H. J. KASTNER.

HEADLIGHT DIMMER.

APPLICATION FILED DEC. 10, 1914.

1,131,933. Patented Mar. 16, 1915.

FIG. 1.

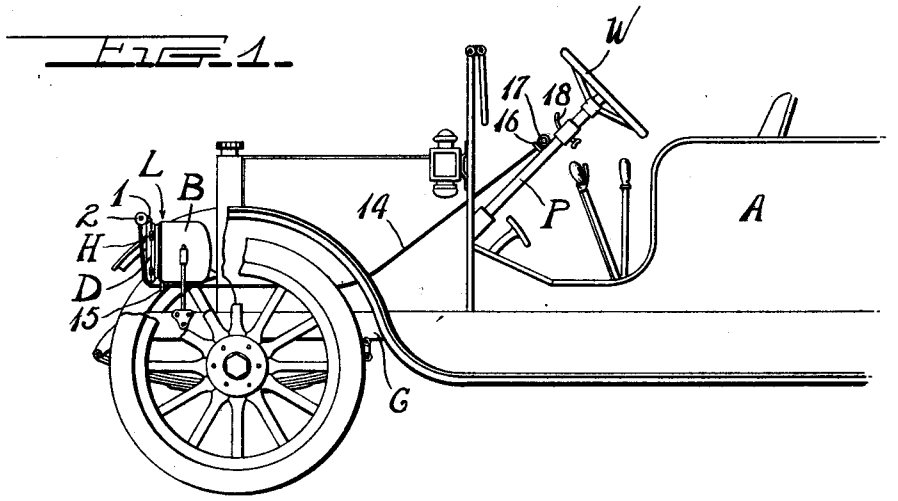


FIG. 2.

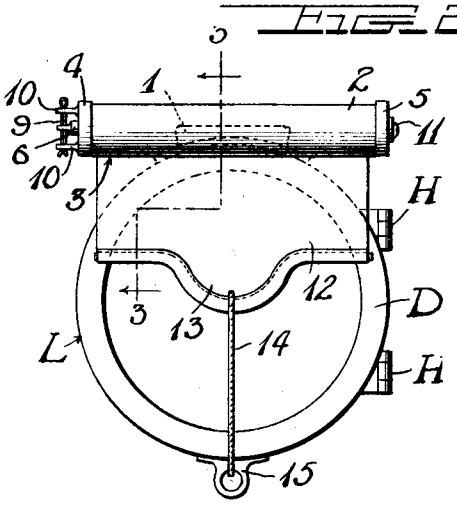


FIG. 3.

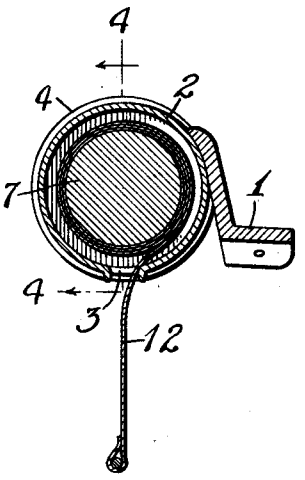
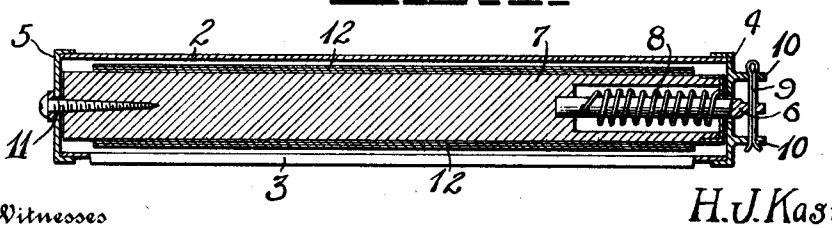


FIG. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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HEADLIGHT-DIMMER.

1,131,933. Specification of Letters Patent. Patented Mar. 16, 1915.

Application filed December 10, 1914. Serial No. 876,511.

To all whom it may concern:

Be it known that I, HENRY JACOB KASTNER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Headlight-Dimmers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in dimmers for automobile headlights and the like, and more particularly to those employing a spring rotated roller, a screen wound upon said roller, and means for unwinding said screen in advance of the light.

The main object of the invention is to so position a device of this character upon the light, as to cause it to not only act as means for partially preventing the projection of rays therefrom, but to also serve as means for retaining the door of the light in closed position.

I have in mind a patent issued to E. A. Edwards on July 5, 1904 and bearing No. 764,229. This device shows a spring actuated roller mounted on the door of the light, a screen wound upon said roller, and means for unwinding said screen in advance of the light. The positioning of parts in this device, however, is not such as to allow the roller and the parts coacting therewith, to act as a combined screen and device for retaining the door in closed position.

To the above end, the invention resides in certain novel features of construction and combination herein described and claimed and shown in the drawings wherein:—

Figure 1 is a side elevation of a portion of an automobile, showing the application of my invention to one of the headlights thereof; Fig. 2 is a front elevation of one of the lights equipped with the invention; Fig. 3 is a vertical transverse section as seen on the line 3—3 of Fig. 2; and Fig. 4 is a detail longitudinal section as seen on the line 4—4 of Fig. 3.

In these drawings, forming a part of this application, a portion of an automobile A is shown, the latter including the usual chassis C which is equipped with a steering wheel W and with a steering post P upon the upper end of which said wheel is revolubly mounted. The machine is also equipped with headlights L which comprise substantially cylindrical bodies B in which the usual sources of light and reflectors are located, and doors D which are provided with transparent panels and which are hinged at H to swing laterally, the hinge line standing in an upright plane as shown.

Most types of lights are provided with suitable latches for retaining their doors D in closed position, but it is well known that excessive vibration of the machine often jars these latches to such an extent as to allow the door to swing outwardly, thus often causing the lights to be extinguished, thus necessitating relighting the same. It is also a well known fact, that it becomes very desirous, at times, to provide some means whereby the rays of light projected from the headlight, may be made dim, thereby preventing the blinding of pedestrians by the glare from these lights.

As hereinbefore suggested, a number of devices have been provided for carrying out this last named object, and as also suggested, numerous forms of latches have been provided for retaining the doors of the lights in closed position, but in so far as I am advised, a single device has not been constructed which will simultaneously perform both of these functions. This is the object of the structure now to be described.

Secured to the upper edge of the door D, is an attaching bracket 1 to which a transverse tube 2 is secured, said tube having a longitudinal slot 3 in its lower side and having one of its ends permanently closed by a cap 4, while a removable cap 5 normally closes the opposite end of said tube. The cap 4 is provided with a central opening through which the stub shaft 6 of a curtain roller 7 projects, said shaft being secured to one end of a coil spring 8 which is located within the roller, while the other end of said spring is secured to the roller. By this means, when the shaft 6 is held against rotation, the spring will be wound as the roller is rotated in one direction. For the purpose of holding the shaft 7 against rotation, I provide an upright cotter pin 9 which projects through an opening in the outer end of said shaft and through alined openings in upper and lower ears 10 which project laterally outward from the stationary cap 4. It will likewise be seen that this construction prevents the stub shaft 6 from moving inwardly to such an extent as to allow it to be disengaged from the opening in said cap 4.

The cap 5 is provided with a central opening through which a screw 11 is passed, the inner end of said screw being threaded into the other end of the roller 7, whereby this end is revolubly mounted and held concentric within the tube. With the parts constructed as so far described, the cotter pin 9 may be removed and the cap 5 may be disengaged from the tube, after which the entire roller may be pulled endwise from said tube.

Secured at its upper end to the roller 7 is a screen 12 which may be constructed of any suitable material, the central portion of the lower end of said screen being extended downwardly in substantially the form of a tab 13. When the screen is drawn downwardly by means to be described, this serves to interrupt the most powerful rays of the light, but the weaker rays are allowed to radiate around the same.

Extending downwardly from the tab 13 in advance of the door D, is an operating cable 14 which then extends rearwardly through a guide 15 located adjacent the lower side of the light L and continues still farther rearwardly to the post P, at which point it is passed through a second guide 16, its free end being equipped with a ring 17 or other appropriate form of stop, this ring normally contacting with the guide 16 to prevent excessive forward movement of the cable, but being capable of being pulled upwardly and rearwardly and engaged with a fork 18 likewise carried by said post. By this moving of the stop 17 and the cable 14, the screen 12 will be moved downwardly in advance of the transparent panel of the door D to the necessary extent for accomplishing the desired results.

I may here explain that when the screen is wound to its limit upon the roller 7, the spring 8 is still under tension and that this tension has a tendency to straighten the angle in the cable 14 but since this angle cannot be straightened, the tension of the spring is exerted to retain the door D in closed position. When this door is opened for the purpose of lighting the lamp within the casing B, the screen will be unwound, thereby placing the spring under greater tension, which tension is exerted to again close the dor.

From the foregoing description, taken in connection with the accompanying drawings, it will be seen that a comparatively simple device has been provided for carrying out the objects of the invention, yet that the article will be very efficient in operation.

I claim:—

1. The combination with a headlight having a transparent door hinged upon an upright axis, of a horizontal roller revolubly mounted on the upper edge of said door, a screen secured at its upper end to said roller, a spring for rotating the roller in a direction to wind the screen thereon, a guide adjacent the lower side of the light, a cable attached to the lower end of the screen, and extending downwardly therefrom in front of the door and then rearwardly through said guide, and means mounted independently of the door for holding the rearwardly extending portion of said cable against forward movement, whereby the tension of the spring acts not only to wind the screen upon the roller, but serves as means for retaining the door in closed position.

2. A device of the class described comprising a tube having a longitudinal slot in one side, a cap permanently closing one end of said tube and having a central opening, a hollow roller within the tube, a spring located within said hollow roller and secured at one end thereto, a stub shaft connected to the other end of said spring and projecting outwardly through the opening in said cap, the outer end of said shaft having an opening, a pair of ears secured to said cap on opposite sides of the opening therein, said ears having openings alining with the opening in the shaft, a cotter pin passing through the alined openings in said ears and shaft, a movable cap closing the other end of the tube and having a central opening, a screw passing through the opening in said removable cap and threaded into the adjacent end of the roller, and a screen wound upon said roller.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HENRY JACOB KASTNER.

Witnesses:

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RUSSELL A. KIEFER.