

R. E. SAGLE.
SIGNAL SYSTEM.
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1,395,208.

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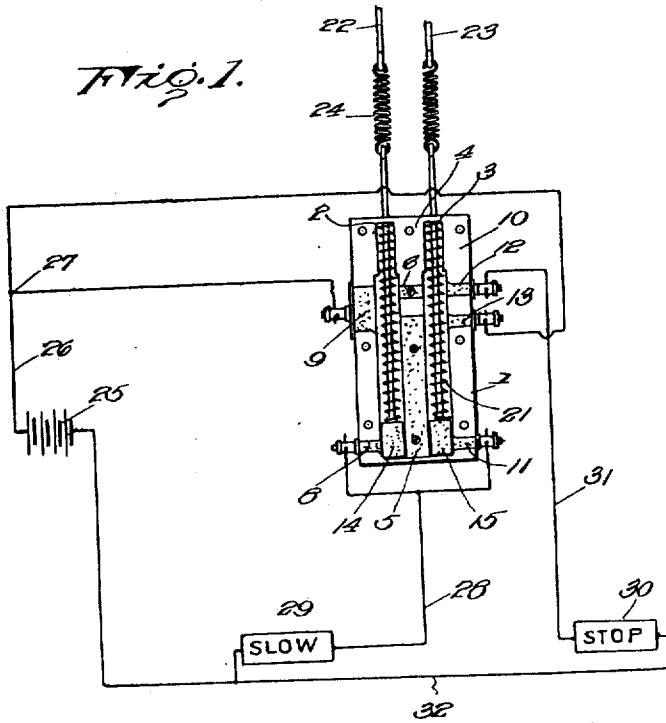


Fig. 2.

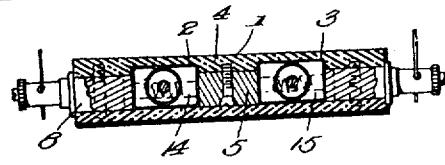
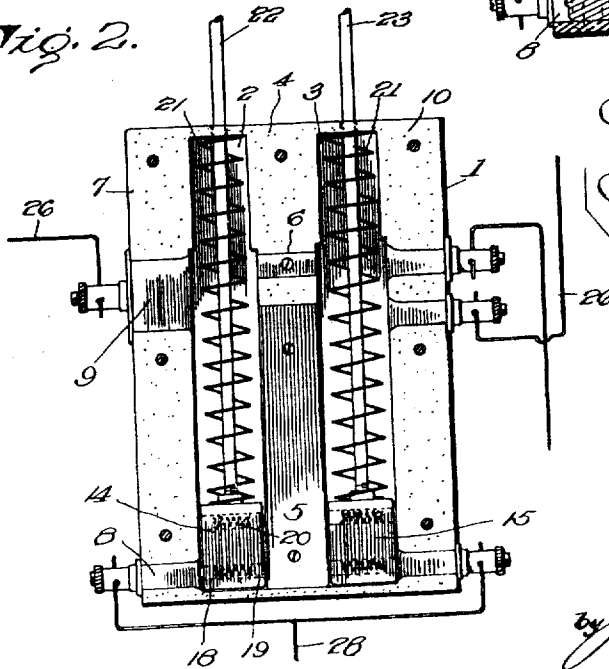
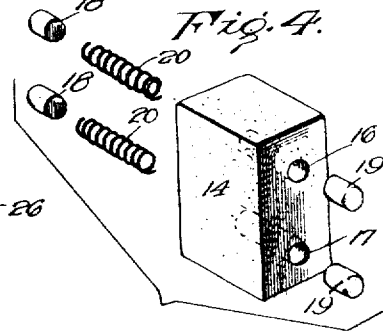


Fig. 4.



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UNITED STATES PATENT OFFICE.

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SIGNAL SYSTEM.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROY E. SAGLE, a citizen of the United States, residing at Roseville, in the county of Muskingum and State of Ohio, have invented certain new and useful Improvements in Signal Systems, of which the following is a specification.

This invention relates to a signal system for automobiles, adapted for automatic actuation in a movement of a control member of the automobile, whereby a signal is displayed for the information of the following vehicles, which signal corresponds to an action contemplated through the operation of the particular automobile control.

The improved system is designed to be entirely automatic and immediately responsive to automobile control by the driver, such for example as indicating a "stop" signal when certain automobile control devices tending to stop the automobile are operated, or a "slow" signal under similar automobile control.

Specifically, the system coöperates with the brake pedal and with the clutch pedal, and includes a particular type of switch responsive to the action of either pedal to automatically display the "slow" signal; and which switch is equally responsive to the operation of both pedals to automatically display a "stop" signal.

In the drawings:—

Figure 1 is a diagrammatic view illustrative of the system.

Fig. 2 is a plan of the switch with the cover removed.

Fig. 3 is a transverse section of the same.

Fig. 4 is a perspective view of the contact block and contact members shown separated.

The improved system is primarily dependent upon the switch, here shown as the block 1, of suitable insulated material, having spaced parallel channels 2 and 3 therein. The wall 4 between the channels 2 and 3 is provided with a contact section 5 for a portion of its length from one end, and is further provided with a relatively narrow contact section 6 beyond and spaced from the end of section 5. The outer wall 7 of channel 2 is provided with a contact section 8 at one end and opposite one end of the section 5, and with an additional contact section 9 which transversely aligns with the section 6 and the adjacent end of section 5. The outer wall 10 of channel 3 is provided

with an end contact section 11 opposite the end of section 5, and with spaced contact sections 12 and 13 transversely aligned respectively with the section 6 and the adjacent end of section 5.

Slidably mounted in each channel 2 and 3 is a contact block, such blocks 14 and 15 being of identical construction. The blocks are of insulated material and are each formed adjacent their ends with transverse channels 16 and 17, to receive contact members. The contact members of each channel are here shown as metallic sections 18 and 19 slidably fitting the respective channel and normally spaced for contact operation by an interposed spring 20.

The respective contact members 18 and 19 are arranged to coöperate with the appropriate contact sections of the block 1, when properly disposed, and one pair of such members of each block are so disposed that when the blocks are in normal position metallic connection is had between the section 5 and the sections 8 and 11.

The respective ends of the channel, 2 and 3 are suitably closed to limit the movement of the blocks in both directions and springs 21 are arranged to hold the blocks in the normal position described. The blocks are connected to certain control members of the automobile, for example block 14 may be connected by wire or other connector 22 to the clutch pedal, and block 15 may be similarly connected at 23 to the brake pedal. Both connectors preferably include extension spring sections 24 so that the blocks may be positioned under a limited movement of the pedals, and the further movement of the pedals not interfered with.

The wiring system coöperating with the improved switch is shown more particularly in Fig. 1, wherein the battery 25 is connected by conductor 26, branch at 27 to the contact sections 9 and 13 of the switch block 1. The contact sections 8 and 11 of such switch block are connected by conductor 28 to a "slow" signal 29 of any appropriate type to be operated by the passage of current therethrough. A "stop" signal 30 is in connection through conductor 31 with contact section 12 of the block 1. The common return 32 from the signals leads to the battery, or both signals and battery may be grounded if desired.

With the parts in the normal position as illustrated it is apparent that no current is

flowing to the signals. Through operation of the clutch pedal the block 14 is drawn to a position to cause the contact members of such block 14 to establish metallic connection between the sections 9 and 6 and 9 and 5 of the block 1. Current now reaches the slow signal 29, through conductor 26, contact section 9, block contact members, contact section 5, block contact members of block 15, section 11, and conductor 28. With the clutch out the speed of the automobile is of course retarded, and the slow signal thus displayed. If the brake pedal is operated, which would also have the effect of retarding the speed of the automobile, a similar energization of the slow signal results. In this instance the block 15 is drawn forward and the current through conductor 26 passes through contact section 13, the aligned contact members of block 15, contact section 5, contact members of block 14, contact section 8, and conductor 28. If however both clutch and brake pedals are operated, the apparent intention being to stop the car, the stop signal is energized in the following manner. With both blocks 14 and 15 in advanced position the metallic contact is had between contact section 9, 6 and 12. The current then reaches the stop signal through conductor 26, section 9, contacting members of block 14, section 6, contacting members of block 15, section 12, and conductor 31.

Therefore in the operation of either the clutch or brake pedals, which would have the effect to retard the movement of the car the "slow" signal is displayed, while in the operation of both the clutch and brake pedals, which would have the effect to stop the car, the "stop" signal is displayed.

The switch may be secured at any appropriate point so long as it can be conveniently connected to the respective pedals, and in fact the entire device may be concealed from view. The operation is wholly automatic, and it is of course contemplated that the signals be capable of being illuminated when energized for operation, for signaling at night.

What I claim is:

1. A signal system for automobiles or the like, including two independent signals, circuits respectively controlling said signals, a switch member adapted to control said circuits, said switch member being operated by manually actuated members for the control of the vehicle, said switch member being responsive in the actuation of either of said

control members to govern one signal circuit alone and responsive in the actuation of both said control members to govern the other circuit alone, whereby in the actuation of either of said control members for the vehicle one signal only is operated and in the actuation of both said control members for the vehicle the other signal only is actuated.

2. A signal system operated from the brake and clutch pedals and including a slow signal and a stop signal, circuits for energizing said signals a switch block arranged in said circuits and independent means operable in said block and connected respectively to the clutch and brake pedals to energize the slow signal on operation of either the clutch or brake pedal and to operate the stop signal on actuation of both the clutch and brake pedal at the same time.

3. A signal system operated from the brake and clutch pedals and including a slow signal and a stop signal, circuits for energizing said signals, switching means connected to the clutch and brake pedals to energize the slow signal on operation of either the clutch or brake pedal and to operate the stop signal on actuation of both the clutch and brake pedal at the same time.

4. A signal system operated from the brake and clutch pedals of an automobile and including a slow signal and a stop signal, circuits for energizing the signals, a switch member connected to and movable by the brake pedal, a second switch member connected to and movable by the clutch pedal, and contact elements for said circuits controlled by the positions of the respective switch members, said contact members being arranged to close the circuit to the slow signal upon operation of either of said members and to close the circuit to the stop signal in the operation of both of said members at the same time.

5. An automobile signal system including independent signals, a circuit for each of said signals, a switching means connected to one control member of an automobile, a second switching means connected to another control member of the automobile, the operation of either switching means closing the circuit to one of said signals and the simultaneous operation of both of said switching means closing the circuit to the other of said signals.

In testimony whereof I affix my signature.

ROY E. SAGLE.