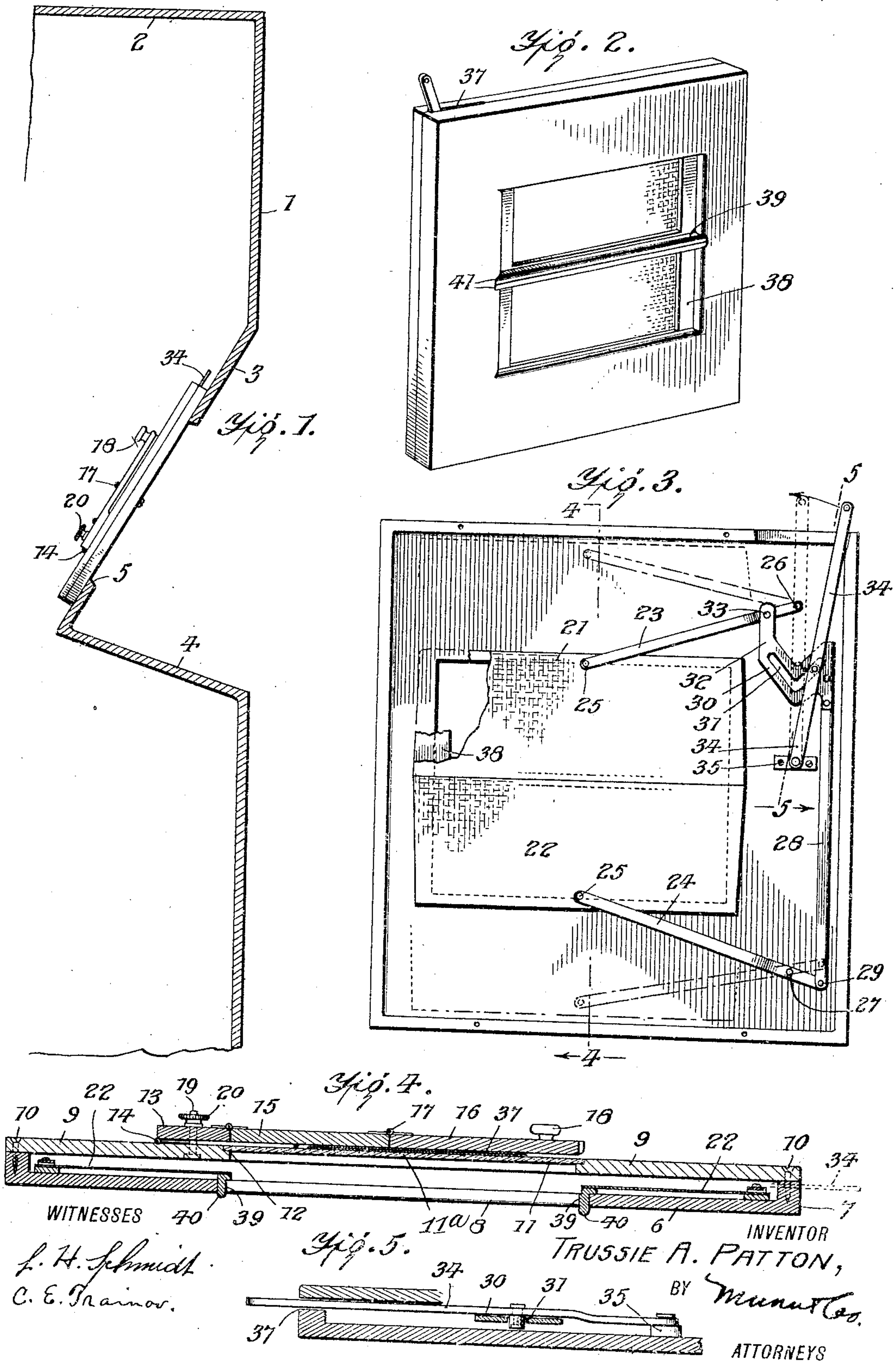


T. A. PATTON.
 PHOTOGRAPHIC PRINTING DEVICE.
 APPLICATION FILED MAR. 23, 1909.

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UNITED STATES PATENT OFFICE.

TRUSSIE ALEXANDER PATTON, OF CABOOL, MISSOURI.

PHOTOGRAPHIC-PRINTING DEVICE.

960,192.

Specification of Letters Patent.

Patented May 31, 1910.

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To all whom it may concern:

Be it known that I, TRUSSIE ALEXANDER PATTON, a citizen of the United States, residing at Cabool, in the county of Texas and State of Missouri, have invented a new and useful Improvement in Photographic-Printing Devices, of which the following is a specification.

My invention is an improvement in photographic printing devices, and consists in certain novel constructions and combinations of parts hereinafter described and claimed.

The object of the invention is to produce a device, adapted to be arranged in an opening through the wall of a dark room as for instance in a window, and arranged to exclude the actinic rays, the device being provided with a shutter transmitting only yellow or non-actinic rays, to permit the adjustment of the sensitized paper on the negative, the shutters being arranged to be opened when the paper is in place.

Referring to the drawings forming a part hereof, Figure 1 is a vertical section of the improvement. Fig. 2 is a perspective view of the shutter support. Fig. 3 is a rear enlarged view of the same. Fig. 4 is a section on the line 4—4 of Fig. 3, and Fig. 5 is a section on the line 5—5 of the same figure.

The present embodiment of the invention consists of a shield or hood composed of a front 1, and having side and end walls 2, only one of which is shown, and adapted to fit within an opening in the wall of a dark room.

The front is provided at approximately its vertical center with a recess having an upper wall 3 inclined inwardly and downwardly with respect to the dark room wall, and a lower wall 4, inclining inwardly and somewhat upwardly, and integral with the upper wall.

The upper wall 3 is provided with a transverse substantially rectangular opening 5, over which is placed the shutter supporting means to be now described in detail, it being understood that the said means is connected with the edges of the opening in any suitable manner. The said means consists of a substantially square plate 6, having a marginal lateral flange 7, and a central substantially rectangular opening 8, and to the marginal flange is secured a second plate 9 by screws 10, the edges of the second plate being flush with the outer face of the flange as shown.

The plate 9 is provided with a central sub-

stantially rectangular opening 11, registering with the opening 8 of the plate 6, and a sheet of transparent material 11^a, glass in the present instance, covers the opening 11, the edges of the opening being rabbeted as at 12 to receive the edge of the sheet.

A strip 13 is hinged by one side edge to the outer face of the plate 9, as at 14, and a side edge of one section 15 of a folding door is hinged to the strip, the other section 16 of the door being hinged by one side edge as at 17 to the other side edge of the first section. A button 18 is connected with the section 16 near its free edge, and a threaded stem 19, connected with the plate 9, extends through the strip 13, and is engaged by thumb nut 20, on the outer side of the strip.

A shutter consisting of sections 21 and 22 is provided for closing the opening 8 in the plate 6, and the shutters are mounted for sliding movement toward and from each other on the inner wall of the plate 6.

A link 23, 24 is pivoted by one end to the outer side edge of each shutter and at approximately the center thereof as at 25, and the other end of the link 23 for the shutter 21 is pivoted to the plate as at 26, while the link 24 for the shutter 22 is pivoted to the plate as at 27, the point of connection being somewhat removed from the end of the link.

A bar 28 is pivoted by one end to the other end of the link 24, as at 29, and the other end of the bar has secured thereto a plate 30, which is provided with an angular slot 31 forming a cam for a purpose to be presently described.

A lug 32 extends from the end of the plate parallel with the bar 28, and is pivoted to the link 23 at 33. A lever 34 is pivoted to a bracket 35 secured to the plate 6, and the lever is provided with a pin 36 which engages the cam slot 31, the free end of the lever extending through a slot 37 between the plates, and in position to be grasped by the operator.

It will be evident from the description, that when the lever 34 is swung on the bracket 35, the engagement of the pin with the cam slot will swing the links 23 and 24 to move the shutters toward and from each other in unison.

In operation the shield or hood being arranged as described, and the shutters closed, the folding door is opened, the negative is placed on the sheet 11^a, which is provided with gage stops 36 to properly position the

negative, and the sheet of sensitized paper 37 is placed thereover, and the door closed.

The lever 34 is then moved to its central position, shown in dotted lines in Fig. 3, which opens the shutters and exposes the print. After it has been exposed a proper length of time, the lever is swung in the reverse direction which closes the shutters. The folding door is then opened, the print removed, and the process repeated.

By manipulating the thumb nut 20, the space between strip 13, and the frame 9 may be regulated. By increasing the space, a greater thickness of paper may be inserted between the door and the negative, while by decreasing the space the door may be brought closer to the negative, to firmly retain a thinner sheet of paper in contact with the negative throughout the entire extent of the paper.

The engagement of the pin on the lever 34 with the slot 31 causes the bar 28 to be moved up or down and the link being connected with the levers 23 and 24 at each end, the said levers are swung by the reciprocation of the link. It will be observed that the two arms of the slot are of substantially equal length, and make substantially the same angle with a perpendicular line through the apex, so that when the lever 24 is moved to the position shown in dotted lines in Fig. 3, the shutters are opened, and they may be closed by continuing said movement to the left, or by returning the lever to the position shown in full lines. In other words when the lever is moved to its full extent in either direction, the shutters are first opened and then closed.

Each of the shutters 21 and 22 consists of a substantially rectangular frame 38 in which is supported a sheet of translucent material impervious to the actinic rays, and the adjacent edges of the frames are provided with a marginal flange 39 which is of greater width than the thickness of the plate 6, and extends beyond the opening 8 as at 40, and the strips are longer than the opening, and are undercut to form lugs 41, which engage the outer faces of the edges of the opening to guide the shutters in their movement and prevent them becoming displaced. It will be understood that the frame 38 is of greater area than the opening so that the edges thereof rest on the opening.

I claim—

1. A device of the class described, comprising a shield provided with a recess having an inclined upper wall, and a substantially horizontal lower wall, said upper wall meeting the lower wall and having a substantially rectangular opening, a frame covering the opening, said frame comprising parallel plates secured together in spaced relation and each provided with a central opening registering with the opening of the

other plate, a transparent sheet covering the opening of one plate, a folding door hinged to the plate and covering said opening when closed, means for limiting the movement of the door from the plate, a shutter having sections arranged between the plates and movable toward and from each other for closing the opening in the other plate, and means for simultaneously moving said shutters in opposite directions.

2. In a device of the class described, a frame, said frame comprising parallel plates secured together in spaced relation and each provided with a central opening registering with the opening of the other plate, a transparent sheet covering the opening of one plate, a folding door hinged to the plate and covering said opening when closed, means for adjusting the door to and from the plate, a shutter having sections arranged between the plates and movable toward and from each other for closing the opening in the other plate, and means for simultaneously moving said shutters in opposite directions.

3. In a device of the class described, a frame comprising plates superimposed and secured together in spaced relation, and provided each with a central opening, the opening of one plate registering with the opening of the other, means for supporting a negative and a sensitized sheet at one of the openings, a shutter consisting of sections movable toward and from each other between the plates for closing the other opening, and means for simultaneously moving the shutters in opposite directions.

4. In a device of the class described, a frame comprising spaced parallel plates, provided with registering substantially rectangular openings, means for supporting a negative and a sensitized sheet at one of the openings, a pair of shutters movable toward and from each other between the plates for closing the other opening, and means for simultaneously moving the shutters.

5. In a device of the class described, a main frame provided with an opening, a sectional shutter for closing the opening, each of the sections comprising a frame resting against the edge of the opening, a sheet of material translucent and impervious to the actinic light rays supported in the shutter frame, means for moving the sections simultaneously in opposite directions, a strip secured to the inner edge of each shutter and extending through the opening, the ends of said strips being undercut to form lugs for engaging the opposite face of the plate for the purpose set forth.

6. In a device of the class described, a main frame provided with an opening, a sectional shutter for closing the opening, each of the sections comprising a frame resting against the edge of the opening, means for

moving the sections simultaneously in opposite directions, a strip secured to the inner edge of each shutter and extending through the opening, the ends of said strip being undercut to form lugs for engaging the opposite face of the plate for the purpose set forth.

7. In a device of the class described, a plate provided with an opening having parallel side walls, a sectional shutter, whose sections are of greater length than the distance between the side walls and rest against one side of the plate, means for moving the shutter sections simultaneously and in opposite directions, and a strip secured to the inner edge of each section and extending through the opening, the ends of the strip being undercut to receive the edges of the side walls.

8. In a device of the class described, a plate provided with an opening having parallel side walls, a sectional shutter, whose sections are of greater length than the distance between the side walls and rest against one side of the plate, means for moving the

shutter sections simultaneously and in opposite directions, means on the sections and extending through the opening and engaging the opposite side of the plate for the purpose set forth.

9. In a device of the class described, a frame having an opening, a shutter for the opening consisting of sections movable toward and from each other, guides for the sections, and means for simultaneously moving the sections in opposite directions, said means comprising a bar, a link fulcrumed on the frame and having one end pivoted to a shutter section and the other to said bar, a plate secured to the other end of the bar and provided with a cam slot, a link pivoted by one end to the other shutter and by the other end to the casing, a lug on the plate upon which the link is fulcrumed a swinging lever pivoted at one end of the frame and having a pin for engaging the cam slot.

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Witnesses:

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