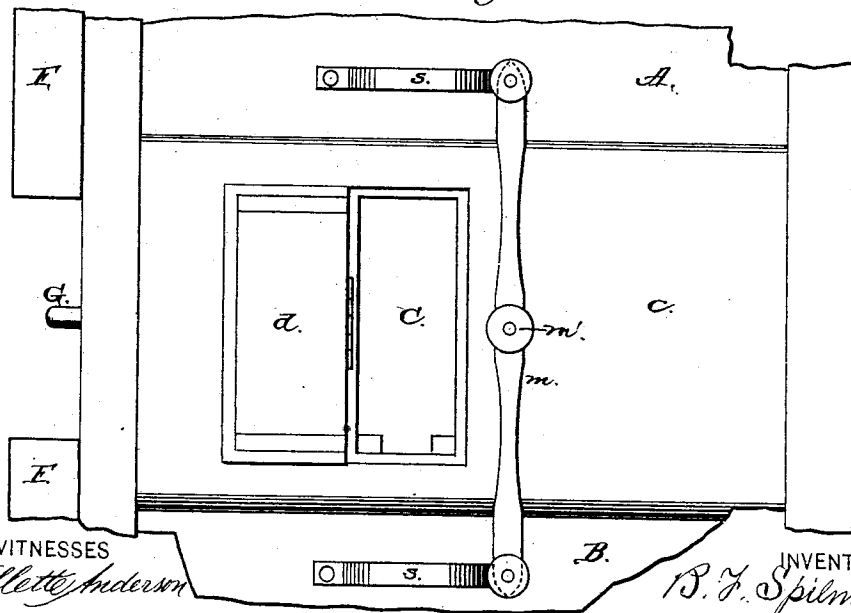
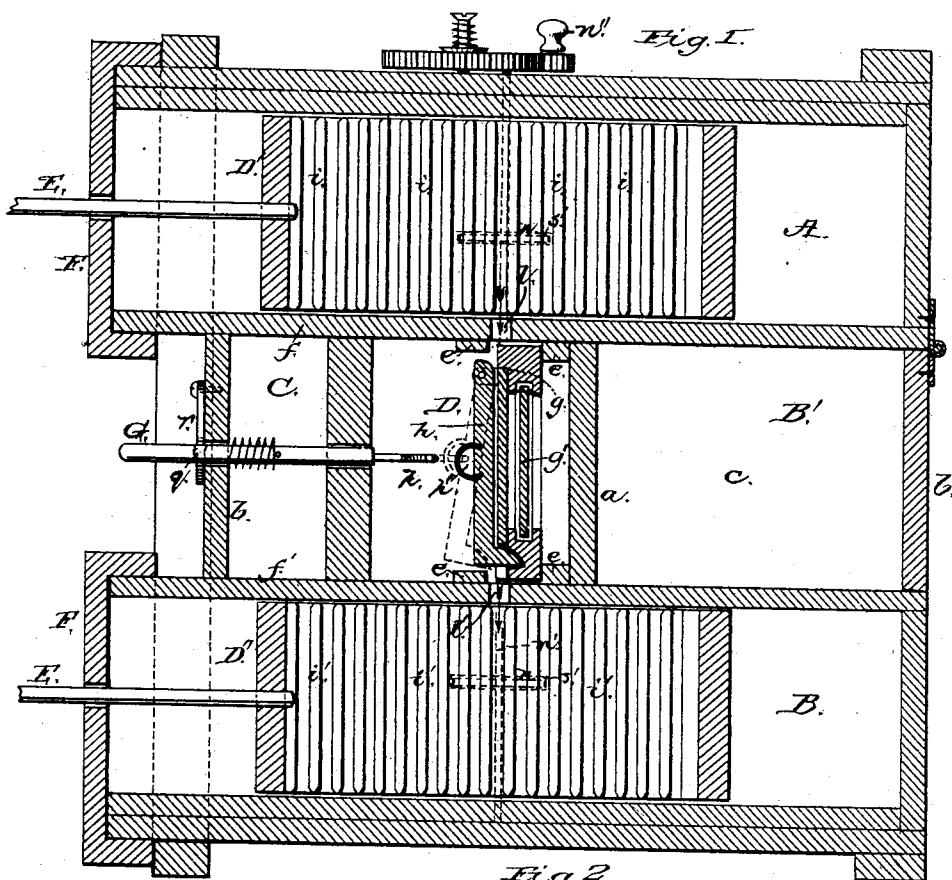


(No Model.)

2 Sheets—Sheet 1.

B. F. SPILMAN.
Photographic Dry Plate Holder.
No. 236,373. Patented Jan. 4, 1881.



WITNESSES

Villette Anderson
A. J. Chasi

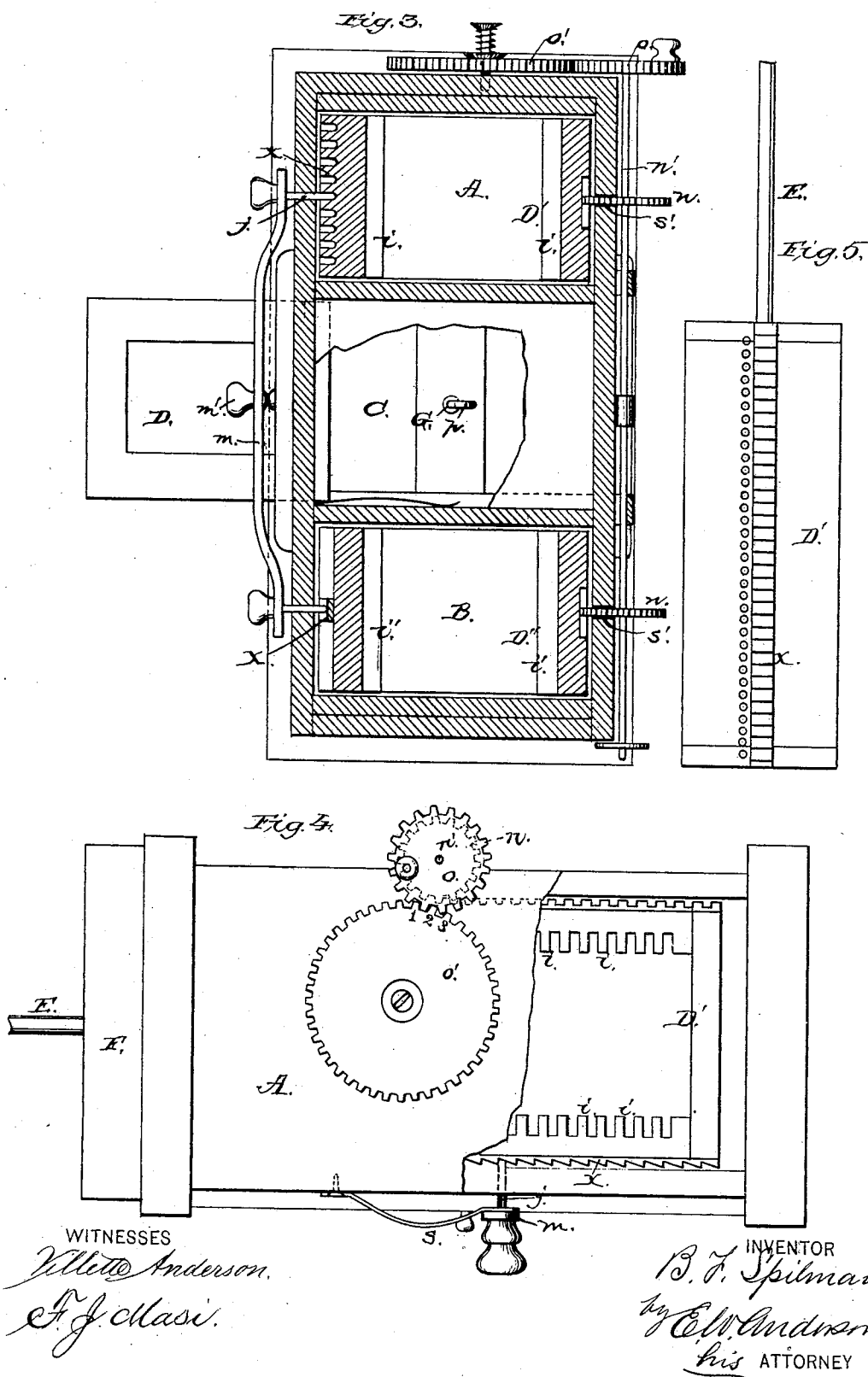
INVENTOR

B. F. Spilman
by E. W. Anderson
his ATTORNEY

(No Model.)

2 Sheets—Sheet 2.

B. F. SPILMAN.
Photographic Dry Plate Holder.
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UNITED STATES PATENT OFFICE.

BENJAMIN F. SPILMAN, OF HARRODSBURG, KENTUCKY.

PHOTOGRAPHIC DRY-PLATE HOLDER.

SPECIFICATION forming part of Letters Patent No. 236,373, dated January 4, 1881.

Application filed August 7, 1880. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. SPILMAN, of Harrodsburg, in the county of Mercer and State of Kentucky, have invented a new and valuable Improvement in Photographic Dry-Plate Holders; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical longitudinal section of my improved holder. Fig. 2 is a side elevation thereof. Fig. 3 is a vertical cross-section. Fig. 4 is a top, and Fig. 5 is a detail, view.

This invention has relation to improvements in dry-plate holders for photographic instruments.

The object of the invention is to provide a receptacle for sensitized negative-plates, whence they may be transferred to the plate-holder without exposure to light, and after receiving an impression be returned to the holder and transferred to a second receptacle, also without exposure, wherein they may be stored until the impressions can be conveniently fixed.

The nature of the invention will be fully set forth hereinafter.

In the annexed drawings, the letter A designates the receiving and B the storing chamber, both being so constructed as to be impervious to light, and arranged the one above the other. These chambers are of rectangular form, and are separated from each other by a space divided by suitable partitions, *a*, and end and side walls, *b* and *c*, into a chamber, B', for storing a supply of negatives, and a chamber, C, for the reception of the plate-holder D. This is introduced into its chamber through a hinged door, *d*, in its side, and is received between ways *e* in its top and bottom walls, *f f'*. It is provided with the usual seat *g* for the reception of the negative, and slide *g'*, which, being withdrawn after the plate-holder is inserted in the camera, admits light to the said plate. It has also a hinged side, *h*, controlled by a spring, for a purpose hereinafter explained.

l l' indicate slots of a length and width to give passage to the negative-plates, and are formed in the top and bottom walls, *f f'*, of chamber C. These slots are somewhat reduced at their ends, in order that in passing through them the sensitized surface of the plates may not be scratched and the glass laid bare.

D' indicates a plate-carrier fitting snugly in the chamber A, and provided with the ledges *i*, between which the negative-plates are successively placed, and D'' is a similar plate-carrier, having similar ledges *i'*, and arranged in chamber B. The plate-carriers D' D'' are provided upon one of their sides with a rack-bar, *x*, which is engaged by a pawl, *j*, arranged upon the end of a spring, *s*, and extending through a perforation in the wall of the said chambers. These springs *s* are secured to the chamber-walls at one end and connected together at the other end by a rod or bridge, *m*, provided with a button, *m'*. The teeth of the rack-bars allow the plate-carriers to be readily moved within their respective chambers A and B when the pawls are disengaged, but hold the plate-carriers in the positions to which they have been simultaneously moved when the pawls are let into engagement with said teeth. The plate-carriers are actuated by means of gears *n* applied upon a vertical shaft, *n'*, which is rotated by a crank-arm, *n''*, upon its upper end. These gears work through slots *s'* in the sides of the chambers, and engage racks or their equivalents on the plate-carriers, and they run the plate-carriers in or out, according as they are turned.

o indicates a gear-wheel on shaft *n'*, and meshing into a graduated disk, *o'*, upon the top of the holder, for a purpose hereinafter set forth. The plate-carriers are guided during their movements by means of a rod or rods, E, extending through packed perforations in the lids F, closing the said chambers.

G indicates a rod extending through the end wall of the plate-holder chamber, and provided on its inner end with a hook, *p*, that engages an eye or staple, *p'*, on the hinged side of the plate-holder. This rod serves to open and close the plate-holder, and is provided with a notch, *q*, which, as the said rod is drawn

out, is engaged by a spring, *r*, on the outside of the chamber, thus indicating when the plate-holder is open.

The operation is as follows: The plate-carrier *D'* is charged with sensitized plates in the dark-chamber and inserted into the receiving-chamber *A*, and the plate-holder put in position, and the dial having been adjusted to the zero-point, the holder is ready for use, and may be carried to the field without danger of the plates being affected by the light. A desired view being reached, the plate-holder is opened by drawing upon the rod *G* and a slight degree of rotation given to the shaft *n'*. This brings the first of the series of sensitized plates in line with the slot *l* in the bottom of chamber *A*, and falling through this slot it is received in the plate-holder, which, being then closed by thrusting in rod *G*, is taken out of the chamber *C* through its door *d*, placed in the camera in the usual way, and the view taken. This being accomplished, the plate-holder is replaced in an inverted position in its chamber, the door *d* closed, and the hinged side of the plate-holder again opened by drawing on the rod *G*. The negative then falls through the slot *l* in the top wall of the chamber *B*, and is received in the plate-carrier *D''* in the said chamber, when the plate-holder is again closed. The register now indicates that one of the negative-plates is used. The slots *l l'* are each provided with an automatically opening and closing valve, which opens to allow the plate to pass, and then immediately closes, thus excluding light from either of the chambers *A* and *B* when the door *d* is opened to admit the tablet to its chamber or remove it therefrom. This operation may be repeated until all of the sensitized plates are used, and they may remain in the storing-chamber *B* until it is convenient for the artist to develop them.

This holder enables the artist to do very rapid work in the studio, his plates being always ready for use, and in field work the cumbersome tent, with its stand and appliances, is effectually done away with.

I do not wish to be understood as confining myself to the special devices above described, since they may be varied in many ways, and yet not go beyond the scope of my invention.

I am aware that a camera has been used in connection with an intersecting chute and two ways, located respectively above and below the camera, and connecting with the chute extremities, and a plate-carrier which moves over the upper way and is formed without a bottom, and a plate-carrier which moves over the lower way and is formed without a top. The ways intersect the chute, and the plate-carriers are caused to maintain the same rate of speed by a connecting-belt. This construction is shown in Patent No. 230,319, and is not claimed herein.

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

1. In a photographer's dry-plate holder, the combination of the receiving-chamber *A*, storing-chamber *B*, the plate-holder chamber *C* between them and communicating therewith by means of the valved slots *l l'*, the simultaneously-moving plate-carriers *D' D''*, the removable plate-holder *D*, having the hinged side *h*, with staple or eye *p'*, and the hook-rod *G*, adapted to engage said eye, substantially as specified.

2. The combination, with the plate-holder chamber *C*, the receiving-chamber above and the storing-chamber below the same, the valved slots *l l'*, the plate-holder *D*, the plate-carriers *D' D''*, having the ledges *i i'*, and a mechanism actuating the same simultaneously, of a registering mechanism recording the transfer of a plate from the receiving-chamber to the plate-holder, substantially as specified.

3. In a photographic plate-holder, the plate-holder *D*, having a rabbet or seat, *g*, for the reception of the sensitized plate, a solid or imperforated slide, *g'*, working in ways outside of said seat, and a hinged side, *h*, in combination with the rod *G*, having hook *p* engaging the eye *p'*, the spiral retracting-spring, and the spring *r*, for engaging the notch *q*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

B. F. SPILMAN.

Witnesses:

GRANT VIVION,
JESSE F. SPENCER.