A. H. WALLACE.

PHOTOGRAPHIC PRINTING DEVICE.

APPLICATION FILED DEC. 13, 1912.

1,103,331.

Patented July 14, 1914.

2 SHEETS—SHEET 1.

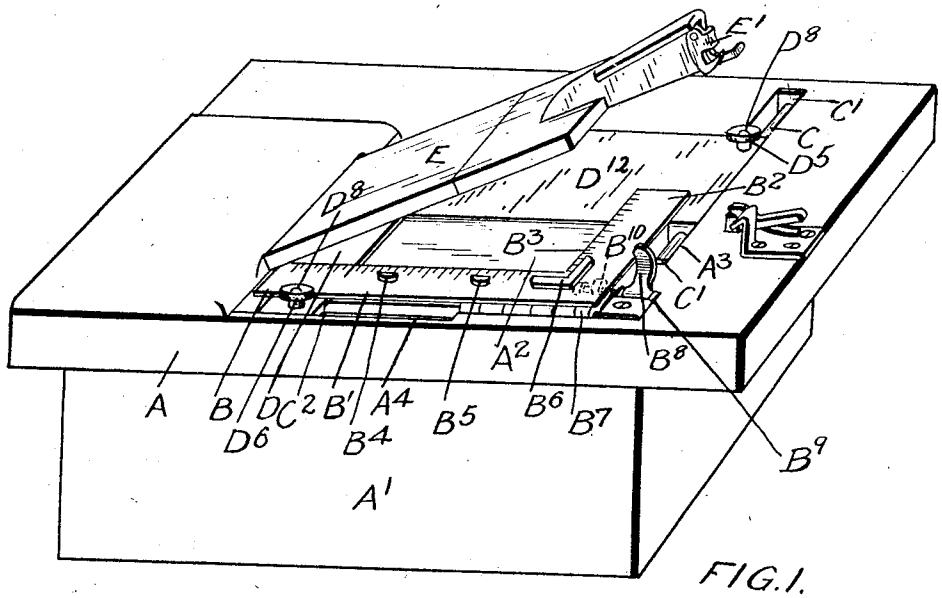

FIG. 1.

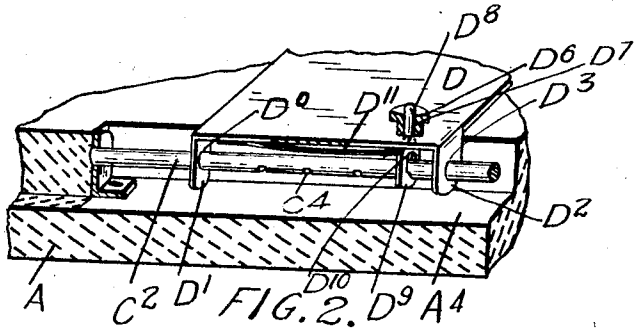

FIG. 2.

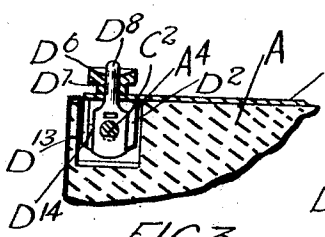

FIG. 3.

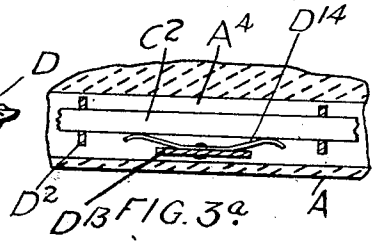

FIG. 3a.

WITNESSES

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2 SHEETS—SHEET 2.

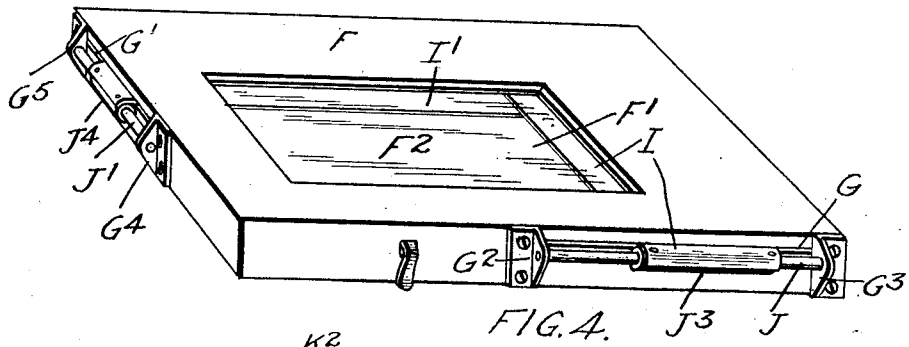

FIG. 4.

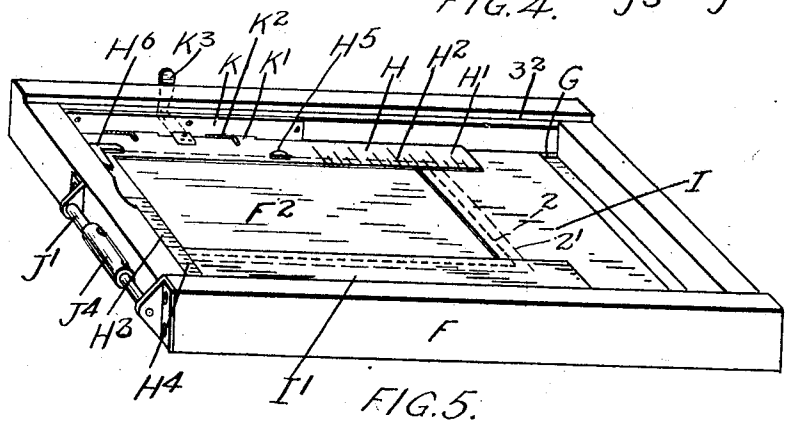

FIG. 5.

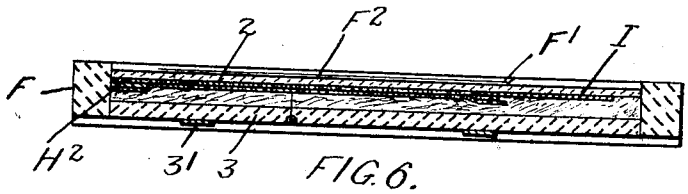

FIG. 6.

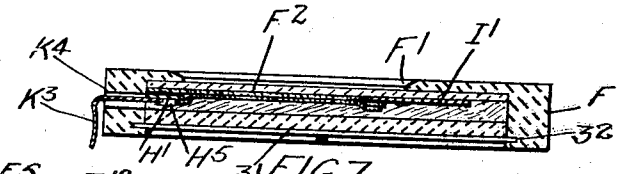

FIG. 7.

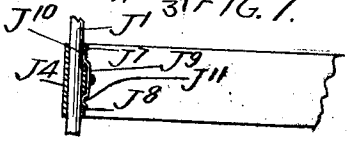

FIG. 8.

WITNESSES.

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UNITED STATES PATENT OFFICE.

ANDREW HARMON WALLACE, OF ST. CATHARINES, ONTARIO, CANADA.

PHOTOGRAPHIC-PRINTING DEVICE.

1,103,331. Specification of Letters Patent. **Patented July 14, 1914.**

Application filed December 13, 1912. Serial No. 736,512.

To all whom it may concern:

Be it known that I, ANDREW HARMON WALLACE, of the city of St. Catharines, in the county of Lincoln, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Photographic-Printing Devices, of which the following is the specification.

My invention relates to improvements in photographic printing devices described in co-pending applications filed in the United States under No. 708,286 on the 8th. of July 1912, and in the Dominion of Canada under No. 171,904 on the 8th. July 1912, and the object of the present invention is to provide a simple means for adjusting movable shutters forming the adjustable side of the frame and for holding such members in the position to which they are adjusted and it consists essentially of a main frame having a window opening and window therein, a right angular suitably graduated frame member hinged at one side of the window and extending along two sides thereof, guide rods secured to the frame and extending parallel with the corresponding sides of the window, shutter members slidably supported on the rods and extending parallel with remaining sides of the window, and means for firmly holding the movable shutter members in place on the guide rods in the position to which they are adjusted as hereinafter more particularly explained by the following specification.

Figure 1, is a general perspective view of my device. Fig. 2, is an enlarged perspective detail of the means for holding the adjustable members in place on the guide rods. Fig. 3, is a cross section through Fig. 2. Fig. 3ª is a plan section of Fig. 3. Fig. 4, is a perspective detail showing my improved construction applied to an ordinary printing frame. Fig. 5, is a perspective view of the printing frame shown in Fig. 4 in the reverse position. Fig. 6, is a longitudinal section through Fig. 4. Fig. 7, is a cross section through Fig. 4. Fig. 8, is a sectional detail showing the means for adjustably holding the shutter shown in Fig. 4 in place on the guide-rods.

In the drawings like letters of reference indicate corresponding parts in each figure.

I will first refer to the construction shown in Figs. 1, 2 and 3.

A is a table or flat top supported on a suitable casing A′ containing the printing lights as described in my co-pending applications above referred to.

A^2 is a window formed in the table A.

A^3 is a groove formed in the table A parallel with one side of the window and A^4 is a similar groove formed in the table A at right angles to the groove A^3 and parallel with the corresponding side of the window A^2.

B is a right angular frame member comprising the arm B′ extending parallel with the groove A^4 and the arm B^2 extending parallel with the groove A^3. The arms B′ and B^2 of the frame are provided with suitable graduations B^3, the arm B′ having side stops B^4 and B^5; the frame being provided with a right angle corner stop B^6, for a purpose later set forth.

C is a rod secured in brackets C′ located in the groove A^3. C^2 is a similar rod supported in similar brackets located in the groove A^4.

D is a movable shutter member provided with down-turned lugs D′ and D^2 having orifices D° and D^3 through which the rod C^2 extends to slidably support the shutter D. The shutter D extends parallel with that side of the window opposite to the frame member B^2. D^{12} is a similar shutter member to the shutter member D provided with corresponding lugs through which the rod C extends to slidably support the same. The shutter member D^{12} extends parallel with the side of the window opposite the member B′.

C^4 are notches formed in the lower side of each of the rods C and C^2.

D^5 and D^6 are knobs secured respectively to the shutter members D and D^{12}. The knobs D^5 and D^6 are provided with central orifices D^7 (see Fig. 2) extending through the knobs and through the corresponding shutter members.

D^8 are stems slidably held in the orifices D^7.

D^9 are flat enlargements to the stems D^8 provided with a vertical slot D^{10}.

D^{11} is a spring secured at one end to the shutter member D or D^{12} and at the opposite end to the enlargement D^9. The spring D^{11} normally holds the same in its upper position as shown in the drawings.

B^7 is a hinged connection between the right angular frame member B and the table top A.

B^8 is a lever pivoted in brackets B^9 secured to the top A and B^{10} is an eccentric member secured to the lever B^8 and extending beneath the frame member B. By turning the lever B^8 upwardly the major radius of the eccentric portion serves to lift the frame B upwardly on its hinge B^7. The film is then inserted in the usual manner beneath the frame B, such frame member is spring-held being then relieved by turning the eccentric downwardly so as to grip the edge of the film.

D^{14} is a leaf spring bearing on the rod C^2 or C and supported by the depending leg D^{13}. The spring D^{14} serves to hold the shutter member D or D^{12} in a rigid position on a line with the edge of the window. The movable shutter members D and D^{12} are then adjusted to the required position by pressing upon the upper end of the stem D^8 and the top of the knob D^6. The stem D^8 is depressed against the spring D^{11} moving the vertical slot D^{10} thereof out of engagement with the notch C^4. The shutter member may then be moved by the finger pressing upon the top of the knob D^6 to the required position preferably opposite one of the notches C^4 which are located to correspond with the standard sizes of prints. The paper is then laid on top of the film against the side stops B^4 and B^5 and the corner stop B^6. The position to which the movable shutters D and D^{12} are adjusted is of course indicated by the graduated scales formed on the inner edge of the frame member B. These scales indicate the size of the picture required to be printed. E is the ordinary shutter which is then drawn down upon the top of the paper and secured by the catch E′ in the ordinary manner described in my previous application.

I will now describe my device as shown in Figs. 4, 5, 6, 7, and 8.

F is a printing frame provided with window orifices F′ and a window glass F^2 secured within the orifices.

G and G′ are slots formed in the side of the frame and extending through such side on a level with the under side of the glass F^2.

H is a right angular frame member comprising the arm H′ having a graduated scale H^2 and the arm H^3 having a graduated scale H^4. The arm H′ is provided with a side stop H^5 and a corner stop H^6.

I and I′ are movable shutter members extending through the slots G and G′.

G^2 and G^3 are brackets secured to the side of the frame F at each end of the slot G. G^4 and G^5 are similar brackets secured to the side of the frame F at right angles to the aforesaid side and at each end of the slot G′.

J and J′ are rods. The rod J extends between the brackets G^2 and G^3 and is secured therein at its ends. The rod J′ extends between the brackets G^4 and G^5 and is secured therein at its ends.

J^3 is a sleeve mounted on the rod J and to which the shutter member I is secured.

J^4 is a sleeve slidably mounted on the rod J′ and to which the shutter member I′ is secured. The sleeves J^3 and J^4 are provided with orifices J^7 and J^8 (see Fig. 8).

J^9 is a spring having inturned ends J^{10} and J^{11} extending through the orifices J^7 and J^8 and bearing upon the rod J or rod J′. The spring member J^9 is secured to its corresponding sleeve between the orifices J^7 and J^8.

K is a plate secured to the inside of the frame F.

K′ is a hinge connection between the plate K and the frame member H.

K^2 are springs normally holding the frame member D against the glass F^2.

K^3 is a lever secured to the frame member H and extending through the orifice K^4 in the side of the frame.

2 represents the film.

2′ is the paper.

3 is the ordinary closing shutter or frame member provided with the usual spring clamps 3′ extending at each end in to the groove 3^2 formed to each side of the frame.

When it is desired to print pictures the shutters I and I′ are slid to the required position indicated by the graduated scales H^2 and H^4, such shutters being held in position by the springs J^9. The lever K^3 is then depressed and the film inserted beneath the frame member H′. The paper is then placed in position over the frame member against the stops H^5 and H^6. The closing shutter 3 is then placed in position and secured by spring closures 3′.

It will be seen from this description that I have devised a very simple means for operating the adjustable shutter members and holding them in a position to print a white border around any size photographic print.

What I claim as my invention is.

1. The combination with the frame having a window opening therein and window, of a right angular frame member extending along two sides of the window, and adjustable members extending along the two remaining sides of the window, and a slidable connection between the adjustable members and the frame extending parallel with the sides of the window, as and for the purpose specified.

2. In a photographic printing device, the combination with the frame having a window opening and window, of a right

angular frame member extending parallel to the sides of the window, guides secured to the frame and extending parallel with the corresponding sides of the window, and frame members slidably connected thereto and extending parallel with the opposite sides of the window, and a covering shutter extending over the window, as and for the purpose specified.

3. In a photographic printing device, the combination with the main frame having a window opening and window, of a right angular frame member extending parallel with two sides of the window, adjustable frame members extending parallel with the opposite side of the window, and means for securing the adjustable members in the position to which they are adjusted, as and for the purpose specified.

4. In a photographic printing device, the combination with the frame having a window opening and window, of a right angular frame member extending parallel with two sides of the window, and rod members supported by the window frame and extending parallel with the sides of the right angular frame, and an adjustable spring member secured to each of the shutter members and designed to engage with the rods to hold the shutter members in the position to which they are adjusted, as and for the purpose specified.

5. In a photographic printing device, the combination with the frame having a window opening and window, of a right angular frame member extending parallel with two sides of the window, rod members extending parallel with the corresponding sides of the window and supported by the frame, movable frame members slidably held upon the rods, knobs secured by the movable members having vertical orifices extending therethrough, stems extending through the orifices and spring connecting means carried by the stems designed to grip the rods to hold the adjustable members in the position to which they are adjusted, as and for the purpose specified.

6. In a photographic printing device, the combination with the frame having a window opening and window, of a right angular frame member extending parallel with two sides of the window, rods extending parallel with the corresponding sides having notches in the lower face thereof, latching members secured to the frame members and designed to engage with the notches in the rods, as and for the purpose specified.

7. In a photographic printing device, the combination with the frame having a window opening and window, of a right angular frame member extending parallel with two sides of the window and having graduated scales formed thereon, of movable frame members, and means for slidably connecting the members to the frame extending parallel with the sides of the right angular frame member, as and for the purpose specified.

8. In a photographic printing device, the combination with the frame having a window opening and window, of a right angular frame member extending parallel with two sides of the window, projections extending upwardly from the upper sides of the right angular member and against which the edge of the printing paper is designed to rest, and a slidable frame member extending parallel with the opposite side of the window, and slidable connecting means extending parallel with the sides of the right angular frame member, as and for the purpose specified.

ANDREW HARMON WALLACE.

Witnesses:
B. Boyd,
W. A. Bond.