

(No Model.)

G. EASTMAN.
PHOTOGRAPHIC PLATE HOLDER.

No. 388,271.

Patented Aug. 21, 1888.

Fig. 1.

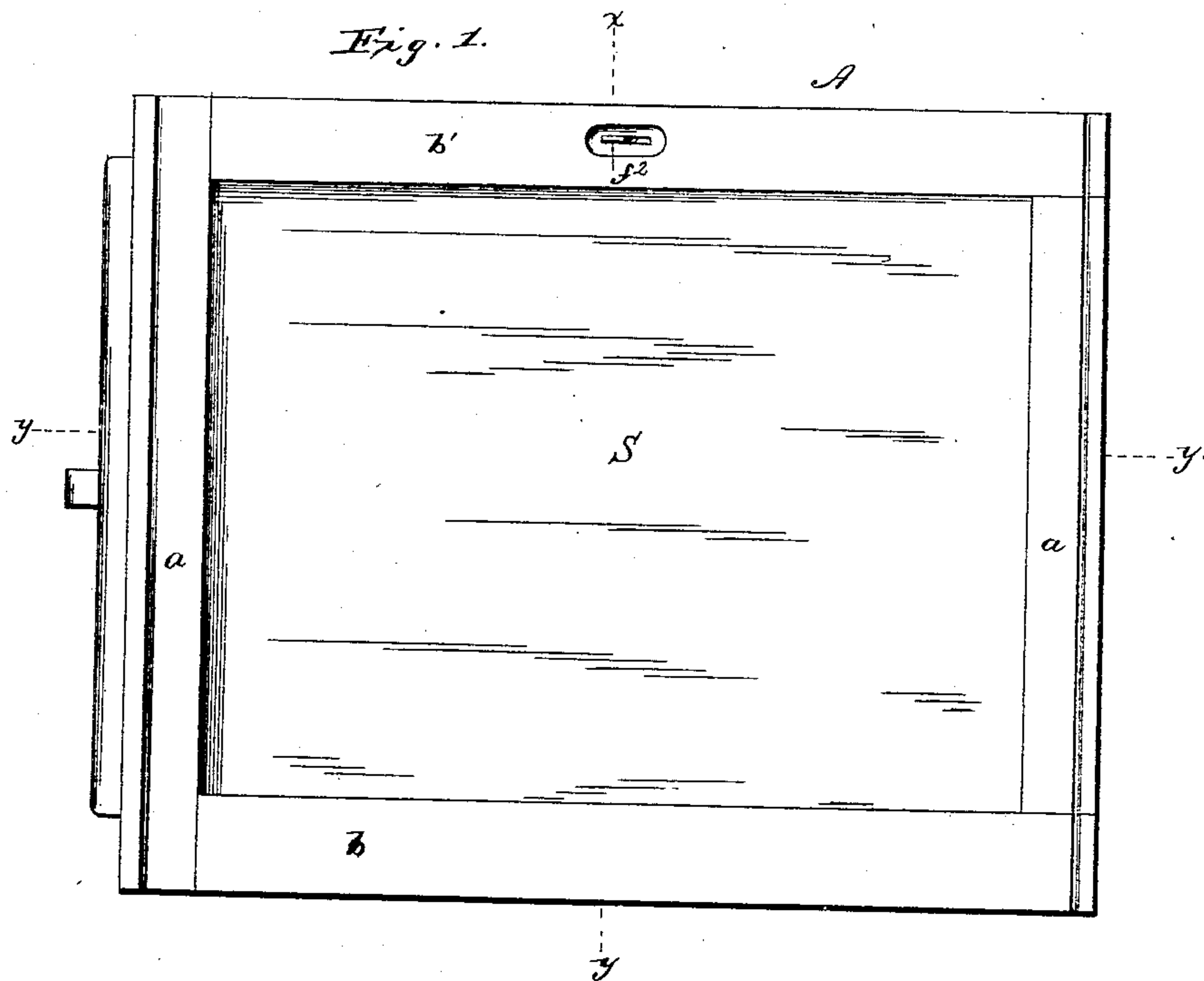


Fig. 2.

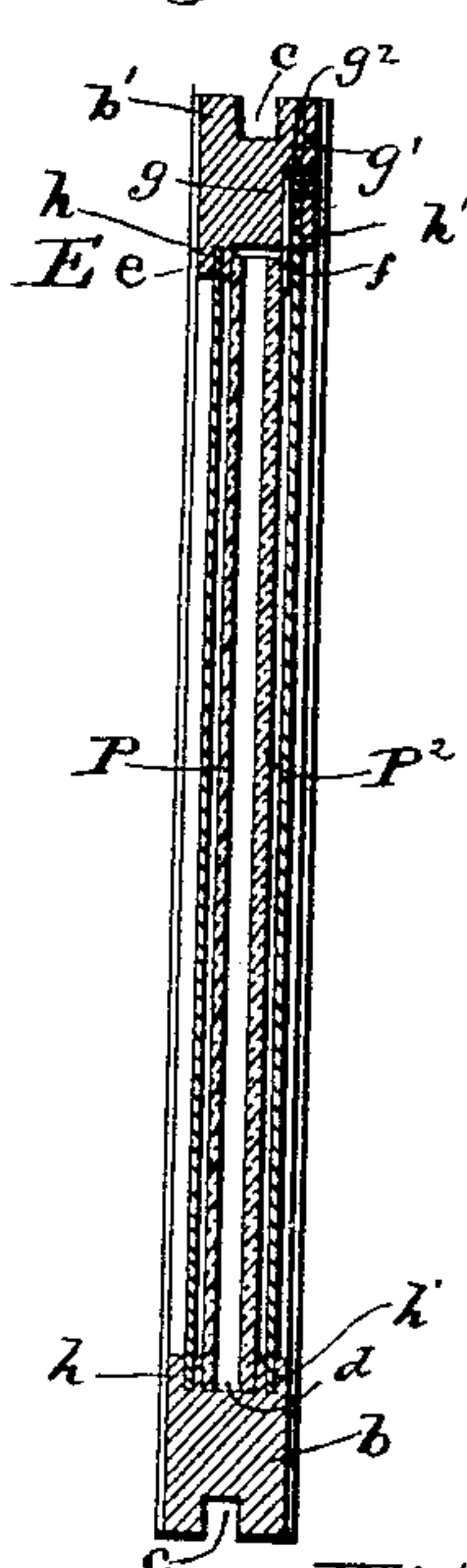


Fig. 3.

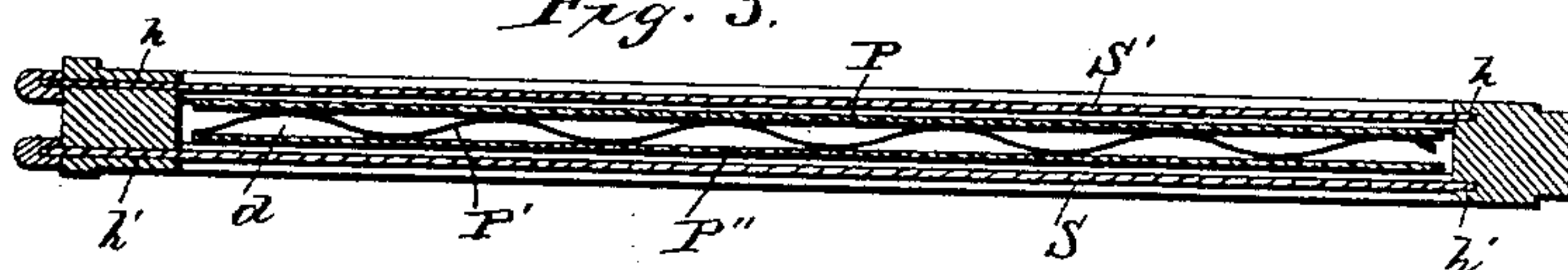
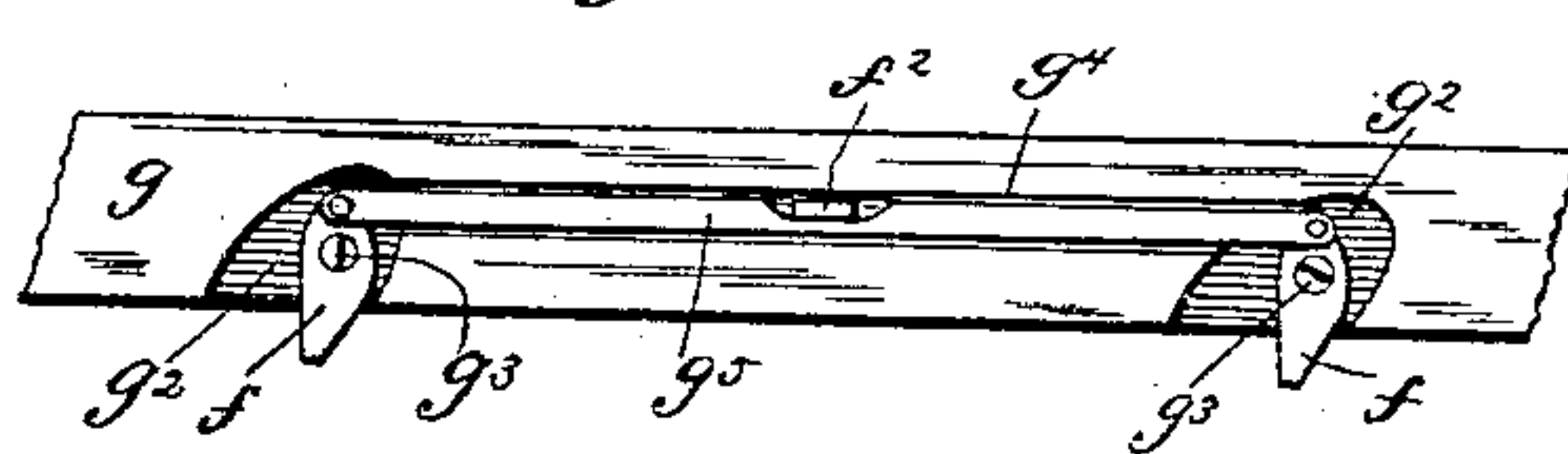


Fig. 4.



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GEORGE EASTMAN, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE EASTMAN DRY PLATE AND FILM COMPANY, OF SAME PLACE.

PHOTOGRAPHIC-PLATE HOLDER.

SPECIFICATION forming part of Letters Patent No. 388,271, dated August 21, 1888.

Application filed October 1, 1887. Serial No. 251,218. (No model.)

To all whom it may concern:

Be it known that I, GEORGE EASTMAN, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Photographic-Plate Holders; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

This invention relates to a new and improved plate holder or receptacle for transporting and exposing photographic dry-plates; and it consists in the novel combination, arrangement, and construction of parts, hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a front view of the holder. Figs. 2 and 3 are sectional views on the line $x x$ and $y y$, respectively, of Fig. 1. Fig. 4 is a front view of one of the side bars with the outer section removed to disclose the locking device.

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

The letter A designates a rectangular frame, of wood or other material, composed of four bars or pieces, which, for convenience, may be termed "end" bars, $a a$, and "side" bars, $b b'$. The two opposite bars, $b b'$, are formed or provided with suitable devices or means—such as grooves c —by which they are adapted to be fitted and detachably secured in position on a camera, the particular means of attachment being modified, altered, or changed at pleasure to adapt the holder to the particular style of camera.

In the inner face of the bar b is formed a longitudinal groove or way, d , while the opposite bar, b' , is provided with a single flange or shoulder, E, at or near one edge and parallel with the wall of the groove d on the corresponding edge of the opposite bar. The inner faces of the bars or end pieces, a , are preferably straight, although they may, if desired, be provided at one or more points with rests, or formed with a single flange, as is obvious.

In the side of the bar b' are located dogs f , preferably two or more, pivotally secured in slots formed in said bar, and so located and arranged that their inner faces will be in the

same plane as the inner edge of the wall of the groove on the corresponding side of the opposite bar, b . The preferred mode of securing and applying these dogs in the bar b' is by dividing said bar into two sections, $g g'$, the section g carrying the flange e , having grooves or recesses g^2 cut in the upper face for the reception of the dogs, which latter are held in position by pins or screws g^3 . A groove or way, g^4 , is also formed in said face of section g for the reception and accommodation of a connecting-bar, g^5 , which latter is pivoted to and connects the dogs f , and is provided with a lip or thumb-piece, f^2 , by which it is shifted. The outer section, g' , of bar b' is a plain piece or strip securely fastened to the lower section, g , and covering the recesses in the latter. As is obvious, the grooves and recesses referred to may be made in the face of the section g' or in a strip interposed between the two sections $g g'$; or the bar may be made in one piece and the recesses and grooves cut therein.

In the side and end bars are formed or cut grooves $h h'$ for the slides or covers $S S'$, the grooves h for one slide being formed in the wall of groove d on one side and the flange e on the other, while the grooves h' for the other side are formed in the opposite wall of groove d and in the face of bar b' above the upper face of the dogs f . One of the end bars, a , is slotted for the passage of the slide, while the inner face of the opposite bar a is grooved to receive the ends of the slides.

The holder described is designed especially for the reception of two plates, which latter are inserted and held as follows: The slide S on the side nearest the dogs f having been withdrawn and the dogs f retracted within the recesses, as by pressing the connecting-bar g^5 toward one of the end pieces a , one edge of a plate, P , is inserted in the groove d and the opposite edge brought down until it rests upon the flange e . An elastic pad, P' —such, for example, as a sheet of stiff paper formed or provided with a series of bends or corrugations—is now placed upon the plate, and a second plate, P' , brought into position by inserting one edge into the groove d and pressing the plate down upon the elastic pad until its opposite edge has passed below the under face of the dogs, when by applying pressure to

the connecting-bar g^5 the dogs are projected and their ends caused to overlap the plate P' . The elastic pad which is interposed between the plates serves to hold them apart and
 5 pressed against the walls of groove d on the one edge and the flange e and dogs f on the other. As is obvious, the two plates with the pad interposed may be simultaneously inserted in the holder, and when it is only desired to
 10 employ a single plate the side of the frame opposite that in which the dogs are located may be closed by a plate or backing of any suitable material; or, if the exposure is to be made on that side, a removable plate of wood, glass, or
 15 hard rubber may be used in lieu of the plate P' . Among the other advantages possessed by this holder may be mentioned its rigidity, simplicity, and convenience of manipulation. The plates can be quickly inserted and removed
 20 without touching them except at the edges, where it can do no harm. There is no danger or liability of injuring the plates in sliding them into position, as they are simply dropped or laid down after one edge has been inserted in
 25 the groove on one side. The elastic pad holds the plate securely in position against the retaining-flanges, thereby protecting the edges and preventing the plates from shifting. The dogs serve to retain the plates in place within
 30 the frame, and, being operated from a common bar, can be quickly and simultaneously withdrawn or projected to release or engage the edge of the upper plate, and the covers or exposing-slides, being received in the retaining-
 35 flanges, effectually preventing the admission of light when closed over the plates.

Having thus described my invention, what I claim as new is—

1. In a plate-holder such as described, and
 40 in combination with its grooved and flanged side bars, movable dogs or clamps supported

upon the flanged side bar and devices connecting said dogs for simultaneously projecting them over the edge of the plate or withdrawing them at will, substantially as described. 45

2. A plate-holder such as described, consisting, essentially, of an open frame composed of end and side pieces grooved near opposite faces for the accommodation of slides or shut- 50
 ters, one of said side bars being provided with a longitudinal groove intermediate the two shutters, and the other with a flange and cooperating plate-holding dogs, substantially as described.

3. The combination, in a plate-holder such as described, and with the side bars, the one grooved and the other provided with a shoulder or flange and locking-dogs, of the plates and interposed elastic cushion or pad, the whole 55
 60 resting at one edge in the groove of one side bar and at the opposite edge between the flange and dogs on the other side bar, substantially as and for the purpose set forth.

4. In a plate-holder such as described, the 65
 combination, with the recessed side bar, of the pivoted dogs and connecting-bar and the covering strip or plate, substantially as described.

5. In a plate-holder such as described, the 70
 combination, with the recessed side bar provided with a shoulder or flange to receive the edge of the plate, of the dogs pivotally supported in the recesses, the connecting-bar with thumb-piece or handle, and the top or outer section applied to the side bar to cover the 75
 dogs and form a groove or way for the exposing-slide, substantially as described.

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Witnesses:

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