

F. A. & W. S. HOWSON.
PHOTOGRAPHIC-PLATE HOLDER.

No. 169,702.

Patented Nov. 9, 1875.

Fig: 1.

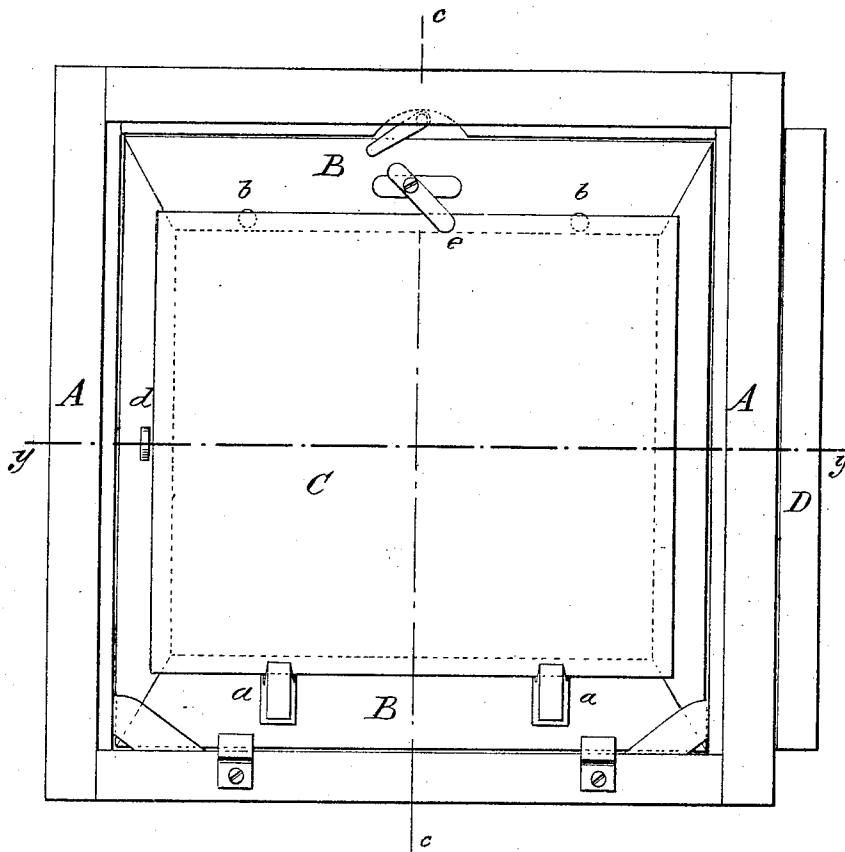


Fig: 2.

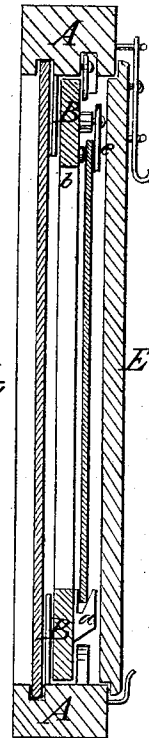


Fig: 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRANK A. HOWSON AND WILLIAM S. HOWSON, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN PHOTOGRAPHIC-PLATE HOLDERS.

Specification forming part of Letters Patent No. **169,702**, dated November 9, 1875; application filed September 25, 1875.

To all whom it may concern:

Be it known that we, FRANK A. HOWSON and WILLIAM S. HOWSON, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Combination Ground-Glass and Plate Holder, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a front elevation of our improved combination holder for ground glass and plate; Fig. 2, a vertical transverse section of the same on the line *c c*, Fig. 1; and Fig. 3 is a horizontal section of the holder on the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

Our invention has reference to an improved combination holder for the ground glass and plate for photographic cameras, by which, in every case, the exact image that was focused on the ground glass is obtained with perfect certainty on the sensitized plate, the holder setting the plate into position, whether the plate is somewhat larger or smaller, so that the ground-glass door of the camera may be dispensed with, and time, labor, and annoyance saved to operators.

The invention consists of a holder with lower grooved glass-holders, glass buttons or studs at the top, and a side support, on which the ground glass and plate are insulated, and securely fastened by a spring top plate.

In the drawing, A represents the outside holder or frame, to which the inner holder B is secured by bottom corner-pieces and top catch. The slide D and door E are arranged on the outer holder A, in the customary manner. The inner holder B is provided, for the purpose of holding in position either the ground glass or sensitized plate C, with grooved holders *a* at the lower part, knobs or buttons *b* at the top part, and a button or gage, *d*, at the side, the holders, buttons, and gage being made of glass or other insulating material.

The lower glass-holders *a* are grooved in V shape, the inner side of the groove or recess being parallel to the base of the holder, while the other side is inclined at the proper angle toward the same, for accommodating plates of varying size and thickness. This avoids the annoyance caused by the old style of plate-holders, in which it frequently happens that a plate, after being coated and sensitized, is found to be too large, and consequently useless.

The side support serves for reversing the inner holder, for upright pictures.

The focus or ground glass is used in the same holder as the sensitized plate, and secured on the insulated holders and buttons by a pivoted spring top plate, *e*. A blotting-pad at the lower part will readily absorb the surplus solution, so that no silver-bottle is required.

The glass plate is held at some distance from the holder, so that the same does not get saturated by the silver solution, and remains thereby in effective and durable state.

The advantage of the combination holder for landscape photography and for large cameras is obvious, as it admits the more convenient and economical handling of the plates.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

A combined ground-glass and plate holder, provided with grooved insulating bottom holders, top buttons, and side gage or support, and with a fastening spring top plate, for securing either the ground glass or sensitized plate in exact focused position, constructed and arranged substantially as set forth.

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Witnesses:

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