Oct. 24, 1933. E. V. STEINER 1,931,967

DIRECTION INDICATING SIGNAL FOR AUTOMOBILES

Filed Aug. 25, 1932

Fig. 1.

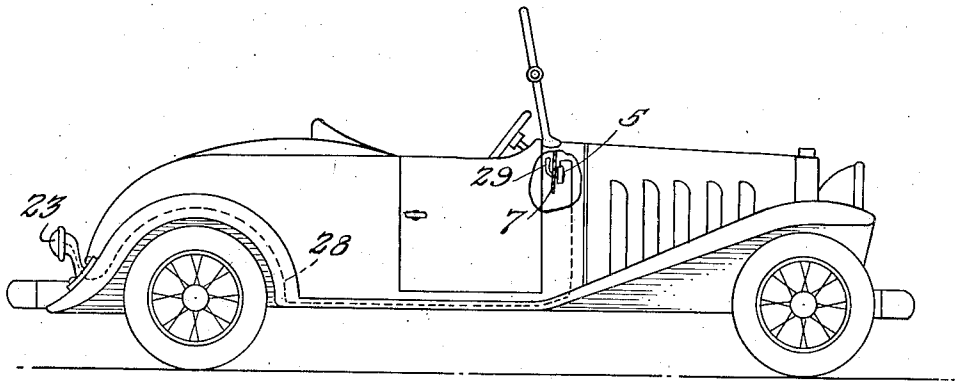


Fig. 2.

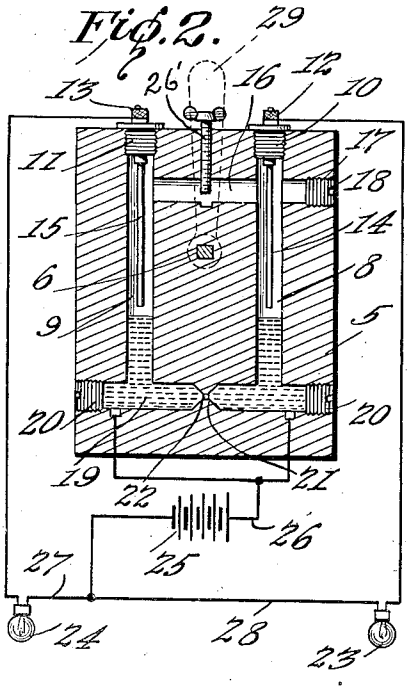
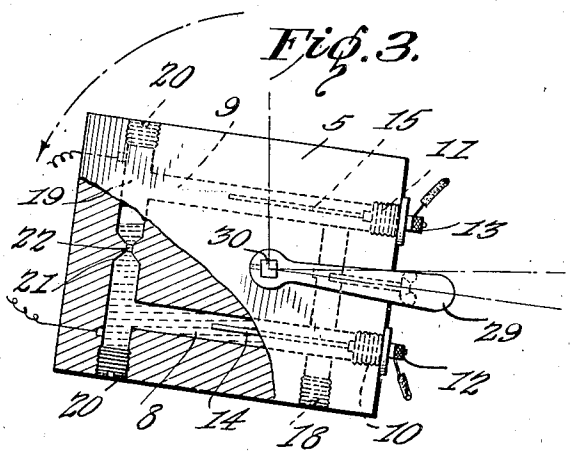


Fig. 3.



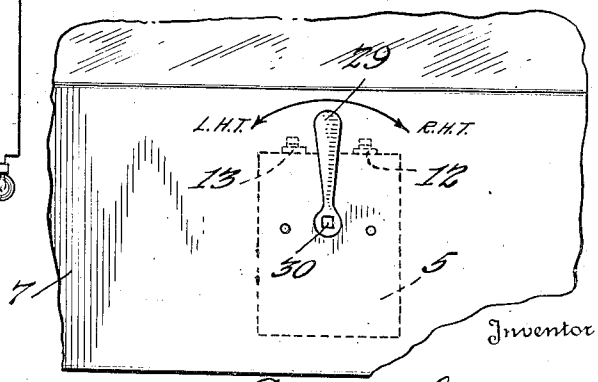


Fig. 4.

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DIRECTION-INDICATING SIGNAL FOR AUTOMOBILES

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Application August 25, 1932. Serial No. 630,454

2 Claims. (Cl. 200—33)

This invention relates to signals for automobiles and the like, and the primary object of the invention is to provide means for indicating the direction of an intended turn, that is to say whether it be to the left or right, in order that the operators of vehicles in the rear may be apprised of the intention of the operator of the vehicle having the signals as to the direction he will turn at an intersection.

A device of this character is of utility and prime importance in connection with the operation of trucks at all times as the distance from the driver's seat to the side of the truck precludes manual signalling as by the projection of the hand of the operator, and the invention is furthermore of increased importance in connection with the operation of vehicles in all sorts of weather when the windows are closed and manual signalling is impossible or inconvenient.

It is a further object of this invention to provide novel means whereby a circuit may be established to one or another of lamps, preferably located at the rear of the vehicle, which lamps may have legends or other indicia indicating the left or right hand turn which upon observation by the drivers of following vehicles will convey information which will enable them to operate with safety.

It is a further object of this invention to provide a control for the circuits from a battery to the aforesaid elements, whereby the circuit after being established will remain closed for a predetermined time depending upon the time of operation of the switch and means contained therein for controlling the flow of a flowable conductor which after displacement by the manual operation of the device gravitates to return the switch to its normal position and at the same time interrupt the circuit through the conductor as the said conductor recedes from the electrode as the device assumes its inoperative position.

It is a further object of this invention to provide a body having channels in which the conductor will flow, one or more of the channels being provided with means for retarding or interrupting the flow in order to prevent the electrode from being uncovered before the signal has been displayed for the time necessary for its proper observation.

It is furthermore an object of the invention to provide a body of the character indicated which is simple in structure and which comprises comparatively few, inexpensive parts which have proven efficient and satisfactory in use.

With the foregoing and other objects in view, the invention consists in the details of construction, and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawing forming part of this application in which like characters denote corresponding parts in the several views, and in which—

Figure 1 illustrates a view in elevation of an automobile showing diagrammatically a signaling device embodying the invention;

Figure 2 illustrates a sectional view of the body of the device and diagrammatically the circuits for the direction indicating elements;

Figure 3 illustrates a view similar to Figure 2 with the body in a different position of adjustment, omitting the details of the circuit; and

Figure 4 illustrates a view in elevation showing an instrument board and the location of the switch body associated therewith.

In the present embodiment of the invention, a body member 5 is formed of relatively non-oxidizable material and it may be relatively thin from front to rear. It is provided with a transversely disposed aperture 6 to receive a mounting such as a bolt or the like by which it is rotatively supported on any appropriate part of an automobile and it is here shown as being applied to the instrument board 7.

The metallic body is provided with two approximately parallel channels or bores 8 and 9 preferably intersecting the upper edge of the body and terminating short of the bottom of the body. The upper end of each channel 8 and 9 is provided with insulating plugs 10 and 11 respectively which may be threaded in place and these act as terminals for conductors 12 and 13 respectively which are connected to electrodes 14 and 15 respectively, which electrodes extend to locations approximating the lower ends of the channels.

The body is also provided with a transverse channel 16 intersecting the channels 8 and 9 near their upper ends and preferably the upper channel merges with one edge of the body as shown at 17 where a plug 18 applied to the channel closes its end.

The body is also provided with a transversely disposed channel 19 which preferably terminates at the two edges of the blade and the outer ends of said channel are provided with closures 20 such as plugs or the like.

The channel 19 intersects the channels 8 and 9 and at a location between the channels 8 and 9, the channel 19 is provided with a partition or

diaphragm 21. In the formation of this partition or diaphragm, the body is bored transversely from the two edges and the thickness of the partition will be determined by the depth of the boring. A portion of the partition is then removed to form an orifice or duct 22 through which a fluid conductor may flow to occupy positions on either side of the partition.

The conductors 12 and 13 are in circuit with lamps 23 and 24 respectively which may, as stated, be provided with legends or indicia to indicate a left hand turn or a right hand turn.

The ordinary battery 25 of the automobile may be provided with a conductor 26 leading to the channel 19 containing the conductor and the lamps by conductors 27 and 28 respectively are electrically connected to that pole of the battery opposite the pole to which the conductor 26 is connected.

The opening through the channel 16 is regulated by any suitable valve or gate here shown as a screw 26' threaded in the member.

When the apparatus is in normal position, the conductor will be contained in the channel 19 and occupy positions in the channels 8 and 9 to the approximate level illustrated in the drawing although this of course may be changed to suit particular requirements.

When the signal is to be established, a handle 29 on a shaft 30 on which the body is supported is manipulated and the body is turned to a degree that the channels 8 and 9 are slightly inclined with the terminals 10 and 11 on a horizontal plane lower than the horizontal plane occupied by the opposite ends of the channels 8 and 9. This movement causes the conductor on one side of the partition to flow into the channel 16 and thence to the channel opposite that in which it was stationed at the beginning of the movement. The relation of parts is such, however, that not all the conductive material on the side of the partition from which the conductive material flows as aforesaid is emptied from the channel 19 on the aforesaid side of the partition, and notwithstanding the tendency of the conductive material to seek a level, in normal operation the residue of the conductive material will not escape through the orifice of the partition 21, since the influence of the weight of the displaced conductive material will cause a movement of the body to a degree which will check the flow of the residue in its attempt to acquire equilibrium.

When the conductor which has been displaced from the one side of the partition to the channel opposite that from whence it flowed initially, the electrode will be submerged and current established for lighting a lamp, and this operation can be alternated by turning the body or member 5 in an opposite direction to substantially the same degree so that the operator may selectively establish a circuit through either of the lamps and when so established, the circuit will be maintained for a time proportional to the flow of the conductive material and the time required for the parts to assume their normal inoperative position.

I claim:

1. In an electric switch, an oscillatively mounted member, said member having a horizontally disposed channel near its lower end, also two vertically disposed channels extending from the top of the member and intersecting the first mentioned channel, a partition in the first mentioned channel having a restricted aperture in the first mentioned channel between the two second mentioned channels, the said member having a horizontally disposed channel intersecting the vertically disposed channels near the top of the member, electrodes in the vertically disposed channels terminating above the first mentioned horizontally disposed channel, a flowable conductor in the channels normally near the lower ends of the vertically disposed channels and in the first mentioned horizontally disposed channel, a source of electricity having terminals in the first mentioned channel and conductors connected to the electrodes.

2. In an electric switch, an oscillatively mounted member, said member having a horizontally disposed channel near its lower end, also two vertically disposed channels extending from the top of the member and intersecting the first mentioned channel, a partition in the first mentioned channel having a restricted aperture in the first mentioned channel between the two second mentioned channels, the said member having a horizontally disposed channel intersecting the vertically disposed channels near the top of the member, electrodes in the vertically disposed channels terminating above the first mentioned horizontally disposed channel and in such relation to the walls of the channels that a conductor flowing longitudinally of the electrode which is uppermost after the switch has been manipulated will pass the said electrode out of contact therewith, a flowable conductor in the channels normally near the lower ends of the vertically disposed channels and in the first mentioned horizontally disposed channel, a source of electricity having terminals in the first mentioned channel and conductors connected to the electrodes.

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