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DIRECTION SIGNAL FOR VEHICLES

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6 Claims. (Cl. 177—339)

This invention relates to a switch for making or breaking a circuit through an electrically actuated device, such as a signaling device, etc., and particularly to means for preventing complete operation of the switch if there is insufficient flow of current in the circuit or the circuit wires are broken.

In the present instance the invention will be illustrated in conjunction with an electrically actuated signaling device such as used on motor vehicles and the like.

The regulations controlling motor vehicle traffic, in most states, require that a driver shall give a signal at least fifty feet ahead of making a turn around a corner, or otherwise. The signal must be visible and may be accomplished by the driver extending one arm and giving the proper signal. A mechanically actuated signal in the form of a semaphore arm or the like may be employed, and also electrically actuated signals, such as electric lights, etc.

Electric light signals are probably more extensively employed than any other type but they are not dependable as any one of the signal lights may burn out, the wiring may chafe and become short circuited, the battery contact or switch points may become dirty, etc. Any one of these defects may occur at any time and the driver may operate the signaling mechanism without being aware thereof. The driver would naturally think that the proper signal had been given but as a matter of fact no signal is given under such circumstances and an accident may result.

The object of the present invention is to generally improve and simplify the construction and operation of signaling mechanisms, especially of the electrically actuated type, and particularly to provide a means for rendering the signal mechanism totally inoperative if the mechanism, the current supply, or any circuit actuating the mechanism is broken, thereby giving the driver a definite warning that the signaling mechanism is not operating and at the same time giving the driver an opportunity to give the proper arm signal until there is time to make the proper repairs.

The invention is shown by way of illustration in the accompanying drawing, in which—

Fig. 1 is a diagrammatic view of the signaling mechanism.

Fig. 2 is a partial sectional view showing the manually actuated control switch and the dashpot mechanism whereby the switch is returned to normal position.

Fig. 3 is a side elevation of Fig. 2, said view being partially in section.

Referring to the drawing in detail, and particularly Fig. 1, A and B indicate a pair of signal lights disposed on the rear of a vehicle, and C and D a pair of signal lights disposed on the front of the vehicle; the purpose of the lights being that of indicating the direction in which the driver intends to turn. Whenever a circuit is closed through these lights two lights will be illuminated, for instance, lights A and C if a left hand turn is to be made and the lights B and D if a right hand turn is to be made. In order to close a circuit through either pair of lights a manually controlled switch, generally indicated at F, is employed. This switch is best illustrated in Figs. 2 and 3.

It consists of a disc of insulating material, or the like, which is secured on a shaft 2, the shaft being supported in a suitable bearing 3 and the outer end of the shaft being provided with a knob 4 so that it may be grasped and turned. Formed on one side of the disc is a cam shoulder 5 and similarly formed on the other side is a cam shoulder 6. The cam 5 cooperates with a pair of flexible contacts 7 and 8 and the cam 6 with a pair of flexible contacts 9 and 10. Also formed on the disc is a flat face 11, the function of which will hereinafter be described.

Current to operate the lights may be supplied from any suitable source of current supply, such as a storage battery G, or the like. One side of the battery is grounded, as shown at 12, and the other side is connected with one terminal of a winding of a magnet 14 by means of a wire 15. The other terminal of the magnet winding is connected with a wire 16 and this is, in turn, connected with the switch contacts 7 and 9. The contact 8 is connected through a wire 17 with the lights D and B, and the contact 10 is connected through wire 18 with the lights C and A. If the driver wishes to make a left hand turn, he grasps knob 4 and rotates shaft 2 in such a direction that the cam shoulder 6 will engage the contact 9 and bring it into engagement with the contact 10. In so doing he closes a circuit which can be traced from the battery G through wire 15, the winding 14, wire 16, contacts 9 and 10, and wire 18 through the lights C and A, the light A being grounded and thereby completing the circuit. If a right hand turn is to be made, the knob 4 is again grasped and turned in the opposite direction and the cam shoulder 5 will then engage the contact 7 and force it into engagement with the contact 8 and thereby close a

lish the circuit, and means for preventing completion of the rotation of the switch if no current or insufficient current flows through the device.

4. In a system where a device is electrically actuated, a source of electric current supply, a rotatable switch for closing or breaking a circuit to actuate the device, said switch having a predetermined degree of rotation when operated and having a preliminary rotary movement sufficient to establish the circuit, and means for preventing completion of the rotation of the switch if no current or insufficient current flows through the device.

5. In a system where a device is electrically actuated, a source of electric current supply, wires connecting the current supply with the device, a manually operated control switch connected with said wires to close a circuit through said wires and the device to actuate the same, means for automatically returning the control switch to break the circuit, said switch moving through a predetermined distance when operated and being free to move a sufficient distance to close the circuit, and means for preventing completion of the switch movement if no current or insufficient current flows through the device.

6. In a system where a device is electrically actuated, a source of electric current supply, wires connecting the current supply with the device, a manually operable control switch connected with said wires to close a circuit through the device, a dogging member engageable with the switch and normally preventing complete operation of the switch, said dogging member permitting a preliminary movement of the switch sufficient to close the circuit but said dogging member preventing completion of the switch movement if no current or insufficient current flows through the device, and means for rendering the dogging member inoperative to permit completion of the switch movement if the circuit is operable.

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MEANS FOR REGULATING ELECTRIC STEAM GENERATORS

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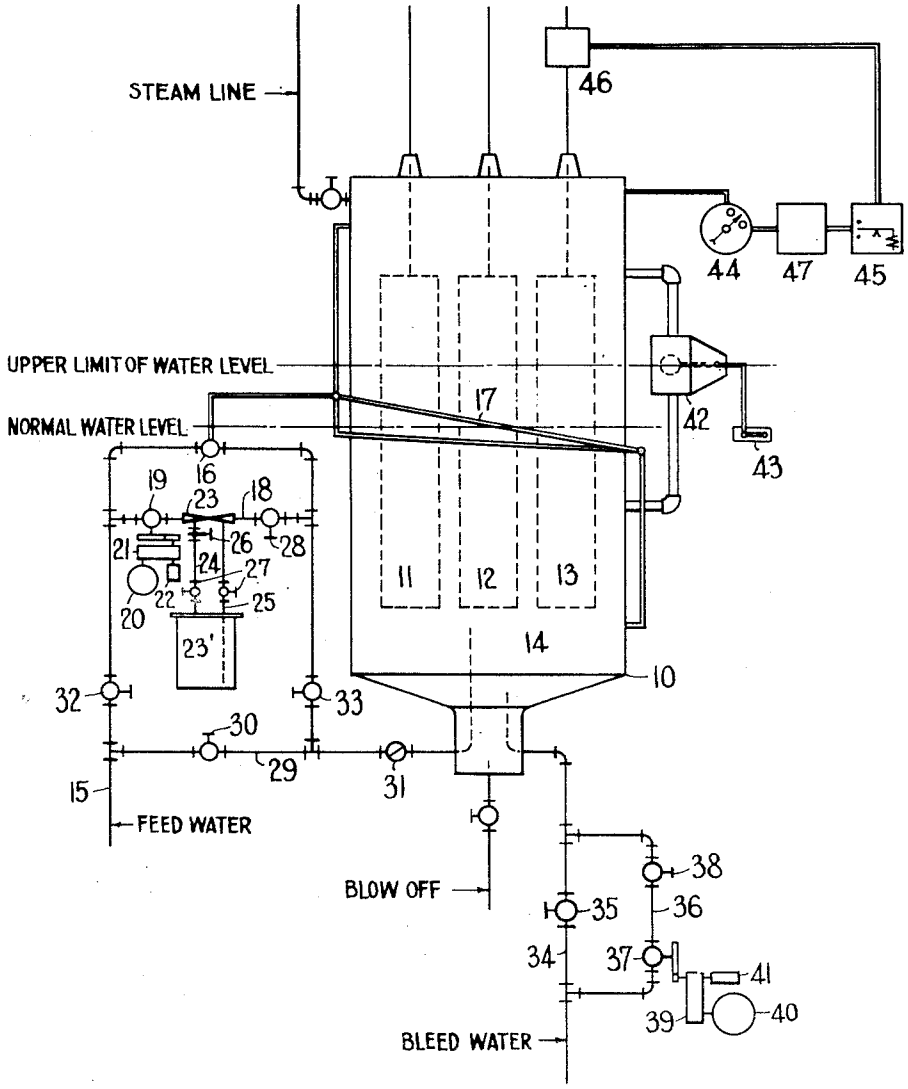


Fig. 1.

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