O. P. LIEBREICH.

HEADLIGHT CONTROL SWITCH FOR MOTOR VEHICLES.

APPLICATION FILED OCT. 22, 1917.

1,316,372. Patented Sept. 16, 1919.

Fig. 1.

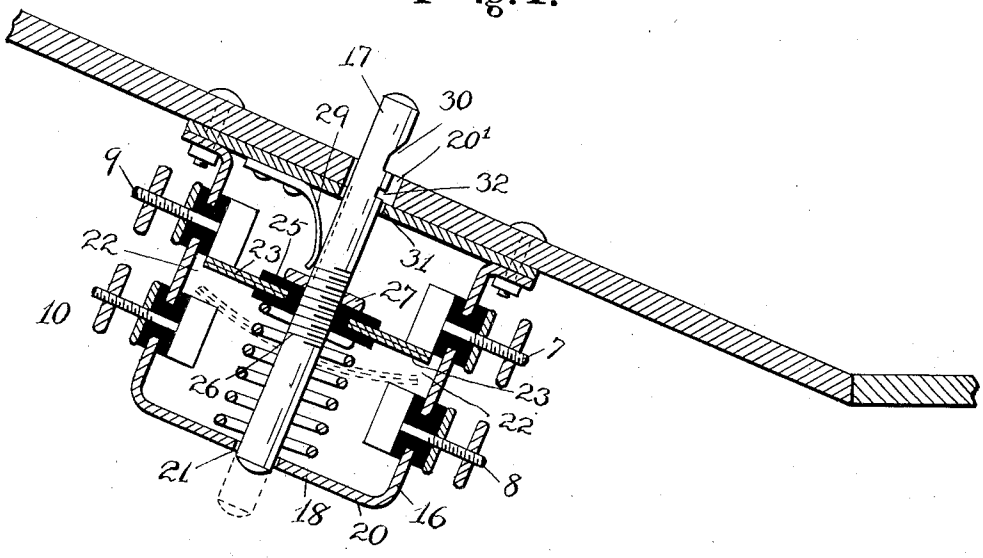


Fig. 3.

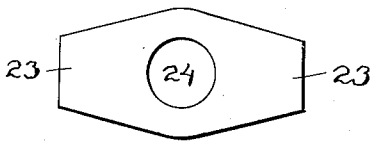
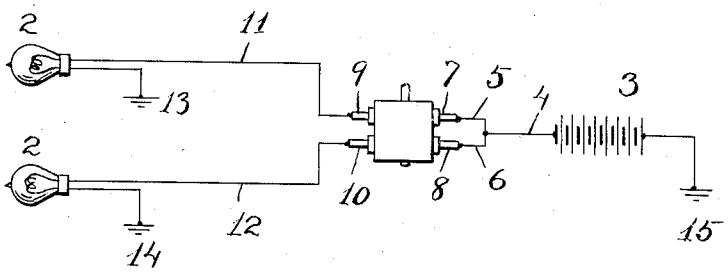


Fig. 2.



Inventor.
Oscar P. Liebreich
by E. W. Anderson & Son
Attorneys.

UNITED STATES PATENT OFFICE.

OSCAR P. LIEBREICH, OF TROY, NEW YORK.

HEADLIGHT-CONTROL SWITCH FOR MOTOR-VEHICLES.

1,316,372. Specification of Letters Patent. Patented Sept. 16, 1919.

Application filed October 22, 1917. Serial No. 197,987.

To all whom it may concern:

Be it known that I, OSCAR P. LIEBREICH, a citizen of the United States, resident of Troy, in the county of Rensselaer and State of New York, have made a certain new and useful Invention in Headlight-Control Switches for Motor-Vehicles; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification:

Figure 1 is a central longitudinal section of the invention, as applied.

Fig. 2 is a plan view of the invention, partly diagrammatic.

Fig. 3 is a detail plan view of the contact plate.

The invention has relation to switches controlling the current of the electric headlights of a motor vehicle, having for its object to provide improved means for controlling the degree of illumination or candle power of the lights or light in the city limits, or while passing other vehicles or foot passengers without said limits.

The invention consists in the novel construction and combinations of parts, as hereinafter set forth.

In the accompanying drawings, illustrating the invention, in its preferred embodiment the numeral 2 designates the headlight bulbs; 3 the battery or generator, having wiring connection 4, branched at 5 and 6, with the switch, the branch 5 connecting at one side of the switch with a terminal or binding post 7, and the branch 6 connecting upon the same side of the switch with the terminal or binding post 8. Binding posts 9 and 10, upon the opposite side of the switch, have suitable wiring connections, 11 and 12 respectively, with the bulbs, the connection 11 being from post 9 to one bulb 2 and from said bulb to the machine frame at 13, and the connection 12 being from the post 10 to the other bulb and from said bulb to the machine frame at 14, the battery or generator at the other end of the line being connected at 15 with the machine frame, to complete the circuit through said frame.

The switch consists preferably of a casing 16, carrying the binding posts stated, suitably insulated therefrom, a rod 17 being located centrally of said casing and reciprocatory lengthwise therein, a coiled spring 18 bearing at one end against a collar 25 of said rod, and at its other end against the bottom 20 of the casing, and serving to maintain and return the rod into normal projected position, through a perforation 20′ in the floor of the car, convenient for actuation, usually by the foot of the driver. This rod has sliding engagement within a perforation 21 in the bottom of the casing, the engagement being sufficiently loose to admit of a lateral movement of the rod, from its lower end, where it engages said perforation, as a center, as hereinafter stated.

The binding posts 7 and 8 are located one above the other, at one side of the casing, and the posts 9 and 10 are located oppositely thereto, at the other side of the casing, the posts at each side being spaced apart by intervals 22. The operating rod 17 carries oppositely extending contacts 23, usually a single flexible resilient bar or plate of metal, having a central perforation 24 engaged by the insulator sleeve or collar 25, a nut 27, engaging thread 26 of the rod, preventing upward movement of said sleeve.

The contacts 23 are normally in engagement with the posts 7 and 9, under the influence of the spring 18, and transmit the current therethrough to one of the bulbs 2, for showing a bright light.

When the light is to be dimmed, the driver presses his foot upon the operator rod 17, and depresses the same until the contacts 23 engage the lower posts 8 and 10, the current then passing through said contacts to the other bulb 2, of less illuminating power.

The depresion of the rod is of sufficient degree to bend the plate 23, for better contact with the lower posts, the spring being strong enough to insure a good contact with the upper posts. In the fully depressed position of the rod 17, a lateral spring 29, secured to the switch case top, engages one side of said rod and presses it laterally, so that an upper lateral notch 30 of the rod will engage with one side of the edge portion of the perforation of the switch case, said portion constituting a tooth 31, the lower shoulder of said notch engaging the tooth, and the rod being thereby retained in depressed position, with the spring 18 under compression. A kick of the foot of

the driver will release the notch from said tooth, and the rod will be at once returned to normal projected position by the spring.

When neither light bulb is to be illuminated, the rod 17 is depressed slowly, to bring the lower lateral notch 32 of the rod in line with the tooth 31, when the spring 29 will press the rod laterally, to engage this notch with said tooth, the spring 18 being compressed. The release of the rod is effected in the same way as above stated.

I claim:

In a circuit controller, a switch having upper and lower sets of posts spaced apart, an operating rod capable of both endwise and lateral movement, said rod having a contact member for bridging and connecting either set of said posts and having upper and lower notches, a spring for maintaining said rod in normal position with the contact member engaging one set of said posts, means engaging the upper of said notches upon lateral movement of the rod to retain said member in engagement with the other set of posts, and a spring for moving the rod laterally, said means capable of engagement with the lower of said notches to retain said member in neutral position midway between the sets of posts.

In testimony whereof I affix my signature in presence of two witnesses.

O. P. LIEBREICH.

Witnesses:

MARCIA MCAULIFFE,

CLARA E. HELLER.