Sept. 8, 1931. M. GROSSMAN 1,822,619

MULTICOLOR FLASH LIGHT

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Fig. 1.

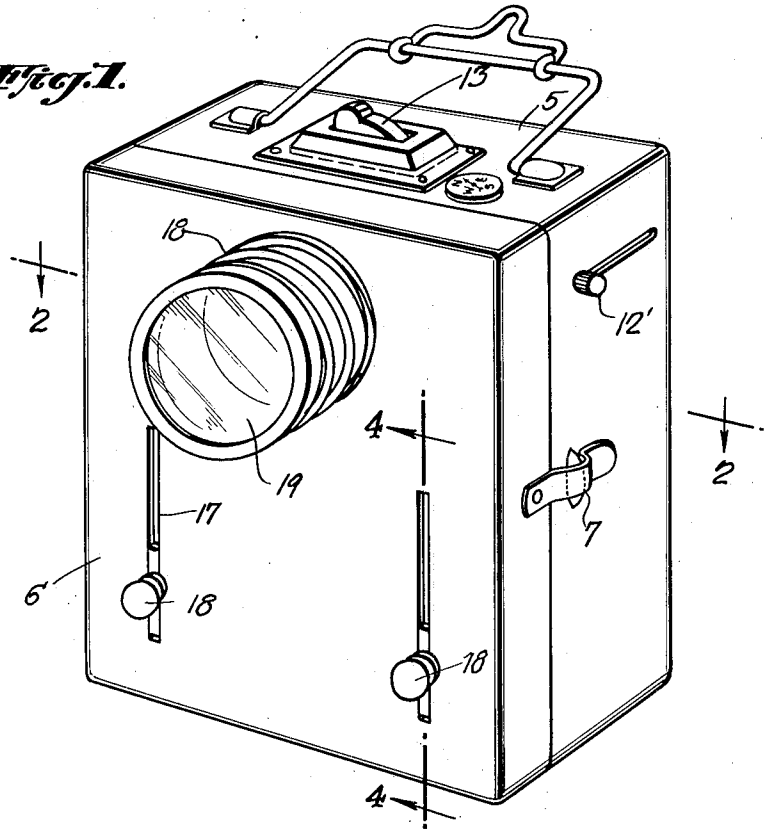
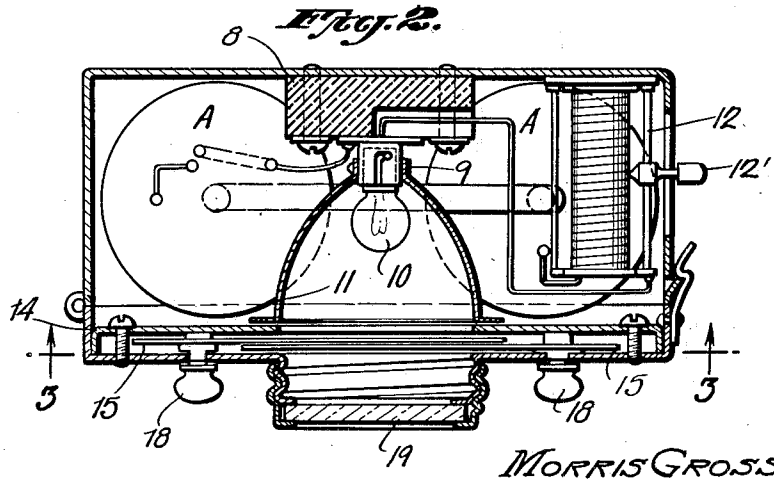


Fig. 2.



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Fig. 3.

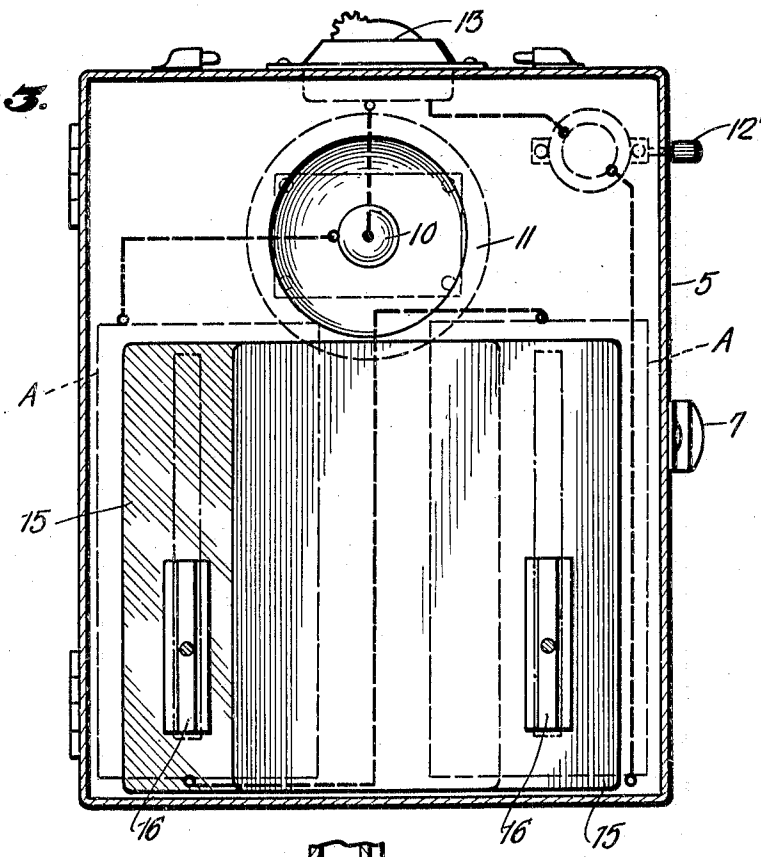
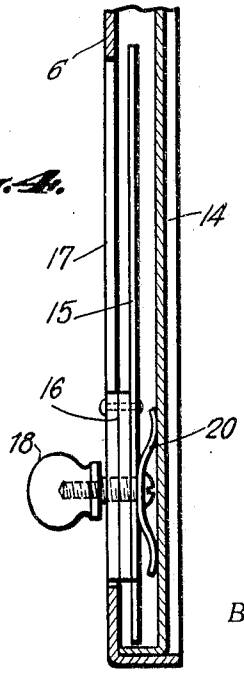


Fig. 4.



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1,822,619

UNITED STATES PATENT OFFICE

MORRIS GROSSMAN, OF NEW YORK, N. Y.

MULTICOLOR FLASH LIGHT

Application filed May 23, 1929. Serial No. 365,473.

This invention relates to new and useful improvements in electrical flashlights, and aims to provide a novel, simple and useful device of this character wherein the color of the light rays emanating from the flashlight may be instantly changed from one desired color to another. This type of flashlight is particularly useful for signalling purposes, such as in connection with the operation of railroads, steam ships, vehicular traffic and the like.

Furthermore, the invention aims to provide a flashlight equipped with means to prolong the life of the flashlight batteries, and to enable the regulation of the strength of the light rays emanating from the device.

A further and important object is to provide a flashlight of this character that is relatively simple in construction, as well as simple in operation, the same comprising but few parts, and these so corelated as to reduce the possibility of disarrangement to a minimum.

The foregoing and other objects will become apparent as the nature of the invention will be better understood from the following specification when considered in conjunction with the accompanying drawings.

In the drawings:—

Figure 1 is a front side perspective of my improved flashlight.

Figure 2 is a detailed horizontal sectional view taken substantially upon the line 2—2 of Figure 1, and looking downwardly in the direction of the arrows.

Figure 3 is a vertical horizontal section taken substantially upon the line 3—3 of Figure 2, and looking rearwardly in the direction of the arrows, and

Figure 4 is an enlarged fragmentary vertical section, taken substantially upon the line 4—4 of Figure 1, and also looking in the direction of the arrows.

Now having particular reference to the drawings, my novel flashlight consists of any suitable design of housing 5 open at its front side and provided at said front side with a swinging door 6, suitable latch means 7 being provided to normally maintain the door in closed position. Arranged upon the back wall of the housing 5 adjacent the upper end thereof is a suitable non-conducting lamp support 8, equipped with a lamp socket 9, for the reception of the ordinary flashlight bulb 10. Associated with the socket 9 is a suitable reflector 11 for the bulb, see Figure 2.

Two or more batteries *a* can be arranged within the housing 5, which batteries are electrically connected with the socket 9, and a current regulating rheostat 12, and a suitable hand switch 13. The rheostat 12 is as illustrated in Figures 2 and 3, located within the upper end of the housing 5 and the regulating knob 12′ thereof is operable through a slot in the side wall of the housing, see Figure 1. The switch 13 is located within the upper end of the housing 5 and the control button thereof projects through the top wall of the housing, so that the switch may be operated by the thumb of the party using the flashlight.

Arranged upon the inner face of the main wall of the swinging door 6 of the housing 5 and spaced slightly therefrom is a supporting wall 14. Arranged for vertical sliding movement between the door 6 and said wall 14 is a pair of colored plates 15—15 of celluloid, isinglass, or other translucent material. As more clearly disclosed in Figure 2, the inner edges of these plates pass beyond the opposite side of the reflector 11, and are normally beneath said reflector, as disclosed in Figure 3.

Each plate 15 is equipped adjacent its outer edge with a slide member 16 operable through a vertical slot 17 in the front wall of the door 6, and equipped with a slide button 18, in order that the slide may be raised or lowered exteriorly of the housing.

Directly in front of the reflector 11, the door 6 is provided with a lens receiving neck 18′ within which is mounted a suitable uncolored lens 19, the wall 14 in back of the lens being provided with an opening as disclosed in Figure 2, in order that the light rays emanating from the bulb 12 may pass through the lens 19.

Normally, the colored plates 15 are in operative position as illustrated in Figure 3, in which position, the light rays projecting from the flashlight will be of a white color.

When it is desired to change the color to red, blue or whatever other colors are selected, either of the plates 15 is raised into position with the bulb 10 and the lens 19. Any suitable means may be provided for frictionally maintaining the plates 15—15 in raised or lowered position, said means being disclosed in Figure 4 as consisting of a leaf spring 20 secured to the back side of the respective plate 15 and having frictional engagement with the wall 14 in spaced relation with the swinging door 6.

The purpose of the rheostat 12 is to prolong the life of the batteries A—A within the flashlight. When new bulbs are arranged within the housing, the control 12′ of the rheostat is moved so that a relatively low current will flow to the bulb 10. As the batteries discharge, the control member 12′ is gradually moved to reduce the resistance through the rheostat.

In view of the foregoing description when considered in conjunction with the accompanying drawings, it will be apparent that I have provided a novel, simple, useful and relatively inexpensive flashlight that is well adapted for all of the purposes heretofore designated, and even though I have herein shown and described the invention as consisting of certain detailed structural elements, it is nevertheless to be understood that some changes may be made therein, without affecting the spirit and scope of the appended claims.

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

1. A flashlight of the character described comprising a housing having a light emitting opening and a plurality of slots in the front wall thereof, light projecting means mounted in the housing, a partition wall mounted in the housing between the front wall thereof and the light projecting means, said partition wall spaced from the front wall and having an opening therein in registry with the front wall opening, a plurality of overlapping screens mounted for sliding movement in the housing between the partition and the front wall for disposition between the light projecting means and the front wall opening, a slide member rigidly mounted on the forward side of each screen and extending into a slot, a handle connected with the outer face of the slide member, a spring member connected to the inner face of the screen opposite the inner face of the slide member and frictionally engaging the partition wall to yieldingly retain each screen in shifted position in the housing.

2. A flashlight of the character described comprising a housing, a door closing the front thereof, a partition wall carried by the door and spaced from the front thereof, the front wall of the door and the said partition wall having aligned light emitting openings therein, said front wall being provided, adjacent its opposite sides with a pair of elongated, vertically disposed slots having their upper ends terminating below the light emitting opening, light projecting means mounted in the housing, a pair of overlapping screens mounted for vertical sliding movement in the space between the partition wall and the front wall of the door, said screens being disposed below the front wall opening when in inoperative position, a slide member mounted on the forward side of each screen and projecting for longitudinal sliding movement into the adjacent slot, said members constituting guides for the screens, a handle projecting forwardly from each screen and operable through the slots for shifting said screens in the housing and resilient means mounted on the rear side of each screen for frictional engagement with the partition wall in a manner to yieldingly retain said screens against sliding movement in the housing.

In testimony whereof I affix my signature.

MORRIS GROSSMAN.