Aug. 23, 1938. E. M. JAFFE 2,127,601

PORTABLE PHOTOGRAPHIC PRINTING DEVICE

Filed March 25, 1937

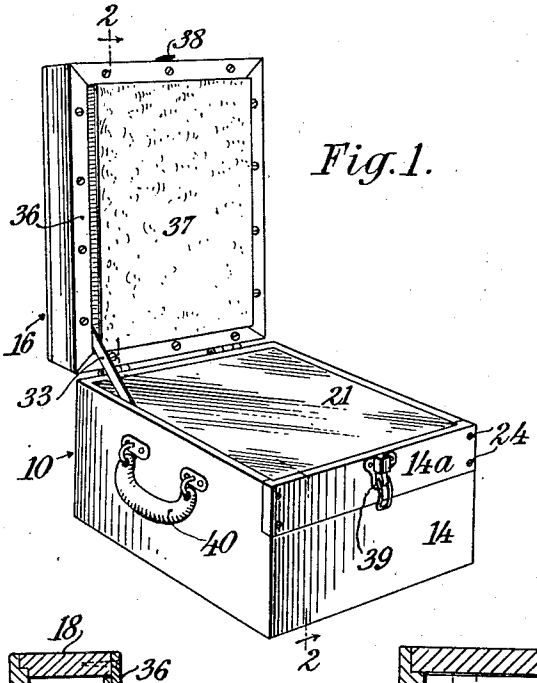


Fig.1.

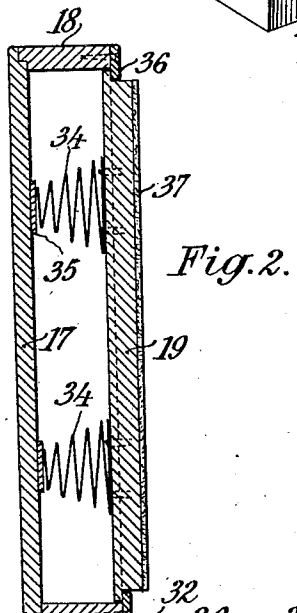


Fig.2.

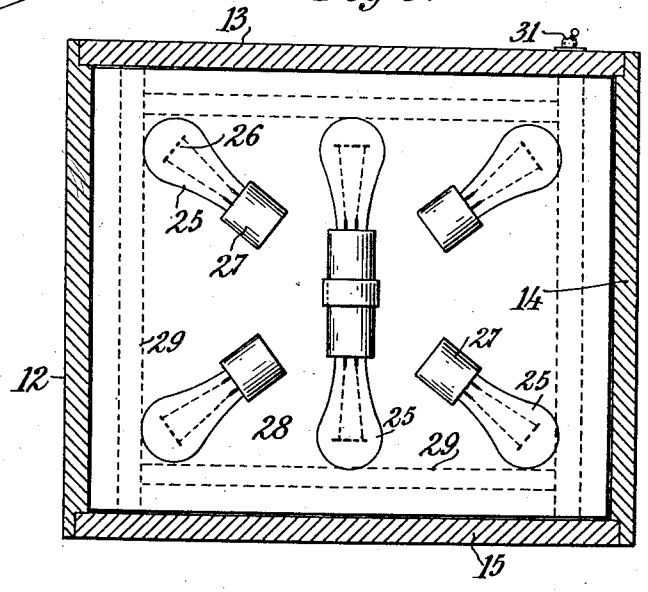
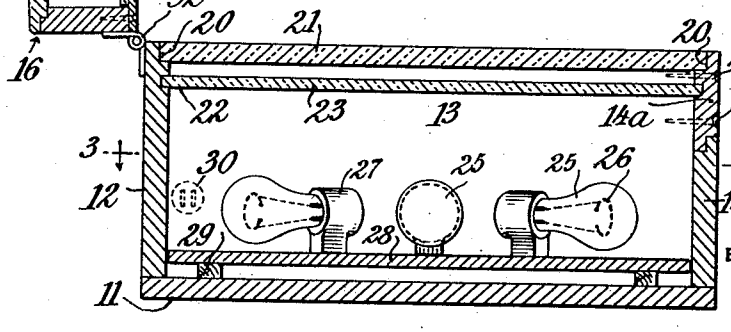


Fig.3.



INVENTOR
Emanuel M. Jaffe,
BY
A. Engel
ATTORNEY

Patented Aug. 23, 1938

2,127,601

UNITED STATES PATENT OFFICE

2,127,601

PORTABLE PHOTOGRAPHIC PRINTING DEVICE

Emanuel M. Jaffe, Brooklyn, N. Y.

Application March 25, 1937, Serial No. 132,906

1 Claim. (Cl. 95—73)

My present invention relates to a portable photographic printing device and aims to provide certain improvements therein.

The primary object of my invention is to provide a photographic printing device in which ordinary standard electric incandescent bulbs are used as the light source for making photographic reproductions of documents, negatives and the like. A further object is to provide such device in which no focusing or adjusting means are required. A further object is to provide in such device shadowless illumination so as to insure uniformly clear prints. A further object is to provide such device which is simple in construction, with no movable parts to go out of order, one which can be readily assembled and one wherein ready access can be had to the lighting source for replacement of any lamp bulb in the event of its failure.

The foregoing and other objects of my invention not specifically enumerated I accomplish by providing a portable cabinet having a light source therein consisting of a plurality of frosted electric lamp bulbs of a type having a substantially spherical bulb portion within which a curved filament is disposed substantially in a plane at a right angle to the axis of the bulb, said bulbs being arranged with their axes substantially parallel to the base of the cabinet and to a light transmitting plate and being of such number and so arranged as to provide shadowless illumination upon said light transmitting plate which closes the top of the cabinet and upon which the matter to be reproduced together with the sensitized paper are adapted to be placed. The said cabinet includes a hingedly connected lid, the inner face of which is provided with a presser board which is resiliently mounted so as to move within the lid as the latter is closed down upon the cabinet proper in pressing relation to the printed or other matter or negative to be copied. The invention will be better understood from a detailed description which follows when considered in conjunction with the accompanying drawing, wherein:

Figure 1 is a perspective view of the device with the lid in open position.

Fig. 2 is a section through the apparatus taken substantially along the plane of the broken line 2—2 of Fig. 1.

Fig. 3 is a section taken substantially along the plane of the line 3—3 of Fig. 2.

Referring to the drawing, the device consists of a portable cabinet comprising a body portion 10 having a bottom 11 and upstanding side walls 12, 13, 14 and 15, and a lid portion 16 having a top 17, side walls 18 and a presser board 19.

The body portion of the cabinet may be formed of any suitable material and preferably is constructed of wood with the sides and bottoms suitably joined together in any manner known to the art. The four side walls of the cabinet at their top edges are rabbeted as shown at 20 for supporting a transparent plate glass 21 of substantial thickness which, when supported on the rabbeted grooves will lie flush with the top of the side walls. Below their tops, the side walls are also formed with recesses or grooves 22 in parallel aligned spaced relation to the rabbets 20 for receiving a translucent light diffusing sheet or plate 23. For facilitating the insertion of the plate 23 within the grooves 22 one side wall of the cabinet herein shown as the front side wall 14 is formed in two parts, one of which 14a is detachably held in superposed relation to the other side wall section 14 by a plurality of fastening elements such as screws 24. It will thus be seen that when the detachable part 14a is removed from the cabinet the sheet or plate 23 can be slid into position along the grooves or slide-ways 22 in the side walls 13 and 15 and then held in position by securing the detachable part 14a onto said respective side walls.

The light source for the device is preferably in the form of a plurality of electric lamp bulbs 25 of the conventional frosted type and preferably those having a substantially spherical portion and in which a curved filament 26 is disposed substantially in a plane of the diameter of the spherical portion of the bulb at a right angle to the axis of the bulb. These bulbs are held in sockets 27 mounted on a base-board 28 which is mounted in parallel relation to the translucent plate 23, with the axis of the bulbs parallel to said base-board and said plate, the sockets being of such number and so disposed with relation to the area of the bottom of the cabinet that the bulbs 25 held therein will provide shadowless illumination on the translucent plate 23 and the transparent plate 21. The sockets 27 may be of any preferred or desired construction and are preferably such in which the wiring thereof can be disposed on the underside of the base-board. To accommodate this wiring when the base-board is mounted in the cabinet, the base-board 28 is mounted upon spacer strips 29 mounted on the bottom 11 of the cabinet so that the base-board 28 in effect constitutes a false bottom for the cabinet. Current for the lamps 25 can be obtained by providing

the cabinet with a conventional inlet 30 into which may be inserted a plug (not shown) connected with a current supply. The current can be controlled by a switch such as 31 mounted on the cabinet.

For obtaining the maximum light developed by the bulbs 25 the interior of the body portion of the cabinet, the sockets 27 and the top of the base-board are all provided with a white coating so as to reduce light absorption to a minimum.

The lid 16 is preferably hingedly connected to the body portion 10 of the cabinet by a piano type hinge 32 and a limiting strap 33 is provided for holding the lid in open position as best shown in Fig. 1. The presser board 19 is of the same configuration as the hollow interior of the lid and is movable and guided therein by the side walls thereof. Mounted on the rear of the presser board is a plurality of conical helical springs 34 which bear against strips or battens 35 mounted on the inner face of the top of the lid. These springs normally urge the presser board outwardly toward the inner face of the lid, and said movement is limited by a frame of overhanging flanges 36 on the inner edges of the side walls of the lid. Preferably the inner face of the presser board, that is, the face which is adjacent the glass plate 21 when the lid is closed is covered with a sheet of felt 37 or the like for engaging and pressing the matter or the negative to be printed and the sensitized paper firmly against the glass plate 21.

In the use of the device the document or negative to be reproduced is first placed on the glass plate 21 and over this is then placed a sheet of sensitized paper after which the lid of the cabinet is closed down and the switch 31 snapped on to illuminate the interior. Normally, exposure to the light source from five to ten seconds is sufficient for making a perfect reproduction. Hence, after five to ten seconds the switch is snapped off, the lid raised and the sensitized exposed paper subjected to the necessary developing and fixing. Where a non-transparent document is to be printed or where the document has printing on both sides, a negative thereof is first obtained by placing the document over the sensitized paper placed on the plate with the sensitized paper facing upwardly, the lid closed down and the same procedure outlined above is followed. To obtain a positive from this print the procedure first outlined is followed. In view of the resilient mounting of the presser board within the lid it will be appreciated that documents of substantial thickness, for example, the pages of an open book, can be reproduced by the second method of procedure above outlined. In order to provide proper contact between the document being reproduced and the sensitized paper, the lid and the body portion of the cabinet are provided with cooperating latching means 38, 38, which when latched together will hold the lid in closed position and the presser board in spring bearing relation to the matter being reproduced.

In the event that any of the lamp bulbs burn out or for any other reason become inoperative such bulb may be readily replaced by the simple procedure of removing the detachable section 14*a*, removing plate 23, removing and replacing the inoperative bulb with a good one and replacing the plate 23 and the section 14*a*. For handling, transporting or moving the cabinet about from place to place it may be provided with a carrying handle such as 40.

While I have shown and described a preferred embodiment of my invention it is to be understood that I do not wish to be limited to the precise construction disclosed, since it will be appreciated that modifications thereof may be resorted to within the range of mechanical skill without departing from the spirit of the invention as claimed.

What I claim is:

A photographic printing device comprising a cabinet having a body portion consisting of a bottom, enclosing side walls and a light-transmitting top closure plate, said body portion having therein a removable false bottom upon which is mounted a light source and a light diffusing plate disposed between the top closure plate and the light source, said closure plate, light diffusing plate and false bottom being all parallelly disposed, said side walls having alined grooves for supporting the light diffusing plate and one of the side walls being formed with a detachable section which when mounted in position serves to hold the light diffusing plate within the body portion and when detached from the body portion permits removal of the light diffusing plate and access to the false bottom and the light source.

EMANUEL M. JAFFE.