

C. A. BLODGETT.
 PRINTING MACHINE.
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2 SHEETS—SHEET 1

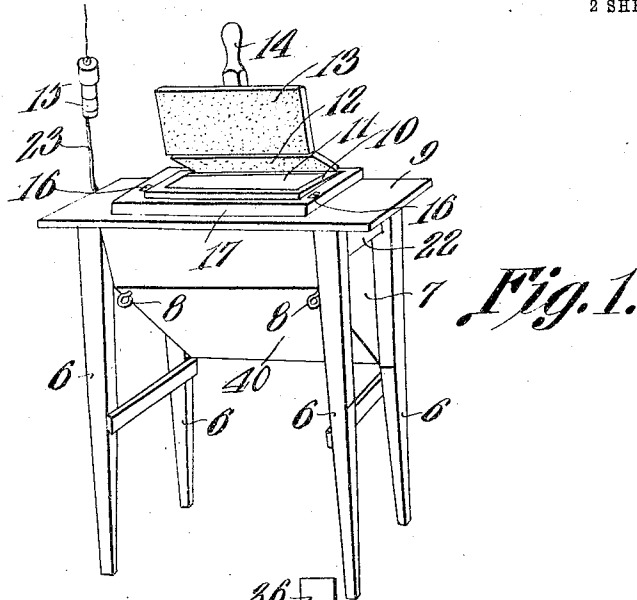


Fig. 2.

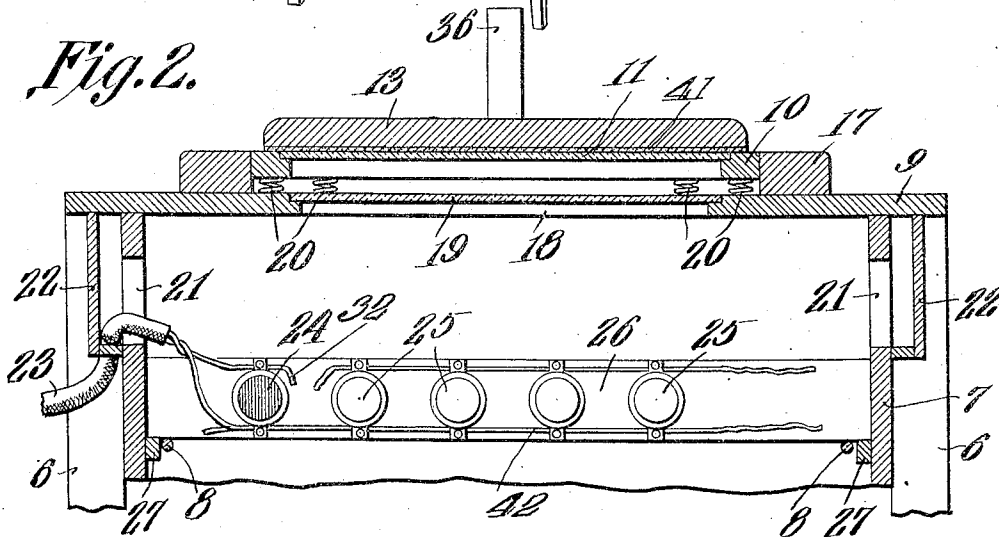
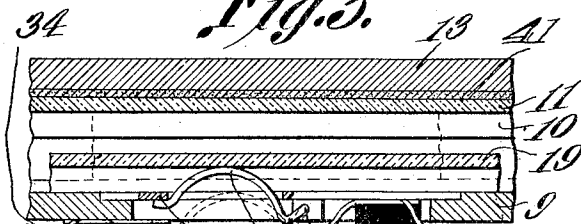


Fig. 3.



Witnesses

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2 SHEETS--SHEET 2.

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UNITED STATES PATENT OFFICE.

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PRINTING-MACHINE.

1,031,906.

Specification of Letters Patent.

Patented July 9, 1912.

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To all whom it may concern:

Be it known that I, CHESTER A. BLODGETT, a citizen of the United States, residing at Hicksville, in the county of Defiance and State of Ohio, have invented a new and useful Printing-Machine, of which the following is a specification.

This invention relates to machines for developing photographic prints.

One of the objects of this invention is to provide a machine of this character wherein the printing lights are controlled by the printing frame to be automatically turned on when the negative and sensitized paper have been secured under the back of the printing frame and to extinguish same upon the back being released to remove the exposed paper.

Another object is to provide means for adjusting the printing lights of the machine to increase or decrease the intensity of the rays of light at the various portions of the printing frame.

Further objects are to provide for a novel back or top for the printing frame and for a novel resiliently supported or cushioned printing frame, together with other objects which will be evident from the following description.

With the above objects in view, this invention resides in the novel construction, arrangement and combination of parts as hereinafter described and as pointed out in the appended claims, the invention being illustrated in the accompanying drawings, in which similar reference characters indicate similar parts, and in which—

Figure 1 is a perspective view of the printing machine. Fig. 2 is a vertical section thereof, parts being broken away. Fig. 3 is a sectional view in detail, showing the switch for opening and closing the printing lamp circuit. Fig. 4 is a horizontal section. Fig. 5 is another vertical section, parts being broken away.

Referring specifically to the drawings, there are designated at 7 a suitable casing, the front side of which is inclined at a suitable angle for the purpose hereinafter described, and at 6, supporting legs for the said casing. The top of the said casing is designated at 9 and has a central rectangular opening 18 therein. A frame 17 is secured on the top 9 around the opening 18, the same being spaced from the edge of the

top around the opening to form a seat within same. A printing frame 10 having the pane of glass 11 set in a rabbet in the upper side thereof, fits within the frame 17 on the top 9 and a plurality of coil springs 20 are disposed between the printing frame 10 and the top 9 which serve to resiliently support or cushion the printing frame. A back or cover for the printing frame is hinged at its rear end to the frame 17 and comprises two sections or leaves 12 and 13. These sections are secured together by a suitable spring hinge 37 which normally tends to swing the forward section 13 upward and backward. A handle 14 is secured to the forward section or leaf 13 over the outer face thereof and the rear end thereof is beveled as designated at 38. On the section 13 being swung upwardly and rearwardly by the spring hinge 37 the beveled end 38 of the lever 14 strikes the rear section 12 to prevent the forward section from being swung backward too far. A pane of glass 19 is set in a rabbet around the opening 18, the said pane of glass being frosted to diffuse the rays of light passing there-through.

On the inner face of each side of the casing 7 is secured a cleat 27 and on the rear end of the said cleat is slidably mounted a cross bar 26. On the front side of the said cross bar is secured a number of electric lamps 25 for emitting a white light and on one end thereof is secured an electric lamp 24 for emitting a red light. A rod 8 is secured to each end of the bar 26 and passes through the front of the casing. A white lamp 25' is also secured to each side of the casing at the front end thereof.

An electric switch 28 is pivoted at 30 in the front end of the top 9 within the frame 17, the same being of arcuate form with the convex side thereof projecting above the surface of the top. That portion of the switch adjacent the pivotal point is bent downwardly and a leaf spring 31 secured rigidly to the top 9 bears at its free end against the said bent portion 29 of the switch to give an upward tension thereto, thus yieldingly supporting the said switch. A stop 35 is provided for the switch 28 to prevent the excessive upward movement thereof. Below the free end of the switch 28 and normally spaced therefrom is secured a contact 33. The spring 31 is con-

nected with a conducting wire 32 and the
 contact 33 is connected to a conducting wire
 34. The white lamps 25 are connected in
 parallel to the wires 42 and 34. The wires
 5 42 and 32 are passed out of the casing 7 in
 form of the usual cord 23 having the plug
 15 on the outer end thereof. This plug is
 adapted to be inserted into the usual socket
 to connect the wires 42 and 32 with a suit-
 10 able source of electric current. The switch
 28 being normally open, opens the circuit
 through the white lamps. The red lamp 24
 is bridged across the wires 32 and 42 and
 therefore remains lighted continuously dur-
 15 ing the use of the machine. Upon the
 switch 28 being depressed, the circuit
 through the white lamps is closed.

Openings 21 are provided in the sides of
 the casing and over the said openings are se-
 20 cured hoods 22 which have the rear ends
 thereof projecting beyond the said openings
 and open, thus shutting out the light from
 without the casing and permitting the cir-
 culation of air through the casing. An up-
 25 standing arm 36 is secured to the rear of
 the top 9 against which the back or top of
 the printing frame is adapted to be swung
 upon the hinges 39 connecting the said back
 with the frame 17. A pair of catches 16 is
 30 also provided at the sides of the frame 17
 for engaging the printing frame 10 when
 the same is depressed to retain same in de-
 pressed position when so desired.

In operating the machine, the negative is
 35 first placed on the printing frame and the
 sensitized paper is then placed over the
 negative in the customary manner, and the
 leaf 12 of the top or back is swung over a
 portion of the sensitized paper and negative
 40 to retain same in position on the printing
 frame, thus allowing a portion of the nega-
 tive and paper to extend from under same
 to allow the operator to make final adjust-
 ment, and the leaf 13 is then swung down-
 45 ward by means of the lever or handle 14
 whereupon the printing frame is depressed
 thus causing the switch 28 to be swung
 downward to engage the contact 33 to close
 the circuit through the white lamps. Thus
 50 at the same moment that the leaf 13 of the
 top is clamped over the paper and negative,
 the white lamps are turned on to expose the
 sensitized paper to the effect of the rays of
 light emitted therefrom. Then after the
 55 usual number of seconds is counted, the
 lever 14 is released which permits the front
 leaf 13 of the top to swing upward and the
 tension on the printing frame being re-
 lieved causes the same to spring upward
 60 thus opening the switch which extinguishes
 the lamps at the same moment that the pres-
 sure is relieved. This permits the sensi-
 tized paper to be exposed the required num-
 ber of seconds with great accuracy and also
 65 automatically turns on and extinguishes the

printing lamps. When desired, the bar 26
 which carries the white lamps 25 and the
 red or ruby lamp 24 can be slid on the
 cleats 27 forwardly or rearwardly by means
 of the rods 8 to shift the printing lamps 70
 with respect to the printing frame, thus
 causing the rays of light to strike the print-
 ing frame at various positions for the pur-
 pose of increasing or decreasing the inten-
 sity of light at the various portions of the 75
 printing frame, this being required in cases
 where it is desired to give a portion of the
 sensitized paper a greater exposure to light
 than other portions thereof. The front 40
 of the casing being inclined serves as a re- 80
 flector to reflect the rays of light reflecting
 same upwardly against the printing frame,
 as will be understood. The lever 14 having
 the rear beveled end 38 which is adapted to
 strike the rear section or leaf 12 of the top 85
 of the printing frame serves as a means for
 holding the said section downward against
 the printing frame to hold the paper and
 negative thereinunder whereby the project- 90
 ing portion of the said paper can be bent
 or turned upward to be observed by the
 operator, which is essential in some methods
 of printing. Then after the sensitized
 paper has been duly exposed the top of the
 printing frame is swung backward against 95
 the arm 36 and the paper is removed, leav-
 ing the machine ready for a new operation.
 It will also be noted that the printing frame
 is resiliently supported or cushioned on the
 top of the casing by a plurality of coiled 100
 springs thereinunder which give an even
 upward tension to the printing frame to
 form an even contact between the negative
 and sensitized paper over the entire surface
 thereof between the pane 11 and the back of 105
 the printing frame. It is also understood
 that the back of the printing frame may be
 provided with suitable padding 41, such as
 is in common use, to assure perfect contact
 between the paper and the negative. 110

With this machine the developing of
 photographic prints is made very conven-
 ient and rapid, and it is also possible to give
 the sensitized paper the proper number of
 seconds exposure, which is quite essential to 115
 the proper developing of the print. The
 ruby lamp which is continually lighted al-
 lows the operator to properly adjust the
 negative and sensitized paper on the print-
 ing frame prior to the exposure, it being 120
 known that the rays of light emitted by
 such a lamp are non-actinic. If desired,
 the printing frame may be held in depressed
 position as above stated, in which event the
 white lamps are kept burning. 125

It is understood that this machine is sus-
 ceptible of alteration in its details of con-
 struction and form within the scope of the
 appended claims without departing from the
 spirit of the invention, and it is not de- 130

sired to limit the invention to the particular form and construction shown and described.

What is claimed is:

- 6 1. In a printing machine, a casing having
an opening in its top, a printing frame re-
siliently supported over the opening, a back
for the printing frame hinged to the casing,
a spring-pressed electric switch and a con-
10 tact therefor, the switch being adapted to be
brought into contact with the said contact
when the frame is depressed, an electric
lamp within the casing, and conductors
15 connected to the lamp and the switch and
contact.
2. In a printing machine, a casing hav-
ing an opening in the top thereof and hav-
ing the front wall thereof inclined, a printing
frame arranged over the said opening, a
20 back for the printing frame hinged to the
casing, a cross bar slidably mounted be-
tween the sides of the casing, white elec-
tric lamps carried by the said bar adapted
to be lighted upon the back being swung
25 over the printing frame, a ruby lamp car-
ried by the said bar and adapted to be con-
tinuously lighted during the use of the ma-
chine, and means for sliding the said bar to
and from the front of the casing.
- 30 3. In a printing machine, a casing having
an opening in the top thereof and having
the front wall thereof inclined, a printing

frame arranged over the said opening, a
back for the printing frame hinged to the
casing, cleats secured to the sides of the 35
casing, a cross bar mounted thereon, white
electric lamps carried by the said bar adapt-
ed to be lighted upon the back being swung
over the printing frame, a ruby lamp car-
ried by the said bar and adapted to be 40
continuously lighted during the use of the
machine, and rods secured to the ends of
the bar and passing through the front of
the casing for sliding the bar on the cleats.

4. In a printing machine, a casing hav- 45
ing an opening in its top, a frame arranged
around the opening and spaced from the
edge of the opening to form a seat within
the frame, a printing frame within the said
frame, a plurality of springs disposed be- 50
tween the said printing frame and the top
of the casing, a back for the printing frame
hinged to the casing, a lamp within the cas-
ing, conductors attached to the said lamp,
and means for closing the circuit through 55
the said conductors upon the printing frame
being depressed.

In testimony that I claim the foregoing
as my own, I have hereto affixed my signa-
ture in the presence of two witnesses.

CHESTER A. BLODGETT.

Witnesses:

E. F. ARMSTRONG,
G. F. JEFFRIES.