

No. 711,741.

Patented Oct. 21, 1902.

R. SCHÜTTAUF.
PHOTOGRAPHIC PLATE HOLDER.

(Application filed Mar. 28, 1902.)

(No Model.)

2 Sheets—Sheet 1.

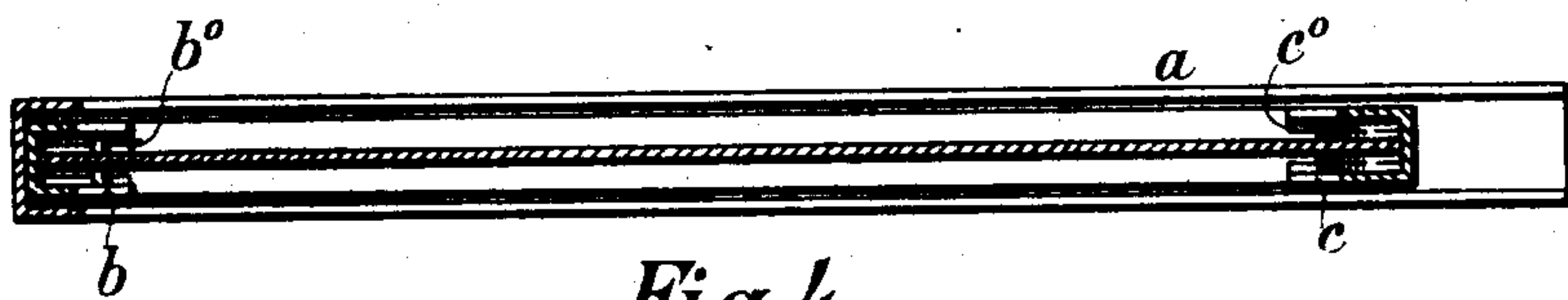


Fig. 4.

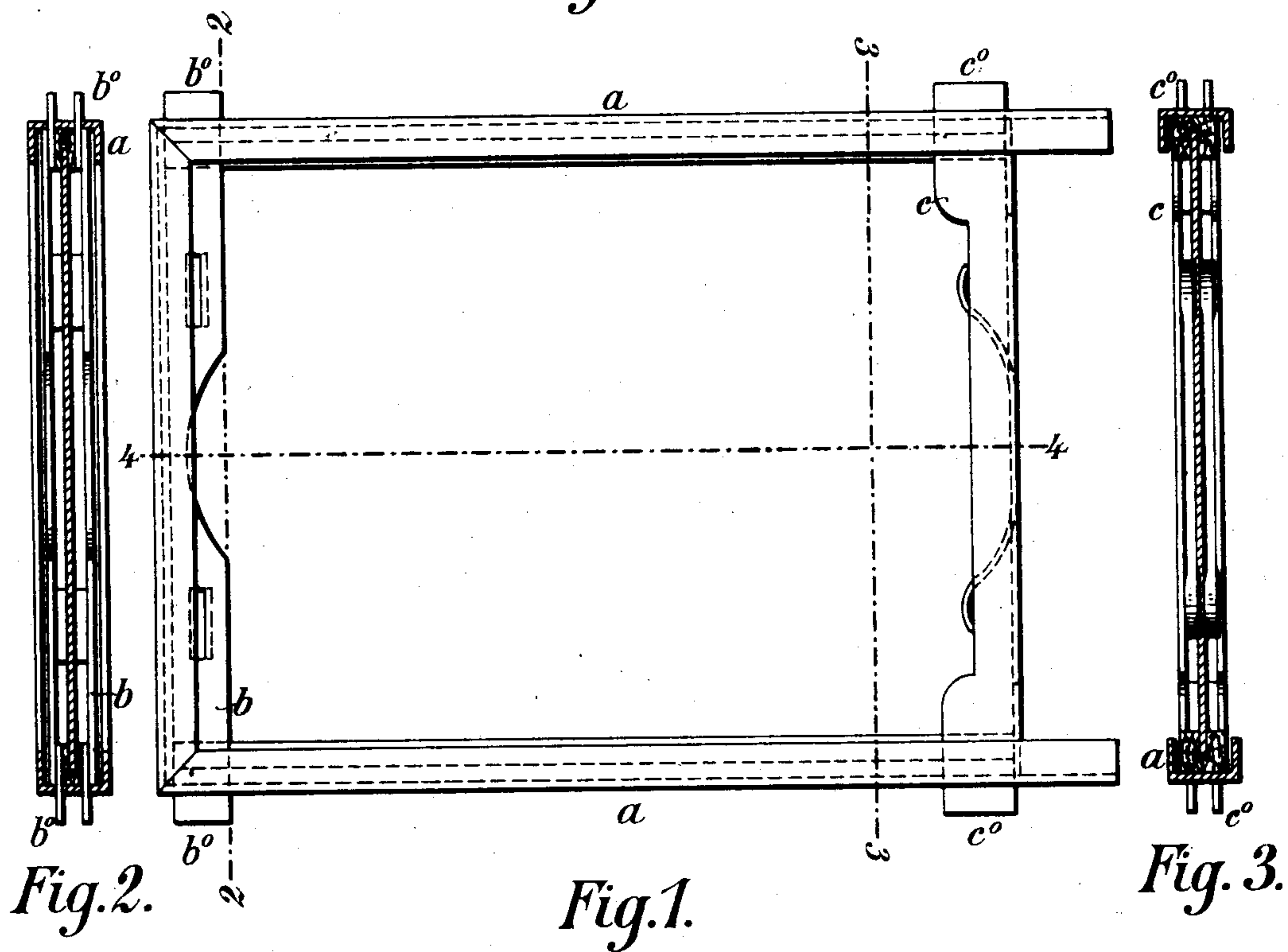


Fig. 2.

Fig. 1.

Fig. 3.

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2 Sheets—Sheet. 2.

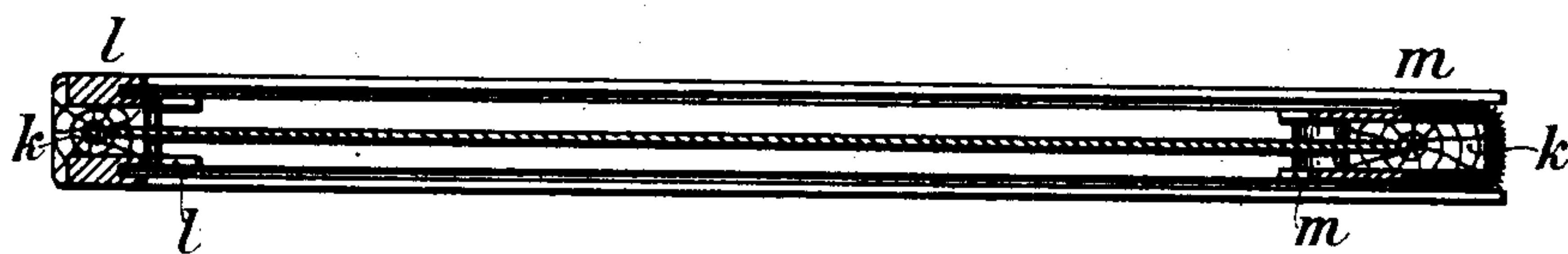


Fig. 8.

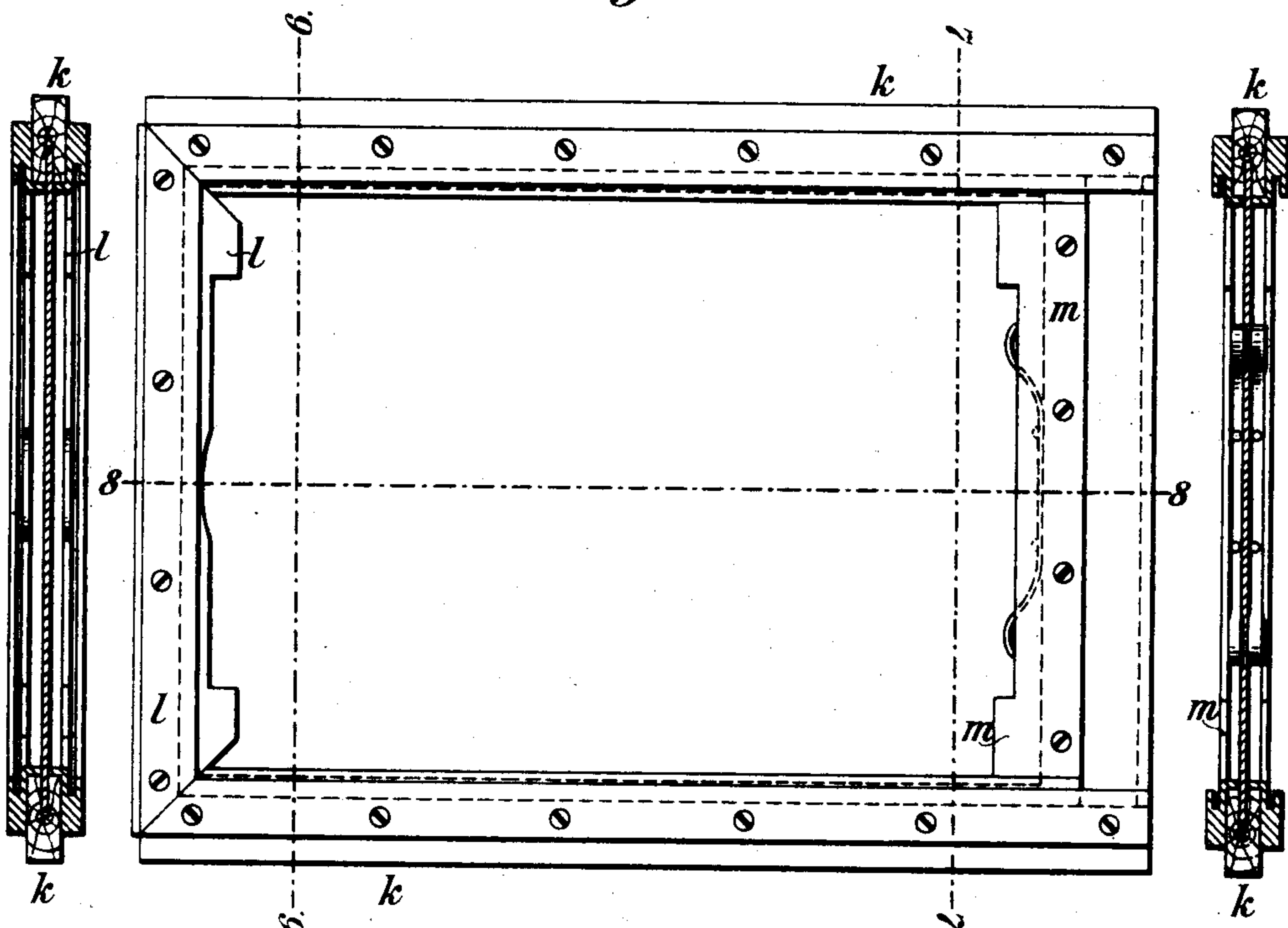


Fig. 5.

Fig. 6.

Fig. 7.

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UNITED STATES PATENT OFFICE.

RICHARD SCHÜTTAUF, OF JENA, GERMANY, ASSIGNOR TO FIRM OF CARL ZEISS, OF JENA, GERMANY.

PHOTOGRAPHIC-PLATE HOLDER.

SPECIFICATION forming part of Letters Patent No. 711,741, dated October 21, 1902.

Application filed March 28, 1902. Serial No. 100,383. (No model.)

To all whom it may concern:

Be it known that I, RICHARD SCHÜTTAUF, mathematician, a subject of the King of Prussia, German Emperor, residing at Carl Zeiss Strasse, Jena, in the Grand Duchy of Saxe-Weimar, German Empire, have invented a new and useful Photographic-Plate Holder, of which the following is a specification.

The object of the invention is to secure only by constructional means, without any particular care or precision in the manufacture, conformity of the individual photographic-plate holders of the same pattern as to the relative position of those parts which the coincidence of the sensitized surface with the focal plane of the lens depends upon.

Photographic-plate holders have in general inside their frame a set of inwardly-directed plane surfaces which are situated in a single plane and serve as an abutment for the sensitized side of the plate, and they have outside the frame, also in a single plane parallel to the first, another set of plane surfaces having a contrary (outward) direction and designed to be brought in contact with similar plane surfaces in the back frame of the camera, so as to correctly locate the plate-holder in the camera. The conformity mentioned above is attained if in all plate-holders the said two parallel planes—the plane of the inside abutment-surfaces and the plane of the outside abutment-surfaces—have the same distance from each other. The invention realizes exact coincidence of these two planes by providing the inside surfaces on one and the outside surfaces on the other of two constructional parts and uniting these parts (by means of outer extensions of the inside surfaces and inner extensions of the outside surfaces) in the plane common to both sets of surfaces.

Figure 1 is an elevation of a plate-holder frame constructed according to the invention. Fig. 2 is a section on the line 2 2 in Fig. 1. Fig. 3 is a section on the line 3 3 in Fig. 1. Fig. 4 is a section on the line 4 4 in Fig. 1. Fig. 5 is an elevation of another plate-holder frame constructed according to the invention. Fig. 6 is a section on the line 6 6 in Fig. 5. Fig. 7 is a section on the line 7 7 in Fig. 5. Fig. 8 is a section on the line 8 8 in Fig. 5.

In the double plate-holder shown in Figs. 1 to 4 the main part *a* of the frame includes two traverses *b* and *c* of U-shaped cross-section.

The opposite inward surfaces of each traverse serve as abutment-surfaces for the sensitized plates. The outside set of abutment-surfaces consists of the opposite outward surfaces of the outer parts of couples of sheets *b*⁰ and *c*⁰. These sheets project through the side bars of the main frame *a* and are soldered on the extremities of the traverses *b* and *c* by means of a very thin layer of solder, so that practically the outer extensions of the inside abutment-surfaces and the inner extensions of the outside abutment-surfaces are in contact and both sets of abutment-surfaces are situated in one single plane.

In the second example of the invention (shown in Figs. 5 to 8) a rectangular intermediate frame *k* presents in the outer parts of its opposite (front and back) surfaces the outside abutment-surfaces. The inside abutment-surfaces are presented by the inner parts of the frame-bars *l* and *m*. The intermediate frame *k* and the frame-bars *l* and *m* are screwed together in such a way that the inner extensions of the outside abutment-surfaces and the outer extensions of the inside abutment-surfaces are in direct contact. Therefore in this case the plane of the outside abutment-surfaces coincides exactly with the plane of the inside abutment-surfaces.

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

1. A photographic-plate holder having both the inside plate abutment-surfaces and the outside camera abutment-surfaces in one single plane, but on different constructional parts, which are in contact in the said single plane, essentially as described.

2. A photographic-plate holder having both the inside plate abutment-surfaces and the outside camera abutment-surfaces in one single plane, but on different constructional parts, which are in contact in the said single plane by means of inward extensions of the outside abutment-surfaces and outward extensions of the inside abutment-surfaces, essentially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

RICHARD SCHÜTTAUF.

Witnesses:

EMIL DÖNITZ,
PAUL KRÜGER.