

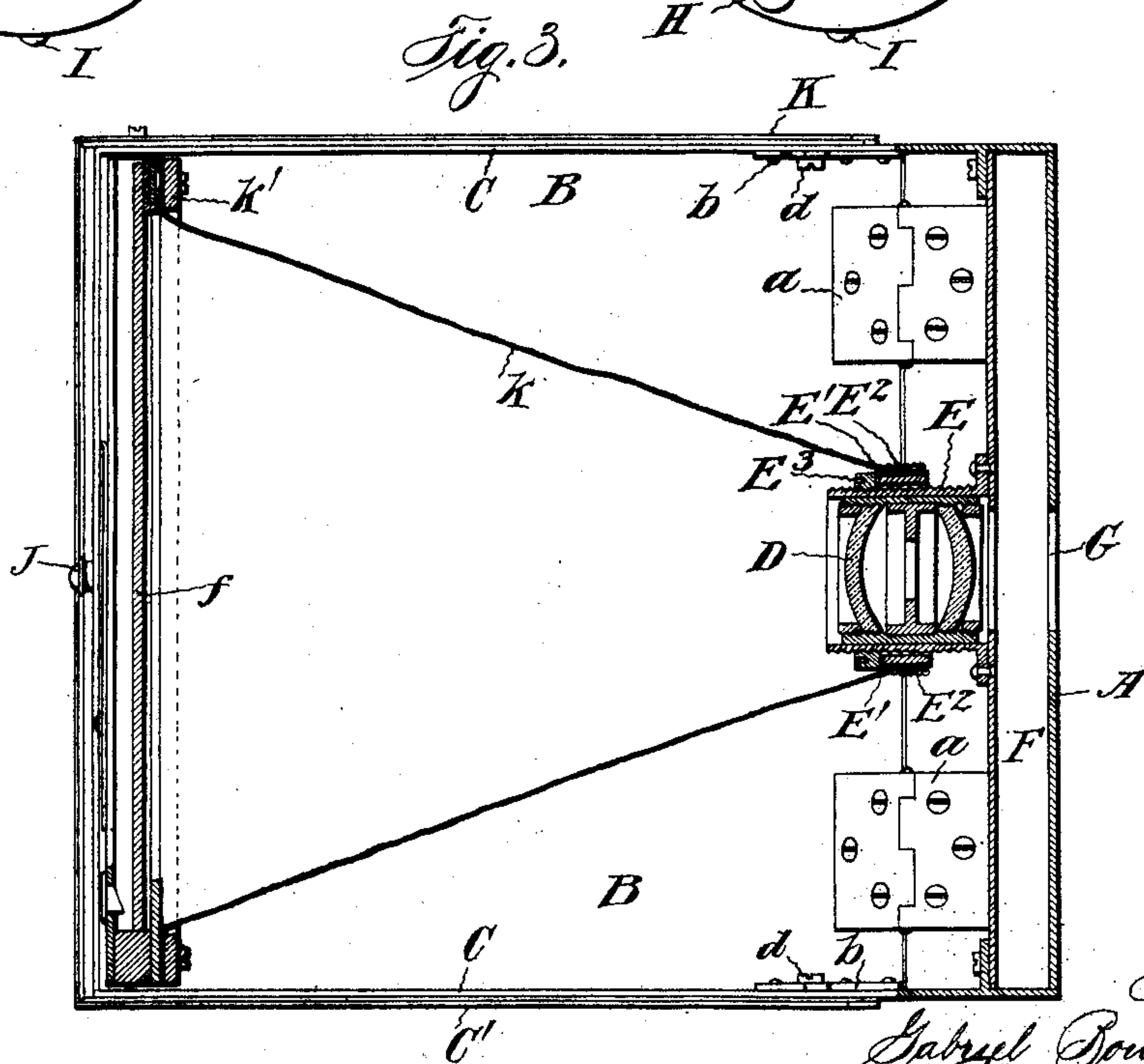
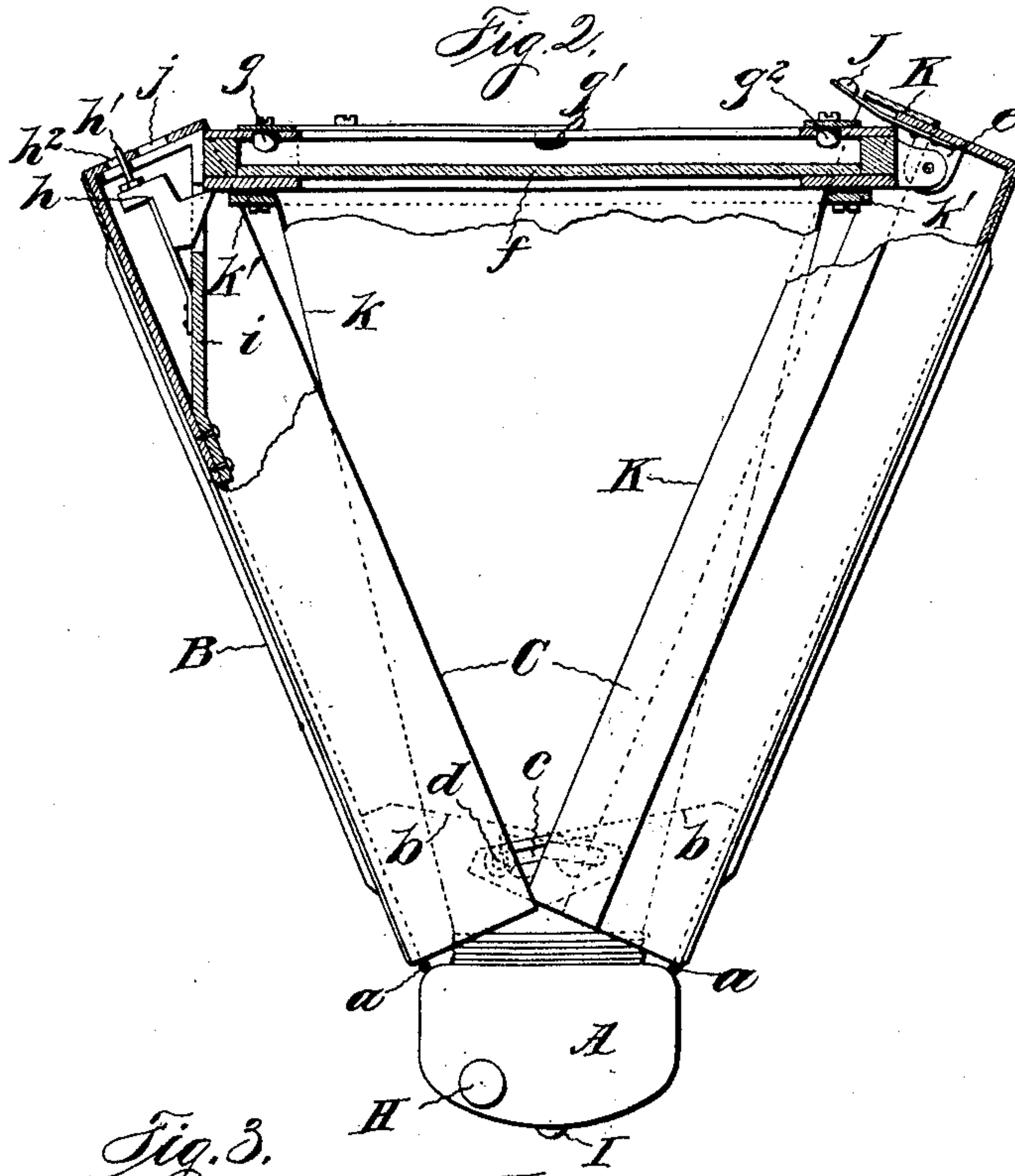
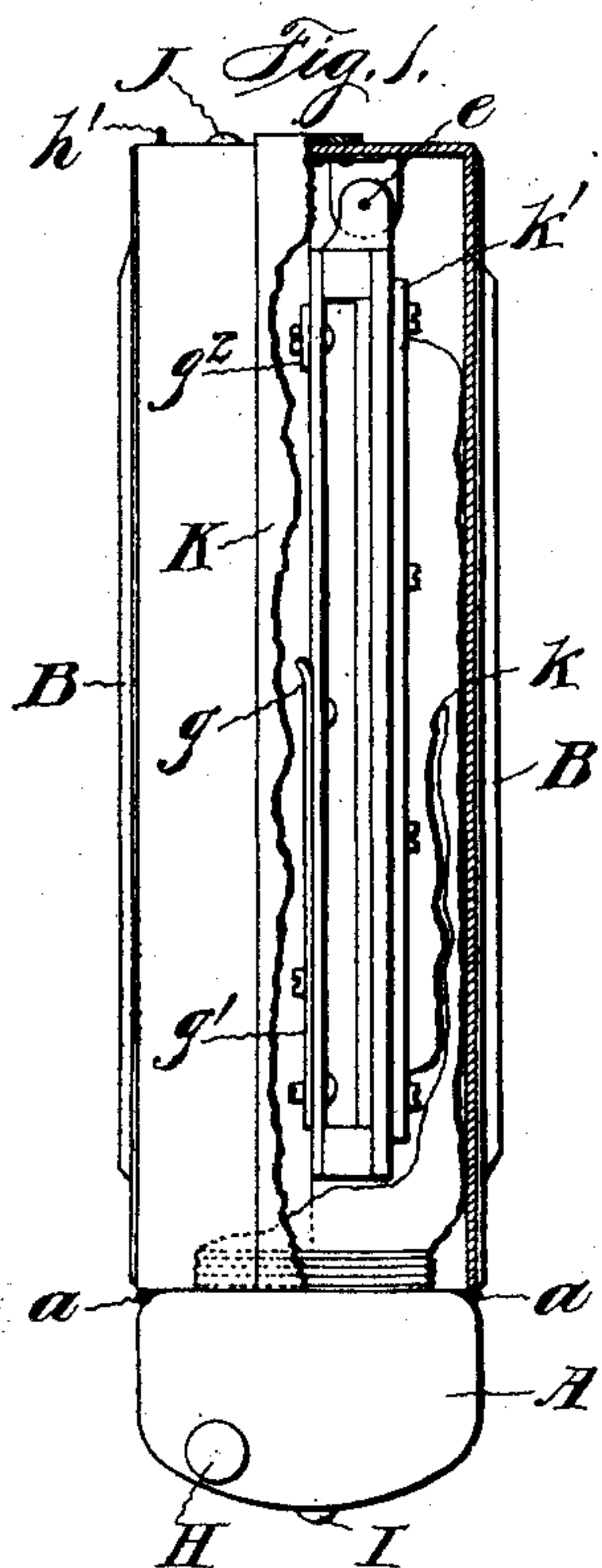
No. 621,211.

Patented Mar. 14, 1899.

G. BOURRELLY.  
FOLDING PHOTOGRAPHIC CAMERA.

(Application filed Apr. 10, 1897.)

(No Model.)



Witnesses.  
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# UNITED STATES PATENT OFFICE.

GABRIEL BOURRELLY, OF PARIS, FRANCE, ASSIGNOR OF ONE-HALF TO  
THADÉE D'OKSZA, OF SAME PLACE.

## FOLDING PHOTOGRAPHIC CAMERA.

SPECIFICATION forming part of Letters Patent No. 621,211, dated March 14, 1899.

Application filed April 10, 1897. Serial No. 631,548. (No model.)

*To all whom it may concern:*

Be it known that I, GABRIEL BOURRELLY, engineer, a citizen of the Republic of France, residing at Paris, France, have invented certain new and useful Improvements in Pocket-Cameras, (for which I have obtained Letters Patent as follows: In France, No. 255,406, dated April 8, 1896, in the joint names of Thadée d'Oksza and myself; in Belgium, No. 120,992, dated April 9, 1896, in the name of Joseph Lenger; in Luxemburg, No. 2,486, dated April 11, 1896, in the name of Joseph Lenger; in Germany, dated April 15, 1896, No. 95,419, in the joint names of Thadée d'Oksza and myself, and in Great Britain, No. 8,790, dated April 25, 1896, in the joint names of Thadée d'Oksza and myself,) of which the following is a specification.

This invention relates to folding cameras which enables the several parts of the device to be compactly folded together and is adapted to open and shut after the manner of a book, so that when shut it has the appearance of a book. All its parts are contained within the box, so that when it is unfolded it forms a complete hand-camera without having to add any extra parts and when shut all the parts are protected by the metal or other casing, which is covered with any desired material, as leather, textile, and the like.

The construction is simple, strong, durable, and easy of manipulation, requiring but a few seconds to place the parts in working position.

In the drawings, Figure 1 is a top plan view of the camera in closed position, partly broken away to show the back and bellows folded into one of the sides. Fig. 2 is a similar view, partly in section, showing the camera ready for use; and Fig. 3 is a vertical central section.

Similar symbols of reference indicate like parts in the several views.

As shown, the camera-box comprises, essentially, three parts, preferably formed of sheet metal covered with a textile or leather, the front A shaped like the back of a book, to which the two box-shaped sides B are hinged, shaped like the covers of a book and with abutting edges C. These sides when

closed form a box that neatly contains the operating parts folded therein and keeps them from injury. The sides B are hinged to the front by the hinges *a*. The spread of the sides is limited by means of stops, which are slotted plates secured to one of the edges C of the sides B, in the slots *c* of which a headed pin or screw-stop *d*, secured to the edge of the other side, operates. The front of the camera, which is also box-shaped, contains a partition or lens-plate F, which carries the lens D, frictionally or otherwise movably held within a barrel E, secured in the center of said partition or lens-plate. A suitable hole G is provided in the front of the camera directly in front of the lens.

The shutter mechanism (not shown) is carried by the partition F between it and the front wall and is to be operated by buttons H I or other suitable means.

When the camera is closed, a suitable spring-catch J on one of the sides, adapted to engage a hole *j* on the other side, locks the sides together. To open the camera, it is only necessary to press the button J sufficiently to disengage it from the hole *j*. An overlapping strip K, attached to one of the sides, covers the meeting edges.

In one of the sides there is pivotally mounted at *e* the camera-back, containing the ground glass *f* and spring-holders *g g' g''* for keeping the plate-holders in position in the back.

When the camera is opened, the back is turned outward on its pivot *e* and brought to the position shown in Fig. 2, thus forming a triangular rigid structure.

A slotted angle-piece *i* is riveted or otherwise secured in one of the sides, to which a spring-catch *h* is secured, the nose of which projects through the slot in the angle-piece and engages the edge of the camera-back. This catch is operated by a pin *h'*, attached thereto and projecting through a longitudinal slot *h''* to the outside of the box, so that when it is desired to close the camera the pin *h'* is pushed along the slot *h''*, thus withdrawing the nose of the catch into the slot in the plate *i* and from under the edge of the back, allowing the latter to fold into place.

The bellows *k* is attached to the back by



means of the metallic framing  $k'$ , screwed thereto. This bellows is preferably made of molded soft rubber in the form of a frustum of a pyramid whose larger end is connected to the back and the smaller end to a ring  $E'$ , to which the bellows is secured by means of a ligature  $E^2$  or in any other suitable manner. This ring  $E'$  passes freely over the barrel  $E$ , threaded exteriorly, and is adjusted and held in place by a locking-ring  $E^3$ . The lens is frictionally or otherwise mounted in the barrel  $E$ , so as to be focused by being slid in and out by means of a rack and pinion (not shown) or by any other suitable means.

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

1. A camera comprising a box for the operative appliances composed of a box-shaped front provided with a light-aperture, and sheet-metal box-shaped sides or covers hinged to said front to open and close like the covers of a book, and to overlap along their free meeting edges, substantially as set forth.

2. A camera comprising a lens-plate, a lens-holder intermediate of its ends, side walls hinged to opposite sides of said plate, a plate-holder frame pivoted to the rear end of one of said side walls to swing toward the inner face thereof, means for securing said frame to the opposite wall when said walls are spread apart, and a flexible bellows secured to the lens-holder and to said frame, for the purpose set forth.

3. A photographic camera comprising a lens-plate, a lens-holder intermediate of its ends, box-shaped side walls hinged to opposite sides of the lens-plate and constructed to overlap along their free meeting edges when folded together, a plate-holder pivoted to one of said walls to swing toward its inner face, means for securing the frame to the opposite wall when said walls are spread apart, and a flexible bellows secured to the lens-holder and to said frame, for the purpose set forth.

4. A photographic camera comprising a lens-plate, a lens-holder intermediate of its ends, box-shaped side walls hinged to opposite sides of the lens-plate and constructed to overlap along their free meeting edges when folded together, a plate-holder frame pivoted to one of said rigid walls to swing toward its

inner face, means for securing the frame to the opposite wall when said walls are spread apart, and a flexible bellows secured to said plate-holder frame and adjustably secured to the lens-holder, for the purpose set forth.

5. A photographic camera comprising a narrow-chambered front provided with an aperture in its outer wall intermediate of its ends, a lens-holder supported in the inner wall of said chamber in line with the aforesaid aperture, and rigid side walls hinged to opposite sides of said front; in combination with a plate-holder frame hinged to the rear end of one of said side walls to swing toward its inner face, and means for securing said frame to the opposite side wall when said side walls are spread apart, for the purpose set forth.

6. The combination with the chambered camera-front having an aperture in its front wall intermediate of its ends, a lens-barrel secured to the inner wall of the chamber in line with said aperture, a lens-holder movable longitudinally in said tube, and box-shaped side walls hinged to the said chambered front; of a plate-holder frame hinged to one of said side walls at its rear end to swing toward the inner face of said wall, means for securing said frame to the opposite wall when said walls are swung apart, and a bellows secured to the frame and adjustably connected with the lens-barrel, for the purpose set forth.

7. The combination with the chambered camera-front, the side walls hinged to opposite sides of said front, and constructed to overlap along their edges when closed, and a lens-holder supported in the inner wall of said chambered front; of a plate-holder frame hinged to one of the side walls near its rear end to swing toward the inner face of said wall, a bellows secured to said frame and the lens-holder, and a spring-controlled locking device on the rear side of one of said walls adapted to engage and lock the corresponding side of the opposite wall when said walls are folded, for the purpose set forth.

In witness whereof I have hereunto set my hand, this 19th day of March, 1897, in presence of two subscribing witnesses.

GABRIEL BOURRELLY.

Witnesses:

DOUGLAS H. BRANDON,  
EDWARD P. MACLEAN.