Jan. 22, 1924. 1,481,472

W. C. LAMPHIER

PHOTOGRAPHIC PRINTING MACHINE

Filed Feb. 2, 1922

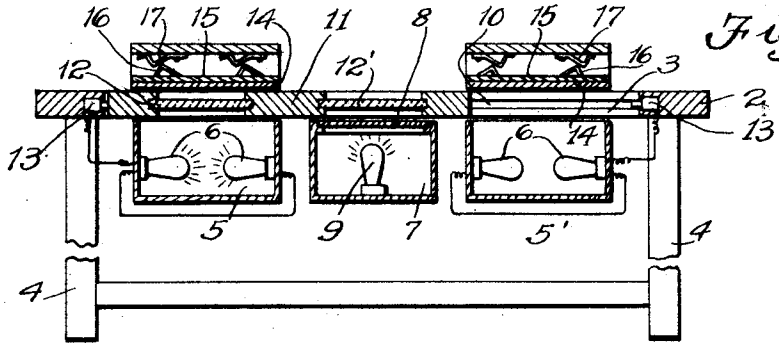


Fig. 1.

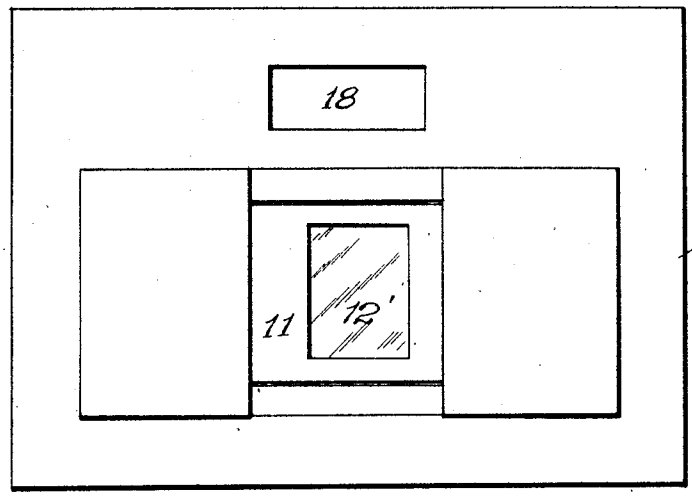


Fig. 2.

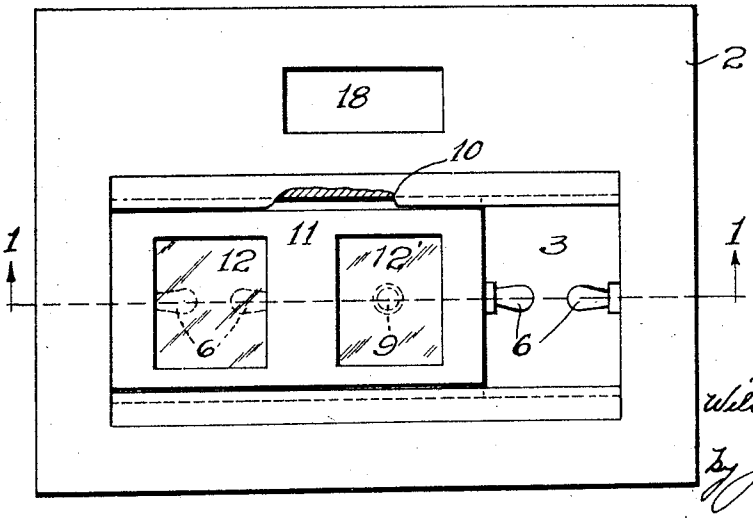


Fig. 3.

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UNITED STATES PATENT OFFICE.

WILBUR C. LAMPHIER, OF NEW YORK, N. Y.

PHOTOGRAPHIC-PRINTING MACHINE.

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To all whom it may concern:

Be it known that I, WILBUR C. LAMPHIER, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Photographic-Printing Machines, of which the following is a specification.

This invention relates to photographic printing machines, and consists more particularly in an improved photographic machine of the type embodying a frame in which is supported a plurality of lamp boxes provided with means cooperating with the lamp boxes to clamp the negative and sensitized paper over said boxes during the printing operation.

The prime object of this invention is to provide simple, durable, economical and efficient means whereby an operator is enabled to materially increase the amount of work, and substantially double the capacity of the single printing machine usually employed for the purpose.

Another object of the invention is to provide novel means whereby the machine can be fed with a new negative and unexposed paper at the same time a second film is being exposed for printing.

A further object of this invention is to so construct the machine that a plurality of lamp boxes are provided in connection with a slidable frame having a plurality of glass plates fitted therein, said frame being adapted by its movement to switch on and off the lights in the said lamp boxes.

The foregoing and such other objects as may appear from the ensuing description are accomplished by the construction, arrangement, combination, assembling and location of the parts hereinafter more fully described, illustrated in the accompanying drawings, and particularly pointed out in the claims appended hereto, it being understood that slight changes in the precise form, proportions and minor details of the construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention,

In the accompanying drawings which form a part of the specification it will be seen that:—

Figure 1 is a longitudinal section of a machine embodying my invention, taken in the plane of the dotted lines 1—1, Fig. 3.

Fig. 2 is a plan view of the same, and

Fig. 3 is a plan with the covers removed from the printing lamp boxes.

Similar numerals of reference are employed to designate corresponding parts throughout the several figures of the drawings.

In the embodiment of my invention as illustrated, it will be observed by referring to Fig. 1, that 2 indicates a table or frame constructed with a rectangular opening 3, and supported on suitable legs 4. A plurality of photographic lamp boxes 5 and 5′ are supported from the table beneath the opening 3 and houses any desirable number of photographic lamps 6, of any suitable power used for printing the sensitized paper, and disposed centrally between the printing boxes 5 in a box 7 provided at the top thereof with a ruby colored glass plate 8, or other suitable color, to allow only the rays of light to pass through that will not injure a sensitized photographic paper, but will allow the negative to be viewed, said box 7 having housed therein one lamp 9 of lesser candle power than those in the printing boxes 5. Fitted within the rectangular opening 3 and adapted to slide back and forth in the guideways 10 is a slidable frame 11 within which is fitted a plurality of glass plates 12 and 12′, and fixedly secured to the table at each end of said opening 3, is an electric switch or button 13, connected by suitable wiring to the lamps 6, so that when the frame 11 is moved or slid to the left end of the opening contact is made with one of said buttons 13 which lights the lamps in box 5, the lights in box 5′ remaining dead, and when the frame is moved to the right end of said opening contact is made with the other button 13 thus lighting the lamps in the box 5′, while the lamps in box 5 remain dead, since the movement of the sliding frame away from contact with the electric buttons will automatically cut out the photographic lamps within the respective printing boxes, as will be readily understood.

The numeral 14 indicates a pad provided with a suitable backing 15 used to furnish the desired pressure to the negative and sensitized paper when in position for exposing, the said pressure being furnished by the springs 16 and 17 which are forced into contact with each other and held in any suitable or well known manner immediately before the exposure is made. 18 indicates an opening formed through the top of the table and

through which the exposed paper prints are dropped.

It will be obvious that the negatives employed may be either a film or glass plate as desired.

It will be readily perceived that the sliding frame 11 may be readily operated by hand, but may be made to operate by foot power or other means such as are already known or used in connection with photographic printing machines.

The operation of my improved machine may be briefly described as follows:

When the sliding frame 11 is in the position shown in Fig. 1, the glass plate 12 will be in position over the box 5, the lamps 6 therein being lighted to print from the exposed negative, while the plate 12′ is in position to receive and be loaded with a new negative and unexposed paper, resting over the box 7 provided with the colored glass plate 8, and when the frame is moved to the right to occupy a position over the box 5′ the slide will contact with the electric button and switch on the lights to print from the exposed negative carried by the glass plate 12′ and the plate 12 will occupy a position to receive and be loaded with a new negative, thus the shifting of the sliding frame back and forth over the printing boxes 5 and 5′ alternately cut out and light up the lamps in the respective printing boxes and at the same time that one negative or film is being exposed for printing another negative and unexposed sensitized paper is properly fed to the frame, thereby permitting the printing operation to continuously proceed, thus enabling the operator to substantially double the amount of work that it is possible to produce on a single machine, and cutting out the electric lamps in one printing box while the printing operation is proceeding in the other box.

Having thus described my invention what I claim and desire to secure by Letters Patent is:—

1. A photographic printing machine comprising a table, a plurality of photographic lamp boxes mounted beneath the top of said table, a slidable frame mounted within said table top and provided with a plurality of glass plates, and a lamp box provided with a colored glass plate centrally mounted below the table top and between said lamp boxes.

2. A photographic printing machine comprising a table, a plurality of printing lamp boxes mounted below the top of said table, a slidable frame mounted within guide-ways formed in said table top, said frame being fitted with a plurality of glass plates, and a lamp box provided with a colored glass plate mounted beneath the table top and between said lamp boxes.

3. A photographic printing machine comprising a table, a plurality of printing lamp boxes fixedly secured beneath the top of the table, a slidable frame mounted in rectangular guide-ways formed within said table top, said frame having a plurality of glass plates secured therein, and a lamp box having a colored glass fitted thereto mounted below the table top and between said lamp boxes.

4. A photographic printing machine comprising a table, a plurality of printing lamp boxes fixedly secured below the top of said table, a rectangular slidable frame mounted within the table top, said frame having a plurality of glass plates fitted therein, an electric button secured to the table at each end of said slidable frame, and a lamp box provided with a colored glass plate secured thereto and mounted beneath the table top and between said lamp boxes.

5. A photographic printing machine comprising a table, a plurality of printing lamp boxes mounted beneath the top of said table, a slidable frame mounted in guide-ways formed within said table top, said frame being fitted with a plurality of glass plates, an electric button secured to the table at each end of said slidable frame and adapted to be operated by the back and forth movement of the frame, and a lamp box fixedly secured below the table top and intermediate said lamp boxes having a colored glass plate fitted thereto.

6. A photographic printing machine comprising a table, a plurality of printing lamp boxes, each box having a plurality of lamps therein and mounted below the top of said table, a slidable frame mounted within the table top, said frame having a plurality of glass plates fitted therein, an electric button secured to the table at each end of said frame connected with the lamps in said boxes, said buttons being operated to cut out and light the lamps in the boxes by the back and forth movement of the slidable frame, and a lamp box fixedly disposed between said lamp boxes beneath the table top and provided with a colored glass plate.

WILBUR C. LAMPHIER.