

1,040,710.

Fig. 1.

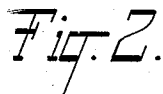
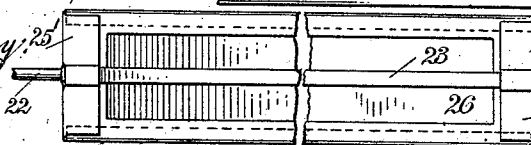


Fig. 4.

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MAX FREEDOM LONG, OF EVANSTON, WYOMING..

PHOTOGRAPHIC-PRINTING DEVICE.

1,040,710.

Specification of Letters Patent.

Patented Oct. 8, 1912.

Application filed July 11, 1911. Serial No. 637,906.

To all whom it may concern:

Be it known that I, MAX F. LONG, a citizen of the United States, and a resident of Evanston, in the county of Uinta and State of Wyoming, have invented a new and Improved Photographic-Printing Device, of which the following is a full, clear, and exact description.

My invention is a photographic printing device so made as to be portable and readily packed for shipment.

It also comprises features of construction whereby light entering the same will not be transmitted directly to the negative from which the photographic print is to be made, but will first fall upon a mirror carried on the interior of the casing of the printing device and be caused to pass, by reflection, therefrom to a suitable opening in which the negative is held in place. Suitable means in the shape of translucent plates properly colored are also provided to modify the light passing into the printing device when the paper to be printed is put into position, the object being to illuminate the negative with non-actinic rays, to allow the user to see where to place the paper on the negative at the start. As soon as the paper is put in place, light is permitted to enter the printing device without causing it to pass through the translucent plates, and the operation of printing then proceeds.

Reference is to be had to the accompanying drawings forming a part of this specification, in which the same characters of reference indicate the same parts in all the views.

Figure 1 is a perspective view of the lower part of a window frame, showing my improved photographic printing device *in situ*; Fig. 2 is a transverse vertical sectional view on the line 2—2 of Fig. 3; Fig. 3 is a transverse section on the line 3—3 of Fig. 2; and Fig. 4 is an enlarged front elevational view of one of the shutters which carries plates of translucent material to modify the light when necessary.

On the drawings, 1 indicates the lower part of an ordinary window frame having a sill 2, on which I rest a board 3, which serves as a base for my portable printing device. This board 3 may be lengthened by means of an extension piece 4 attached to the board 3 by a block 5, to suit the width of the particular window used. The board

3 serves as a base or support to which the body 6 of my improved printing device is attached, and has an opening 6' there-through to permit the rays of light to enter the printing device, 6 when the same is in use.

The printing device is made up of triangular ends 7 united by means of a slanting back 8 on which is supported a mirror 8', and having an extended top 9. The top is horizontal and has an opening 10 there-through which is cut out around the edges as shown at 11, to receive the negative 12, from which the prints are to be made.

The numeral 13 represents a pivoted lid or cover to close the opening 10 and hold the negative 12 in place, with the paper on which the print is to be made securely clamped between the negative and the lid. This lid is pivotally connected at the middle of its long edges to the ends of a U-shaped piece of wire 14 pivotally mounted in a block 15 fixed to the top 9 of the casing; and 16 is a spring attached to one leg of the wire 14 to hold the lid 13 in open position, as shown in Fig. 1, when the negative is to be put in place. When the lid 13 is forced down it fits snugly in on top of the negative 12, and the spring 16 engages the wire 14 in such a way that it always tends to raise the lid. This lid must be fastened to keep it down, and it may be held in position if desired by simply causing it to fit tightly within the upper edges of the opening 10.

On the top of the cover 9, arranged adjacent the inner edge of the opening 10, is placed a bearing block 17, in which is mounted a piece of bent wire 18. This piece of wire has one end shaped to form a crank, as shown in Fig. 1, and its other end has a hook 19, to which is connected a link 20 having a hook which engages the opening in the upper end of a bar 21. This bar 21 is perforated at intervals along its length to receive the crank-shaped ends of longitudinal operating bars 22, having journals, as shown at 24, which are mounted in apertures or bearings in the sides 7. To each of these bars is fastened a shutter 25, each of these shutters being stamped from a single blank of metal having central openings cut therein which are filled by means of oblong pieces of orange-colored celluloid or other suitable translucent material 26. These oblong pieces of translucent material are simply

held in place by bending over the edges of the shutter 25 upon the edges of the piece 26 tightly enough to hold the latter in place. The bent-over portions 25' along the shorter edges of these shutters are perforated to receive the square sections 23 of the bars 22, and when these edges 25' are bent over they are hammered or pressed down to engage the square sections 23 of the rods 22 to form a tight fit therewith, so that when the rods 22 are turned, the shutters 25 will turn with them.

To use my printing device the negative is put in place so as to fill the opening 10, the shutters 25 being then closed. The translucent plates allow only non-actinic rays of light to pass to the inside of the box or casing, illuminating the negative and enabling the user to see how to put the paper on the glass or plate without risk of the photographic paper being affected by the exposure. When the paper is on the negative the lid 13 is forced down by hand, and as soon as it is secured in place, so as to close the opening 10, the wire 18 will be pressed down by the fingers of the hand, to lift the hooked end 19 and raise the bar 21. This will rotate the crank-shaped ends of the bars 22, to open the shutters 25. The printing device having been previously located at the bottom of the window frame, as shown on Fig. 1, light from without will now pass freely through the opening 6' to the mirror 8' supported by the back of the casing 8, and thence by reflection through the negative to the paper.

I wish to reserve to myself the right to make such small changes in the shape, size and arrangement of the parts, as fairly fall within the scope of my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A photographic printing device comprising a casing, means to which said casing is secured for attaching the same to a window frame, said casing having an opening in its front to permit the entrance of light to the inside of the same, a translucent member for controlling said opening, means for movably mounting said member adjacent said opening and a mirror supported inside of said casing at an angle to said opening, said casing having an opening in its top and having means adjacent the top opening for supporting a negative in said opening in the top, whereby light passing into said casing through the opening in the front will fall upon said mirror and pass therefrom to said negative by reflection.

2. A photographic printing device comprising a casing, said casing having an opening in its front to permit the entrance of light to the inside of the same, translucent means for controlling said opening, means

for adjustably mounting the said translucent means, a mirror supported inside of said casing at an angle to said opening, said casing having an opening in its top and having means adjacent the top opening for supporting a negative over said opening, whereby light passing through the opening in the front will fall upon the mirror and pass therefrom to said negative by reflection, means for holding said negative in position over the top opening, and means for controlling the translucent means located adjacent the holding means, whereby when the holding means is pressed down by the hand over the negative, the controlling means can be also operated to move the translucent means to uncover the opening in the front of the casing.

3. A photographic printing device comprising a casing having an opening in its front, a plurality of translucent shutters carried by said casing in position to uncover and close said opening, means for movably mounting said shutters, a mirror supported inside of said casing at an angle to said opening, said casing having an opening in its top, and having means adjacent the top opening for supporting a negative over said opening in the top, whereby light passing through the opening in the front of said casing will fall upon said mirror and pass therefrom to said negative by reflection, means for holding said negative in position, and means for adjusting the position of said translucent shutters and located adjacent said holding means, whereby when the holding means is pressed down over the negative by the hand, the adjusting means can also be operated to move the translucent shutters into position to uncover said opening in the front of the casing.

4. A photographic printing device comprising a casing with an opening in its front, a plurality of transverse shutters, means for mounting the same pivotally over the opening, said casing having a second opening in its top, and having means adjacent said second opening to support a negative in position therein, a mirror carried by said casing at an angle to the opening in the front, to cause light passing into said casing to pass to the negative by reflection, means mounted on the top of the casing to be pressed down upon said negative to hold the same in position, and an adjusting member mounted on top of the casing, said member being located adjacent the means for pressing down upon the negative, and means for connecting said member to the shutters whereby when the means for securing the negative in place is operated by hand, the shutters can likewise be moved into position to uncover the opening in the front of the casing.

5. In a photographic printing device, a shutter plate comprising a single blank of

metal having an oblong central opening, and a plate of colored translucent material carried by said blank and covering said opening, the outer edges of said blank being bent over to engage the edges of said plate of translucent material to hold the same in place.

6. In a photographic printing device, a shutter plate comprising a single blank of metal having an oblong central opening, a plate of colored translucent material carried by said blank and covering said opening, the outer edges of said blank being bent over to engage the edges of said plate of translucent material to hold the same in place, and an adjusting shaft on which said shutter plate is mounted, said shaft having a square section, and the bent-over edges of the ends of said shutter plate having openings through which said shaft is passed, said bent-over edges when folded over being pressed into close contact with said square sections to secure said shaft in place.

7. A photographic printing device comprising a casing having a vertical front containing an opening, a plurality of transverse shutters, means for pivotally mounting said shutters in said opening, a crank connected to one end of each of said shutters outside of said casing, a bar connecting said cranks, a controlling member having a crank at one end and a hook at the other, a bearing block on the cover of said casing in which said member is pivotally mounted, means connecting said hooked end to said bar, the top of said casing having an opening formed therein, and a pivotally-mounted lid for said opening, said lid having a spring to hold the

same normally in open position, the opening through the cover of said casing having its walls formed to receive and support a photographic negative, the lid for such opening when secured down serving to hold the negative in place, the crank on the controlling member for the shutters being located adjacent the front end of said lid, whereby, when the lid is forced down by hand to cover up the negative, the crank on the end of said adjusting member can be engaged by the fingers of the hand at the end of said lid to throw open the shutters to permit the light to enter said casing.

8. In a photographic printing device, the combination of a casing having an opening to permit light to pass into the same, a second opening having means for supporting a negative therein, movable means carried by said casing to hold said negative in position, movable means for controlling the passage of light through said first-named opening, and means for actuating said last-named movable means, located adjacent the holding means, whereby when the holding means is moved to engage the negative, the controlling means for said first-named opening can also be operated.

In testimony whereof I have signed my name to this specification in the presence of the subscribing witnesses.

MAX FREEDOM LONG.

Witnesses:

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J. MATHESON,
JOHN R. ARNOLD,
T. A. HEWITT.