

Oct. 23, 1928.

1,689,075

O. R. LEHMAN

TRAFFIC LIGHT CONTROL

Filed Jan. 28, 1927

Fig. 1.

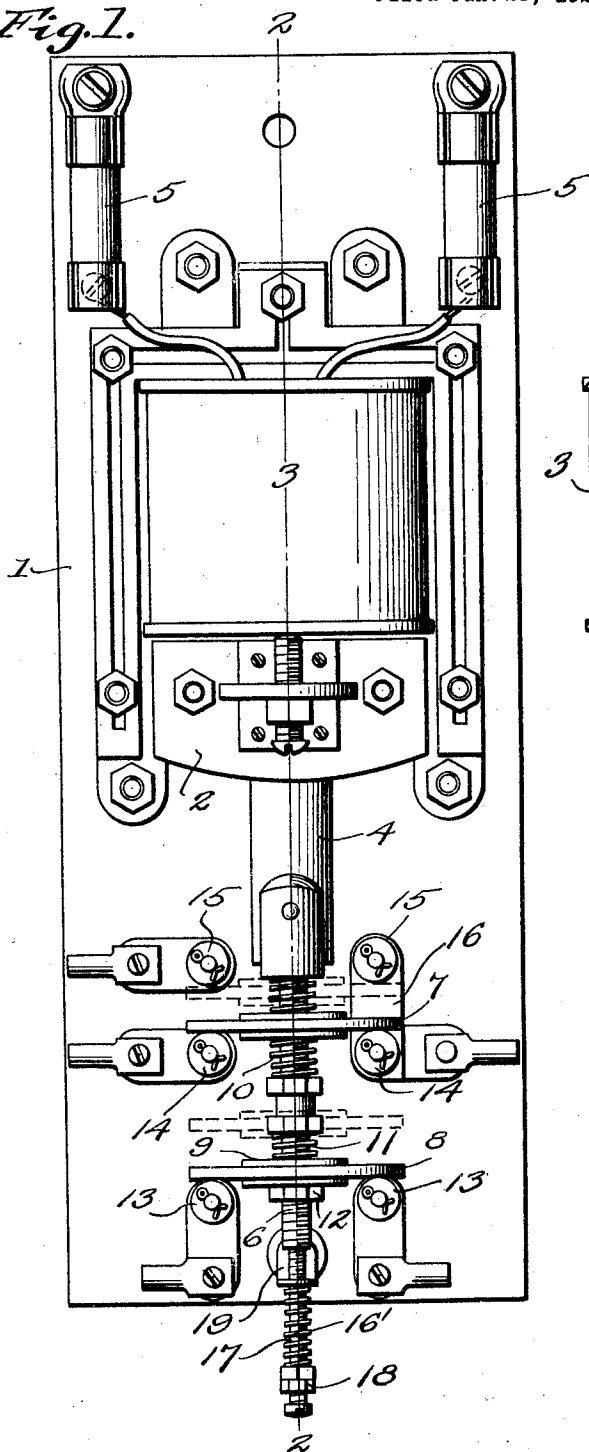
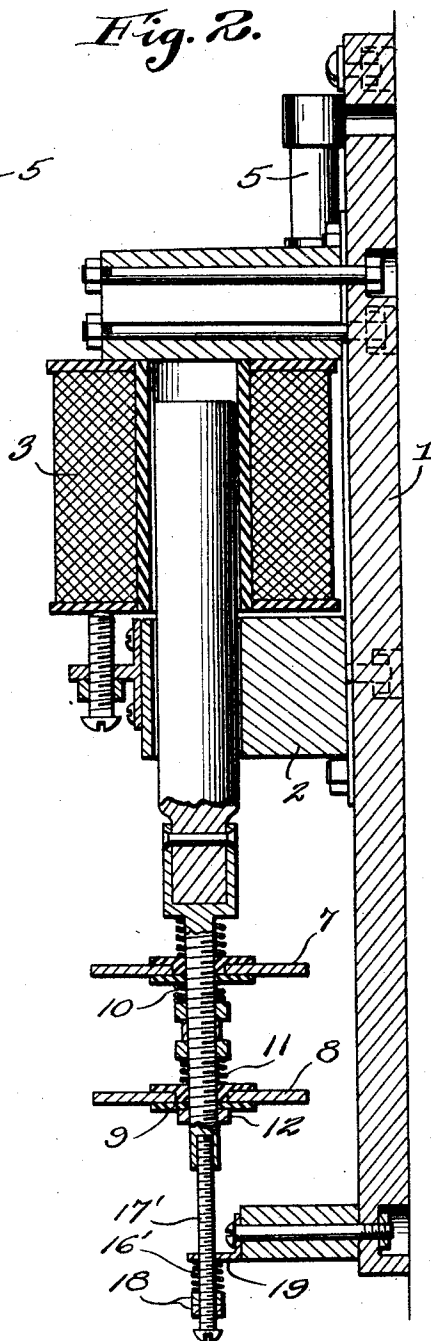


Fig. 2.



Ogden R. Lehman, INVENTOR

BY Victor J. Evans

ATTORNEY

WITNESS:

R. E. Winn

UNITED STATES PATENT OFFICE.

OGDEN R. LEHMAN, OF SPRINGFIELD, OHIO.

TRAFFIC-LIGHT CONTROL.

Application filed January 28, 1927. Serial No. 164,253

This invention relates to an electric circuit controller, the general object of the invention being to provide means for normally keeping the circuits of a system of lights, such as traffic lights, closed, with means operated from a distant point to break said circuits and at the same time to close an emergency circuit so that the traffic can be stopped in order to permit free passage of fire apparatus, ambulances and the like.

Another object of the invention is to provide magnetic means, the solenoid of which has an extension which carries the movable portions of the switches for the traffic lights and the emergency lights, with means whereby the traffic light switches are normally held in closed position and the emergency switch in open position, said parts being so arranged that when the magnet is energized, the emergency circuit will be closed and the other circuit broken.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is an elevation of a device for carrying out the invention.

Figure 2 is a section on line 2—2 of Figure 1.

In these views, 1 indicates a base on which are mounted the supports 2 for the magnet 3 and its armature 4, fuses 5 also being mounted on the board or base and these fuses are arranged in the circuit of the magnet. A threaded extension rod 6 is fastened to the lower end of the armature and this rod carries a pair of disks 7 and 8 which are insulated from the rod by the insulating means 9. Upper and lower springs 10 movably support the upper disk 7 and a spring 11 holds the lower disk 8 against a nut 12 on the rod. Thus these disks are yieldably supported on the rod. The lower disk 8 normally bridges a pair of contacts 13 on the base and the upper disk 7 normally bridges a pair of contacts 14 on the base, these two pairs of contacts being adapted to be connected with the circuits of the system of traffic lights so that as long as the device is inactive, said circuits will be kept closed. A pair of contacts 15 is carried by the base and are arranged above the upper disk 7. One of these contacts is connected with an emergency system of lights while the other is connected by a conducting strip 16 with the contact 14 which is connected with the source of supply.

From the foregoing, it will be seen that in the normal position of the parts and with the magnet deenergized, the disks 7 and 8 will be engaging the two pairs of lower contacts so that the circuits in which these contacts are located will be closed while the circuit in which the upper contacts are located is open, but as soon as the magnet is energized, the armature and its extension will raise the disk to the dotted line position shown in Figure 1, so that the disk 8 will be out of engagement with the contacts 13 while the upper disk 17 will move away from the contacts 14 and engage the contacts 15. Thus the circuits in which are located the two lower pairs of contacts are broken, while the circuit in which is located the upper pair of contacts is closed.

I provide a spring 16' for holding the parts with the disks closing the regular circuits, this spring being arranged on a threaded rod 17' which is screwed in the lower end of the extension rod and which carries a pair of nuts 18 for adjusting the spring against a bracket 19 supported from the base and through which the rod 16' passes.

As before stated, this device is mainly designed for controlling a traffic light system which is provided with an emergency circuit so that by closing the circuit of the magnet, the emergency circuit will be closed while the other circuits will be broken. This will permit the control switch of the magnetic circuit to be located at a distant place, such as a fire engine house, police headquarters or the like. In an emergency, all traffic can be stopped, warning given by bell or red light and the streets cleared for passage of fire apparatus, ambulances or police patrols. The emergency traffic light controller will operate the emergency circuit even if the main system is disconnected. This controller requires no special cabinet and can be installed in any traffic signal control box, with a minimum of additional

wiring, except remote control circuit. If no emergency circuit is used, the lights of the main system may be thrown on the caution signal.

5 It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:—

15 A circuit controller comprising a magnet, an armature therefor, an extension connected with the armature, a pair of disks movably mounted on the extension and insulated therefrom, springs for yieldingly holding the disks in position, two pairs of

contacts adapted to be alternately engaged 20 by one disk, one pair being arranged in an emergency circuit and the other pair in a regular circuit, a third pair of contacts adapted to be engaged by the second disks when the first disk is in engagement with 25 the contacts of the regular circuit, said third pair of contacts being arranged in a regular circuit, means for energizing the magnet from a distant point to break the regular circuits and close the emergency circuit, a 30 rod having its upper end connected with the extension, a bracket through which the rod passes, the lower end of the rod being screw threaded, a nut on the threaded part and a spring between the bracket and the nut. 35

In testimony whereof I affix my signature.

OGDEN R. LEHMAN.