June 7, 1932. H. D. PHILIPS 1,861,937

PRESETTING DIAL FOR PHOTOGRAPHIC PRINTING MACHINES

Filed Jan. 4, 1930

Fig. 1.

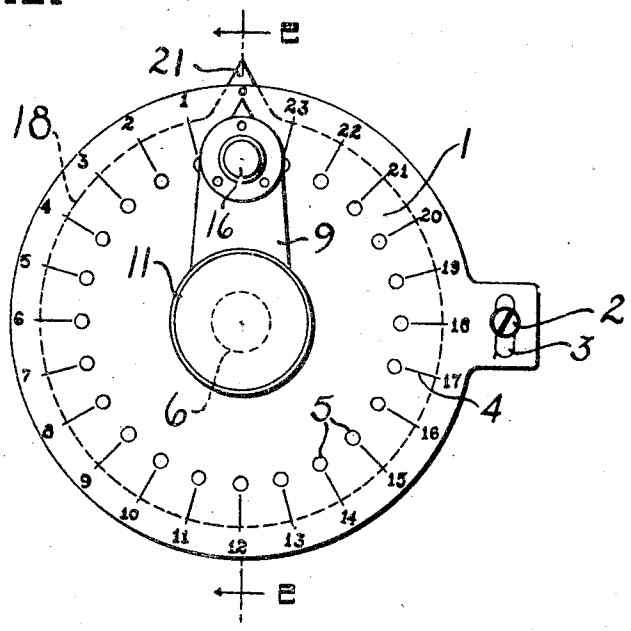


Fig. 2.

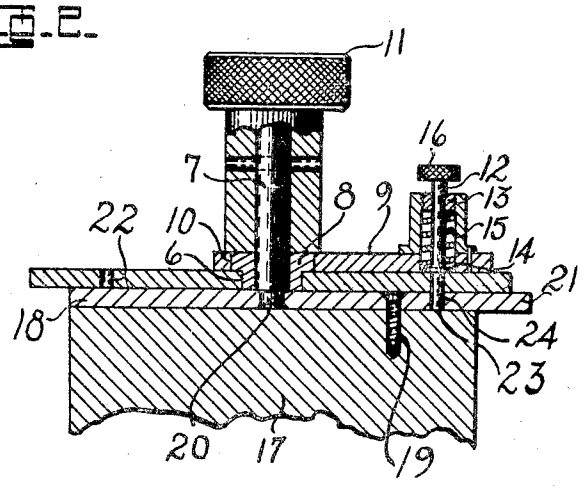
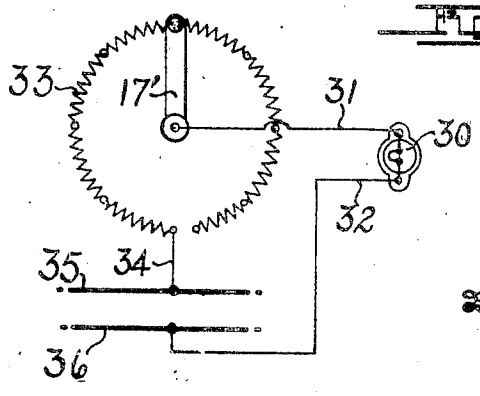


Fig. 3.



Inventor
Harlow D. Philips.
By Donald K. Stewart.
Attorneys

Patented June 7, 1932

1,861,937

UNITED STATES PATENT OFFICE

HARLOW D. PHILIPS, OF ROCHESTER, NEW YORK, ASSIGNOR TO EASTMAN KODAK COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK

PRESETTING DIAL FOR PHOTOGRAPHIC PRINTING MACHINES

Application filed January 4, 1930. Serial No. 418,549.

This invention relates to photography and more particularly to presetting dials particularly adapted for use with photographic printing machines. One object of my invention is to provide a control member with a presetting dial which can be set at any desired position and to which the control member may be turned after a time interval. Another object of my invention is to provide a presetting dial with which a setting may be selected in advance of movement of a control member to the set position and other objects will appear from the following specification, the novel features being particularly pointed out in the claims at the end thereof.

Coming now to the drawing wherein like reference characters denote like parts throughout:

Fig. 1 is a plan view of a presetting dial constructed in accordance with and embodying a preferred form of my invention;

Fig. 2 is a section on line 2—2 of Fig. 1;

Fig. 3 is a diagrammatic showing of one use of my presetting dial.

In Fig. 1 there is illustrated a dial plate 1 which may be attached by a screw 2 in a fixed position on a machine. I prefer to provide a slot 3 so that the dial may be adjusted in its initial set up.

This dial is provided with a series of graduations 4 and a series of guideways 5 which are axially arranged with respect to the circular plate and which, in this instance, are in the form of apertures extending through the dial plate 1. The dial plate is provided with a central aperture 6 through which a shaft 7 passes, this shaft including a bearing member 8 which supports an arm 9. The arm is apertured at 10 and may turn freely about the bearing 8. It should be especially noticed that the arm 9 is not connected with the shaft 7 and consequently the knob or handle 11 can be turned without moving the arm 9.

Arm 9 is provided with a latch in the form of a spring pressed plunger 12 which passes through the bearing 13. The plunger 12 is provided with a shoulder 14 which may limit the downward movement of the plunger, as shown best in Fig. 2 and which also serves to support one end of a spring 15 which normally thrusts the plunger 12 downwardly. The plunger may be drawn from this position by means of a handle 16.

There is a control member 17 which carries fixedly on its upper surface a plate 18 attached by screws 19 or otherwise affixed to move with the control member 17. The shaft 7 is affixed at 20 to the plate 18 so that the control member 17 may be moved by turning the handle 11.

Plate 18 is of circular form as shown in Fig. 1 and is provided with an offset pointer 21 adapted to indicate on the dial plate scale 4 the setting of the apparatus. This plate 18 has a smooth upper surface 22 lying beneath the guideways 5 and this upper surface may ride on the end 23 of the plunger until an aperture 24 comes in alignment with the plunger at which time the spring 15 will thrust the plunger downwardly into the position shown in Fig. 2 and latch the controller 17 in a fixed position.

The operation of my device is as follows. With the parts shown in Fig. 1 the next setting of the controller may be at, say graduation number 15 on the scale 4. The plunger 16 is drawn out against spring pressure and the arm 9 is turned until the desired position is reached after which the plunger is allowed to snap down into the aperture opposite the graduation 15, thus latching the arm in a fixed position with respect to the dial plate. When it is desired to rapidly set the controller to the predetermined position the knob 11 is rapidly rotated until the plunger snaps down into the aperture 23, thus latching the controller in the predetermined position. This can be done very quickly and in photographic printing this is a very useful feature.

In the copending patent application above

referred to my invention is shown as being the device used for the "Parallax" setting adjustment. The reasons for this adjustment are fully given in that patent application.

Of course, this presetting dial is useful in a number of different applications, one of which is shown in Fig. 3. In this position the setting device is used for controlling a lamp 30 which may be a printing lamp to which power is supplied through wires 31 and 32. The former wire 31 leading through a rheostat 33 from a wire 34 leading to the line wire 35. The other line wire 36 is connected to the wire 32.

In this instance the control member 17' is the member which is actuated to produce a very rapid adjustment after a dial has been preset with the apparatus fully described above. This application is particularly useful for printing motion picture films where the density of the various scenes is different and where, as is common practice, some form of signal is arranged on each film scene indicating the desired light intensity for each scene. Where this is the case the dial can be set for the desired illumination and as soon as the signal is given in any of the well known manners as, for instance, by having notched film operate a lamp or bell, the operator may quickly adjust the lamp brilliance by swinging the control member until latched in the desired position. There is then plenty af time for accurately adjusting the arm for the next setting.

Having thus described my invention, what I claim as new and desire to be secured by Letters Patent of the United States is:

1. A presetting dial comprising a dial, an arm movable over the dial into a plurality of predetermined positions, cooperating parts on the arm and dial adapted to retain the former in a set position, a controlling member, and means for moving the controlling member until positioned by the arm.

2. A presetting dial comprising a dial, an arm movable over the dial into a plurality of predetermined positions, cooperating parts on the arm and dial including guideways and a plunger adapted to be positioned by any one of the guideways, said plunger being carried on the arm, a controlling member, and means for moving the controlling member into a position predetermined by said plunger.

3. A presetting dial comprising a dial, an arm movable over the dial into a plurality of predetermined positions, cooperating parts on the arm and dial including guideways and a plunger adapted to be positioned by any one of the guideways, said plunger being carried on the arm, a controlling member, and means for moving the controlling member into a position in which it may be latched in a predetermined position by the plunger.

4. A presetting dial comprising a dial, an arm movable over the dial into a plurality of predetermined positions, cooperating parts on the arm and dial comprising apertures forming guideways, and a spring pressed plunger adapted to enter and be positioned by a guideway, a control member adapted to be positioned by the spring pressed plunger entering a guideway 5, and a handle for moving said control member.

5. A presetting dial comprising a dial, an arm movable over the dial into a plurality of predetermined positions, a spring pressed plunger carried by the arm, a plurality of guideways in the form of apertures in the dial, a controlling member movably mounted beneath the dial and having an aperture therein, means for turning the controlling member until latched into a predetermined position by the spring pressed plunger entering the aperture therein.

6. A presetting dial comprising a relatively fixed dial plate having guideways therein associated with a graduated scale, an arm movably mounted with respect to the dial plate, a latch carried by the arm adapted to engage the dial plate guideways and to be positioned thereby, and a control member movably mounted with respect to the arm and dial and adapted to be latched in position by the latch carried by the arm.

7. A presetting dial comprising a relatively fixed dial plate having guideways therein associated with a graduated scale, an arm movably mounted with respect to the dial plate, a latch carried by the arm adapted to engage the dial plate guideways and to be positioned thereby, and a control member movably mounted with respect to the arm and dial and adapted to be latched in position by the latch carried by the arm, said latch including a handle for releasing said latch permitting movement of the arm relative to the control member.

8. A presetting dial comprising a dial, an arm movable over the dial into a plurality of predetermined positions, cooperating parts on the arm and dial comprising apertures forming guideways and a spring pressed plunger adapted to enter and be positioned by a guideway, a control member including a plate covering the apertures in the dial plate and including a single aperture in alignment therewith, said plate forming a limit for the plunger, a handle for turning the control member permitting the plunger to ride on the plate until, by dropping into the aperture said plunger latches said control member in a position predetermined, by setting the arm with respect to said dial.

9. A presetting dial comprising an apertured dial plate having a scale adjacent the apertures, means for holding the scale plate against movement, a control member adjacent said scale plate having an aperture

therein and a handle for moving the control member, a pointer on said control member adapted to move over the scale on the dial, an arm including a latch adapted to be set in any one of the apertures of the dial plate and to be positioned thereby, said control member being also adapted to be positioned through the engagement of the latch with the aperture in the control member.

Signed at Rochester, New York, this 31 day of December, 1929.

HARLOW D. PHILIPS.