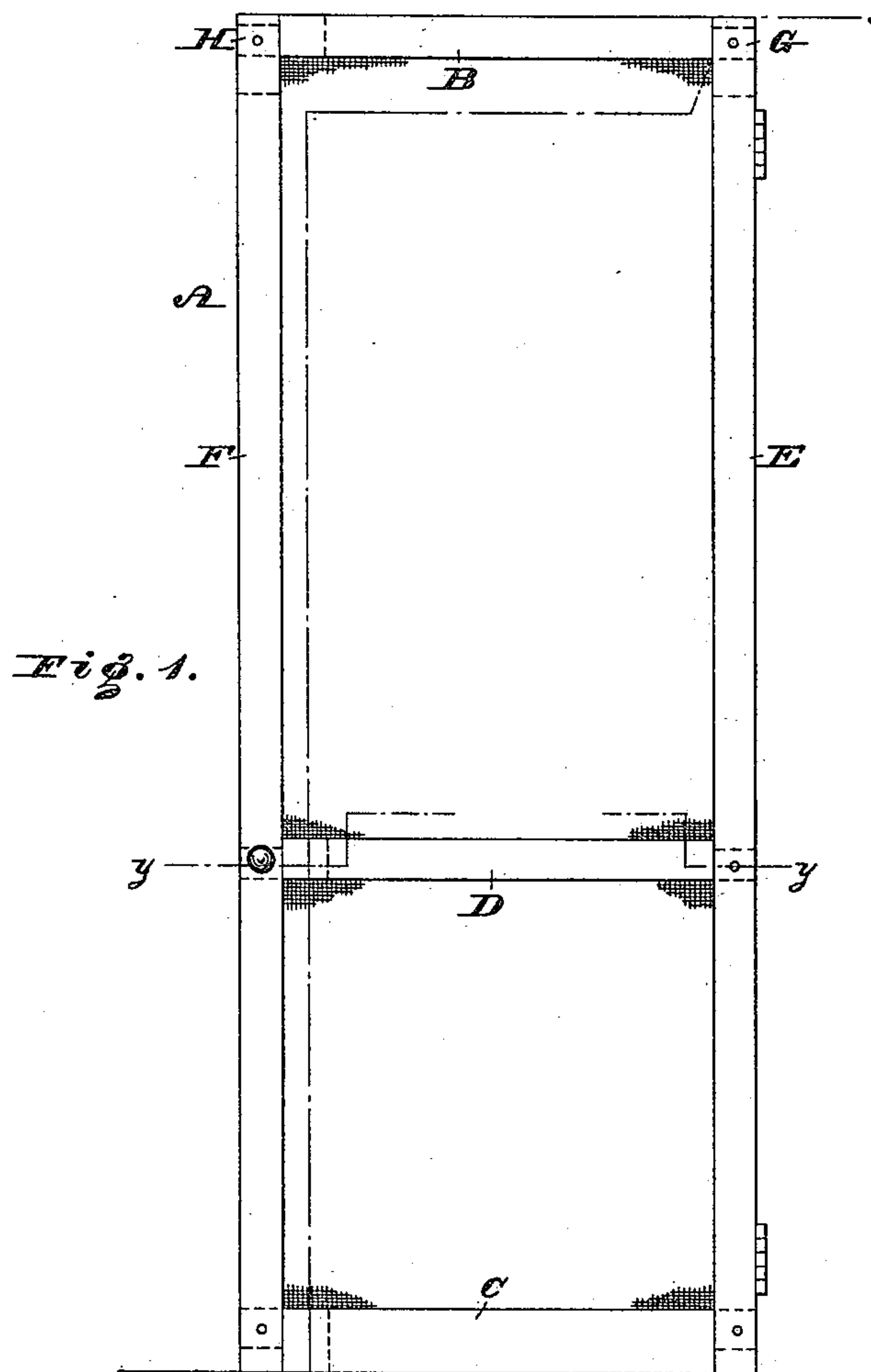
(No Model.)

J. W. BOUGHTON.

KNOCKDOWN SCREEN DOOR OR WINDOW FRAME.

No. 355,969.

Patented Jan. 11, 1887.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN W. BOUGHTON, OF PHILADELPHIA, PENNSYLVANIA.

## KNOCKDOWN SCREEN-DOOR OR WINDOW-FRAME.

SPECIFICATION forming part of Letters Patent No. 355,969, dated January 11, 1887.

Application filed July 31, 1886. Serial No. 209,628. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. BOUGHTON, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Knockdown Screen-Doors or Window-Frames, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a front view of a screen-door embodying my invention. Fig. 2 represents a vertical section thereof in line *x x*, Fig. 1, on an enlarged scale. Fig. 3 represents a horizontal section in line *y y*, Fig. 1, on an enlarged scale. Fig. 4 represents a perspective view of a screen-frame embodying my invention.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of improvements in the class of knockdown insect-screens embodying doors and window-frames, the construction whereof is such that the screens are adapted to be reduced in size according to the dimensions of doors and windows.

Referring to the drawings, A, Figs. 1, 2, and 3, represents a screen-door consisting of the top rail, B, bottom rail, C, intermediate rail, D, and side stiles, E F. Each rail has its ends formed with tenons G H, the tenons G being adapted to be fitted in mortises G' of the hanging stile E, and the tenons H in the mortises of the opposite or locking stile, F. Each rail is formed with kerfs J, which extend into the rail from the inner terminations of the tenons H, forming tongues K. The rails are made of such length that when the door is set up it is slightly wider than the door-frame; hence, in order to make a proper fit, the rails require shortening, to accomplish which the ends of the tongues K are cut off the required extent, thus lengthening the tenons H, said tenons then being inserted in the mortises of the stile F, and the latter properly driven up, so that the desired width of the door is attained. The ends of the tenons H which project outside of the stile F are now cut off, the rails and stiles being secured together in any desired manner. The netting may then be attached to the door as formed,

the hinges, and knob and lock, if any, having been previously or being subsequently secured to the same, and thus the screen-door is ready for use.

It is evident that in setting up the door, should the door-frame be found of much less width than the door, or the latter is intended to be employed for a narrower door-frame, the size of the door may be adjusted by reducing the length of the tongues K, as has been hereinbefore described.

Either mortise for the top or bottom rail is vertically extended, as seen in Fig. 2, so that the top rail may be moved down or the bottom rail moved up. By this provision the height of the door may be reduced, or the door adjusted in height, according to requirements, in which case the ends of the stiles beyond the rails are cutoff. In lieu of extending the mortises, I may make a number of disconnected mortises, in either of which the tenons may be fitted; but when I use an extended mortise the unoccupied space is properly plugged or filled in, so that no gap is presented in the side stiles. If desired, the top and bottom rails may be reversed, as the tenons of the same are out of center, and thus provision is made for reducing the height of the door.

Fig. 4 shows a window-screen or insect-frame constructed similar to the door, excepting that the rail D is omitted, as not requisite, said frame being adjustable in width and height, according to requirements of the window frame or sash.

It will be seen that I provide convenient means for adjusting knockdown doors and frames, the parts whereof, in their normal condition, being readily packed or formed into handles convenient for handling, transportation, &c.

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

1. A knockdown door or frame having rails formed with tenons, and kerfs extending into the rails from the inner terminations of the tenons, thereby forming tongues, substantially as and for the purpose set forth.

2. In a knockdown door or frame, rails having tenons H and kerfs J, forming tongues



K, in combination with the side stile having mortises therein, all substantially as described.

3. In a knockdown door or frame, two or more rails, each having on one end thereof the  
5 tenon G, and on the other end the tenon H, and kerfs J, forming the tongues K, in combination with stiles E F, the said stiles having

extended vertical mortises, all as described, whereby the said frame may be readily adjusted, both in width and height, as desired.

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Witnesses:

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