

No. 617,017.

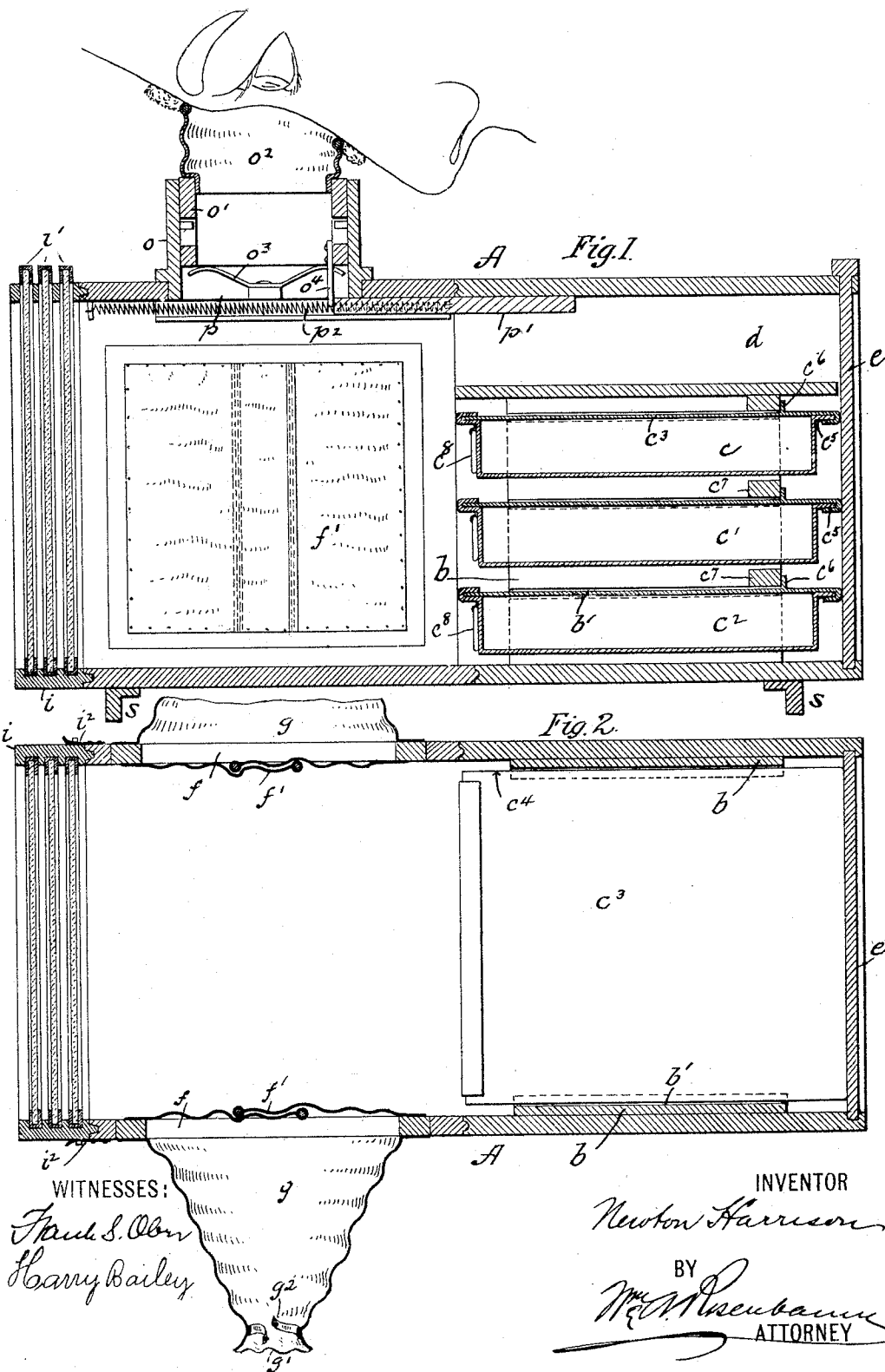
Patented Jan. 3, 1899.

N. HARRISON.
PHOTOGRAPHIC DARK ROOM.

(Application filed Dec. 1, 1897.)

(No Model.)

2 Sheets—Sheet I.



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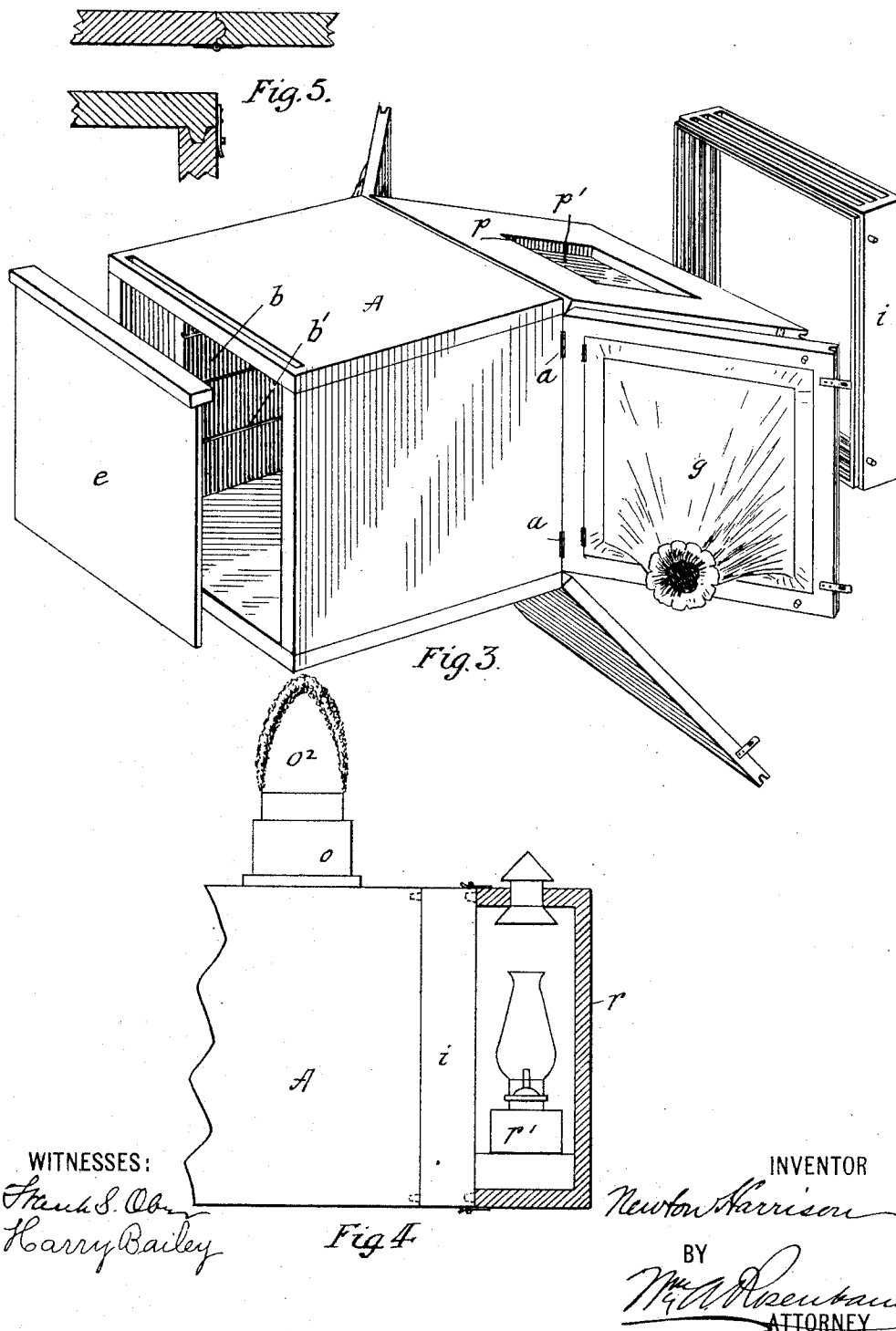
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UNITED STATES PATENT OFFICE.

NEWTON HARRISON, OF NEW YORK, N. Y.

PHOTOGRAPHIC DARK ROOM.

SPECIFICATION forming part of Letters Patent No. 617,017, dated January 3, 1899.

Application filed December 1, 1897. Serial No. 660,377. (No model.)

To all whom it may concern:

Be it known that I, NEWTON HARRISON, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Photographic Dark Rooms, of which the following is a full, clear, and exact description.

This invention is a portable photographic "dark room" fitted with appliances for developing, washing, fixing, and changing photographic plates.

The object of the invention is to provide an apparatus so compact as to be conveniently portable, while at the same time it is so arranged as to give the operator ample space within which to manipulate the plates and do perfect work.

The invention consists of the details of construction and arrangement of parts whereby the above-mentioned objects are attained, and it will be described with reference to the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of the complete apparatus. Fig. 2 is a horizontal section of the same. Fig. 3 is a perspective view of the box, showing the manner of collapsing or folding for compactness. Fig. 4 is a partial side elevation showing means for utilizing artificial light, and Fig. 5 shows details of light-excluding joints.

Referring to the drawings by letter, A is a rectangular box arranged interiorly in two compartments, one for trays, which is normally occupied thereby, and the other for the manipulation of the trays and which is normally empty. On the plane separating these two compartments the sides, top, and bottom of the box are jointed, preferably by means of hinges *a* and as illustrated in Fig. 3. That portion of the box surrounding the tray-compartment is permanent, while the portions forming the manipulating-space are adapted to collapse when the apparatus is not in use against or upon the sides, top, and bottom, respectively, of the permanent portion. The whole may then be inclosed in a suitable casing for transportation. As to this manner of collapsing the walls of the manipulating-space my invention comprehends any other plan than that of hinging and swinging the sides.

For instance, the manipulating-section might telescope over the tray-section.

In the tray-compartment the two opposite sides are fitted with uprights *b*, provided with three horizontal grooves *b'*, into which the edges of the trays or the covers thereof may slide. The trays (represented, respectively, by *c*, *c'*, and *c''*) are arranged one above the other in a tier, and above the top tray is an empty space *d* to receive the plate-holder while the plate is being treated. The rear end of the box is a vertical slide *e*, which may be lifted to remove one or more of the trays. The trays themselves are specially constructed to exclude light, so that the box may be opened without exposure of the contents of any tray. They are also constructed with a view to the easy separation of the tray from its cover while inside of the box. The cover *c''* of the tray has overturned rear and side edges of the form shown at *c''*, while the front edge remains straight. The upper, rear, and side edges of the tray have downwardly-turned flanges *c''*, adapted to enter the overturned edges of the cover. The upper forward edge of the tray has a horizontally-folded flange, into which the forward edge of the cover is adapted to pass. Thus when the cover is adjusted to the tray in the manner described light is entirely excluded therefrom. On top of the cover there is a small lug *c''*, adapted to strike against a cross-piece *c''* of the frame to prevent it from moving forward. The forward end of the tray is fitted with a handle *c''* and the rear end may have one also, if desired. The trays being arranged one above the other and constructed in the manner explained, any one of them may be drawn forward into the manipulating-space, leaving its cover in the grooves of the uprights *b*.

Two opposite sides of the manipulating-compartment are provided with openings *f*, each of which is closed by vertical overlapping curtains *f'*, whose edges are elastic. They are also surrounded on the outside by an extensible and flexible cuff *g*, having a central orifice *g'*, which may be closed around the wrist of the operator from the inside by a snap-catch *g''*. These openings are to admit the hands of the operator, which they do without admitting light at the same time. I

claim an advantage in having a plurality of covers *f* and *g* at each opening, since in removing the hands the inner cover is closed before the hands emerge from an outer one.

5 The front wall of the box is a frame *i*, having a plurality of sliding sashes containing red, orange, or other non-actinic transparent or translucent material for regulating the amount of light admitted to the box. I have
10 shown three of these sashes, which is a sufficient number for ordinary purposes, all three being used, perhaps, when operating in strong sunlight, while two might be more satisfactory when operating on a cloudy or hazy day,
15 and only one when operating by artificial light. The sashes may be removed and replaced by sliding them through the top of the frame. The frame is secured to the forward end of the box by spring-clips *r*², and this
20 same fastening device is provided at all of the joints which are formed by the joinder of the folding parts of the box, the abutting edges in all cases being tongued and grooved to exclude light.

25 To enable the operator to observe his work inside of the box, I provide an opening *p* in the top above the manipulating-space. This opening is covered by a slide *p'* on the inside, which is adapted to be moved to the rear in
30 suitable guides against the pull of a spring *p*² and is held in this open position by a projection from the eyepiece, as hereinafter described. The eyepiece consists of two telescoping parts *o* and *o'*, one part fitting into
35 the opening and the other carrying a hood or cover *o*² for the eyes. The part *o'* is held upward by a spring *o*³, and it carries a projection *o*⁴, which when the part *o'* is elevated is out of the path of movement of the slide; but
40 when the part *o'* is depressed the projection extends across the path of movement of the slide and retains it in its open position. The operator while at work presses his forehead against the eyepiece, and thus holds the slide
45 *p'* open. Should he be startled or for any other reason lift his head, the eyepiece automatically rises under the action of spring *o*³, removes the projection *o*⁴, and slide *p'* automatically closes. This automatic eyepiece
50 is detachable, as shown, but may be permanent.

To develop a plate, the operator first regulates the light by the slides *i'*. He then passes the plate-holder containing the plate through
55 one of the side openings of the box. He then opens the slide *p'* and locks it by pressure of the forehead against the eyepiece. He then

removes the plate from the holder and deposits the empty holder in the space *d*. He then successively removes the trays and treats
60 the plate in the bath contained in each, the last tray containing the fixing fluid, after which the plate may be removed from the box.

The operation of changing plates may be of course accomplished in the space forward of
65 the trays at any time.

For working at night and when the artificial lights of a room are not conveniently placed I provide a lamp-box *r*, containing
70 a lamp *r'*, which may be hung upon the front of the main box, so that its rays will pass through the ruby windows, the box being held in front by spring-clips, as shown in Fig. 4.

I may attach to the bottom of the box or the outside a pair of rockers *s s*, by means of
75 which a uniform swing may be imparted to the whole apparatus while a plate is immersed in the liquid of a tray to thus evenly wash the surface of the plate.

Having thus described my invention, I
80 claim—

1. A photographer's dark room, consisting of a box provided with a plurality of trays arranged one above the other with a space in
85 front of the trays for manipulation, substantially as described.

2. In a photographer's dark room, a box provided with a plurality of trays, each tray having its individual cover, an open space
90 being provided in the box for manipulation and means whereby the trays may be moved from their normal position into said open space without moving the cover, substantially as described.

3. In a photographer's dark room, a series
95 of trays each having its individual cover, a rack or frame for supporting said trays and means whereby the tray may be removed from the rack without removing the cover, as set forth.

4. A photographer's dark room, consisting of a box provided, in one end, with a series
100 of trays arranged in a vertical tier, a space being provided above the trays for a plate or film holder and a manipulating-chamber also
105 being provided into which the trays may be drawn, substantially as described.

In testimony whereof I subscribe my signature in presence of two witnesses.

NEWTON HARRISON.

Witnesses:

FRANK S. OBER,
HARRY BAILEY.