

C. S. Bruff.

Window Shutter.

N<sup>o</sup> 14,798.

Patented May 6, 1856.

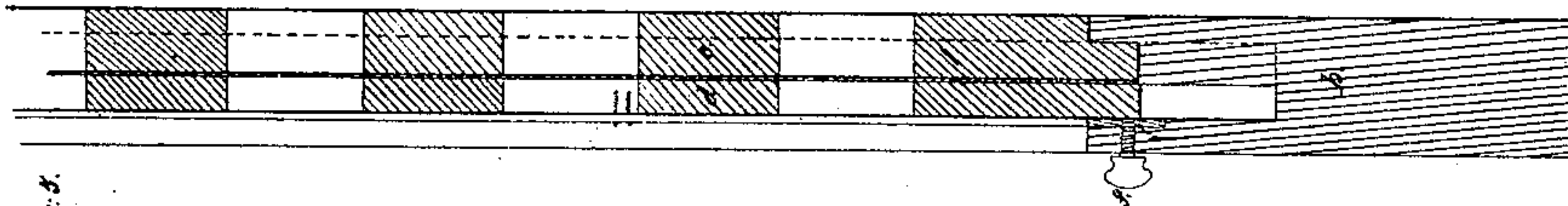


Fig. 5.

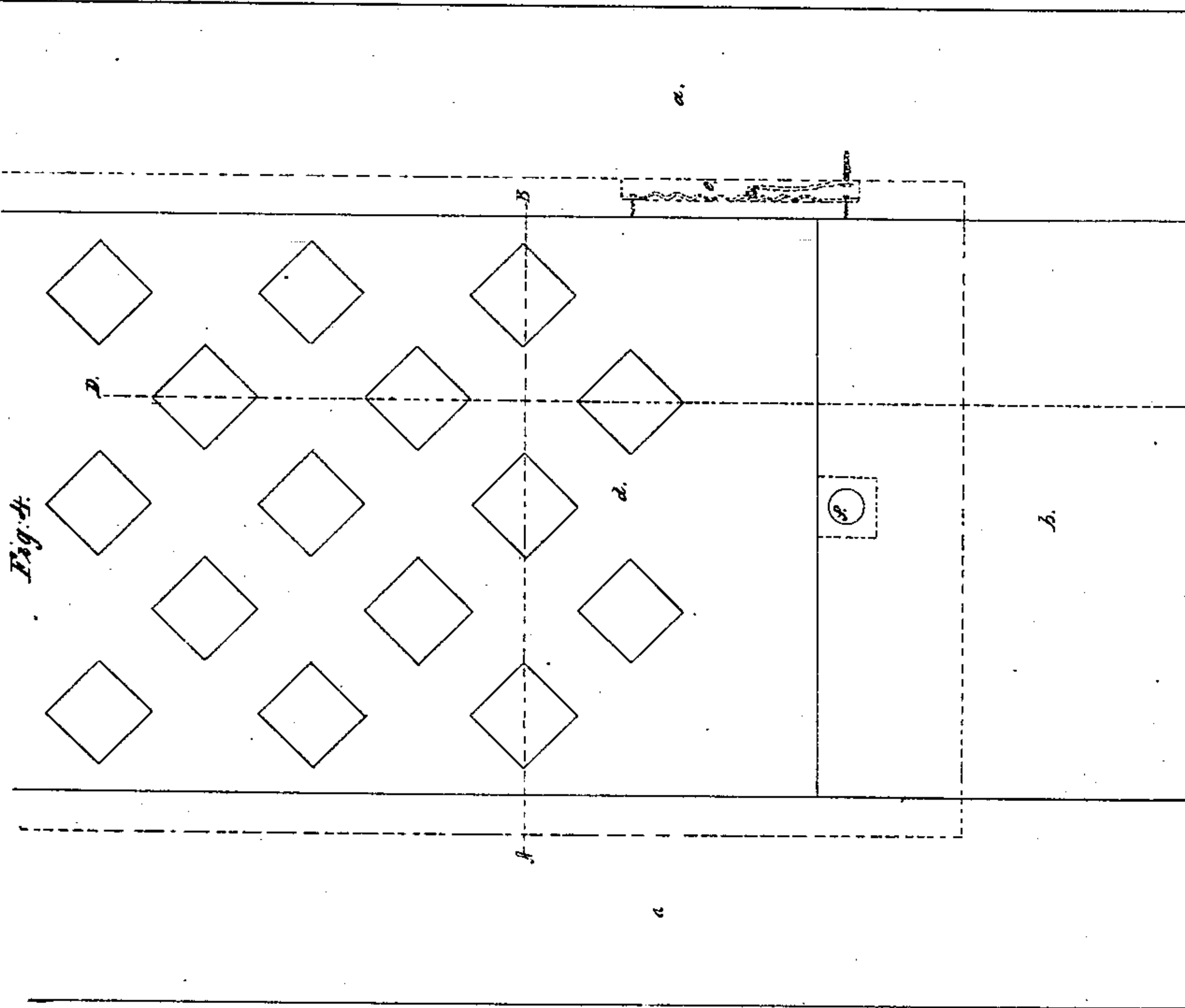


Fig. 4.

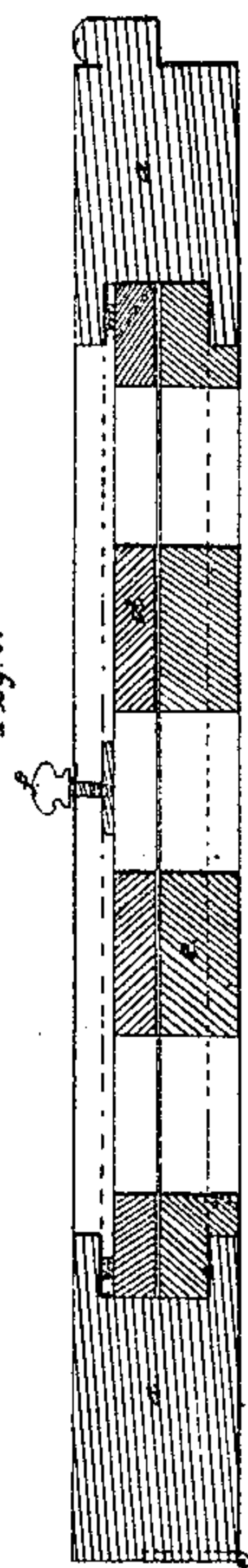


Fig. 6.

Fig. 2.

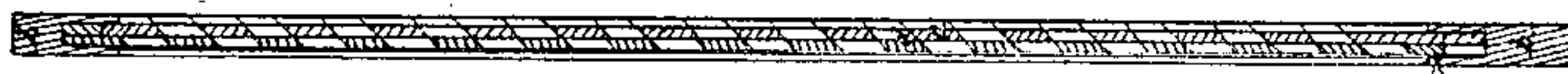


Fig. 1.

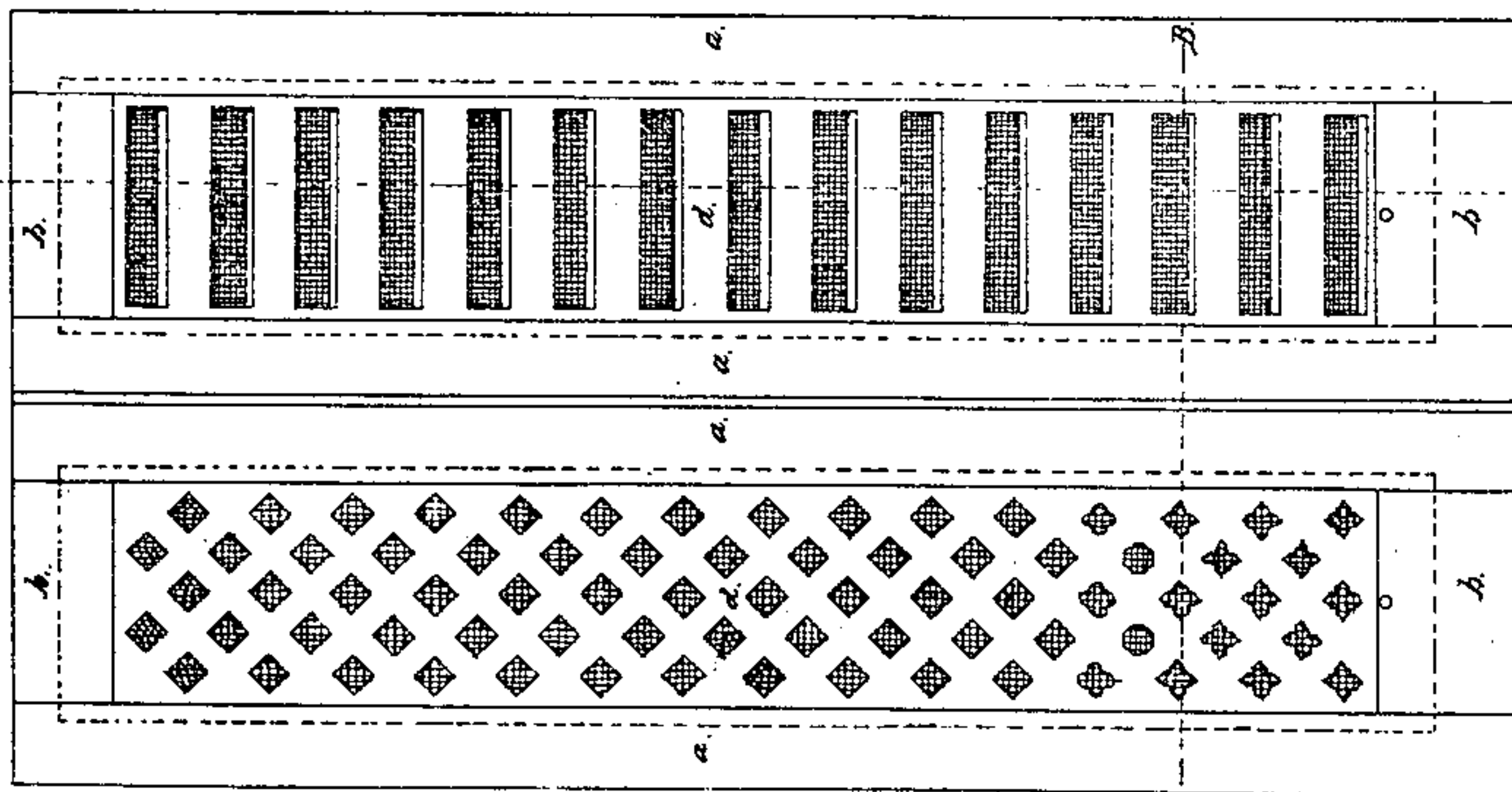


Fig. 3.





# UNITED STATES PATENT OFFICE.

CHARLES S. BRUFF, OF BALTIMORE, MARYLAND.

## DOUBLE-PANEL SHUTTER.

Specification of Letters Patent No. 14,798, dated May 6, 1856.

*To all whom it may concern:*

Be it known that I, CHARLES S. BRUFF, of the city of Baltimore, in the State of Maryland, have invented a new and useful Improvement in Double-Panel Shutters for Windows and Doors of Houses, Railroad-Cars, and Vessels; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in inserting between the movable and stationary panels of a double panel shutter, of any material or pattern, a sheet of wire netting, of such quality as will effectually exclude mosquitoes or other insects from dwelling houses, granaries, or other buildings, and sparks and cinders from rail-road cars, &c., while it affords both light and ventilation to the apartment.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct my shutters with double panels, one of which is stationary in the frame, the other movable; the stationary part of the shutters is composed of the stiles (*a*), top and bottom rails (*b*), and back panel (*c*); the movable part is the front sliding panel (*d*); the rails and stiles being grooved to receive the panels; the grooves in the stiles will be about  $\frac{3}{8}$  inch deep, and the width will be according to the thickness of the panels; the grooves in the top and bottom rails will have an additional depth, according to the depth of the openings or pattern in the panels; for instance, if the openings are one inch deep, the top and bottom grooves will be  $1\frac{3}{8}$  inch. The back panel is pieced with openings of any required shape of pattern, either square worked or beveled; the sliding panel is also pierced in like manner, as shown on Figs. 1, 2, 3, 4, 5, and 6 of accompanying drawings; so that when the sliding panel is moved the distance of the size of the opening, in the direction designed, the openings of one panel will correspond with the openings of the other, and thus give light and air, as Figs. 4, 5, and 6; or when the blank spaces of the sliding panel are brought opposite to the openings of the back panel, the light and air will be excluded, as Figs. 1, 2, and 3. The slid-

ing panel may be constructed to move either perpendicularly or horizontally; in the latter case the greatest depth of grooves will be in the stiles instead of the rails. These shutters may be made, in whole or in part of iron, wood or other substance or composition, the thickness depending upon the material employed in their manufacture. The grooves in the stiles and rails, when made of wood or other material liable to be affected by the atmosphere, will be sufficiently large to allow the sliding panel to work freely under all circumstances; and a thin elliptic spring will be attached to the face of the slide, at four points, viz., near the top and bottom, each side, within the space of the grooves of the stiles, so that they (the springs) will be contracted by the swelling of the panel in damp weather, and will extend on the contraction of the panel in dry weather; thus keeping the sliding panel in its proper position. A proper allowance will also be made in the grooves to accommodate the wire netting, which is inserted between the sliding and stationary panels, and of such size sheet as will remain stationary in its position. The sliding panel will be held in its position, when hoisted, by a simple set-screw and nut; the nut is let into the bottom rail, on the front side of the groove, and the screw is supplied with a knob or button; and when screwed up presses the sliding panel against the stationary one, by working into said nut, as shown on Figs. 1, 2, 3, 4, 5, and 6, and marked (*f*); or by any other fixture for the same purpose.

Being satisfied that the construction of double panel shutters, and the application of wire netting as a mosquito bar, are not my invention, I do not, therefore, claim either of them separately as such; but—

What I do claim as my invention, and desire to secure by Letters Patent is—

The combination of the double panel shutters with the wire netting inserted between the panels, as an effectual bar against the admission of mosquitoes or other insects into buildings, and sparks and cinders in rail-road cars, &c.

CHARLES S. BRUFF.

Witnesses:

N. W. MEANS,  
JAS. H. PARKS.