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R. C. PATTON

SWITCH

Filed Sept. 16, 1921

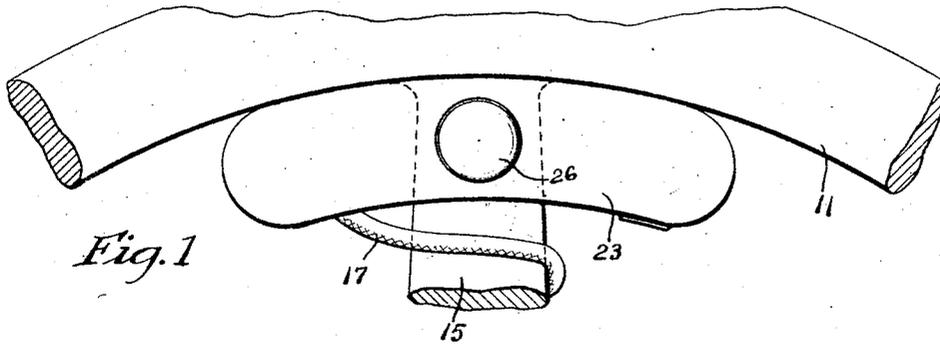


Fig. 1

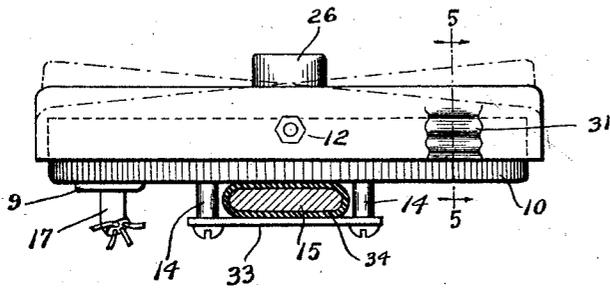


Fig. 2

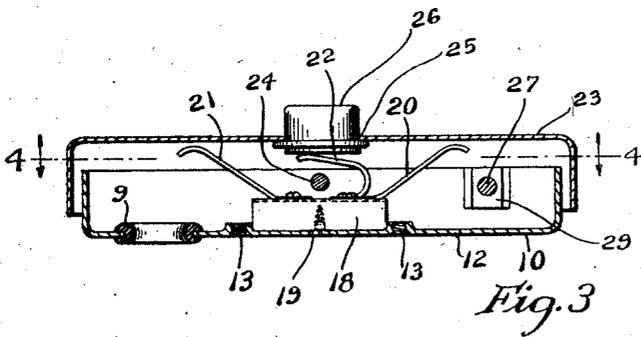


Fig. 3

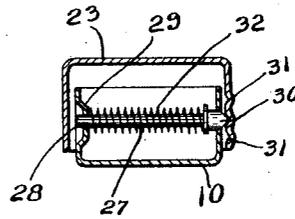


Fig. 5

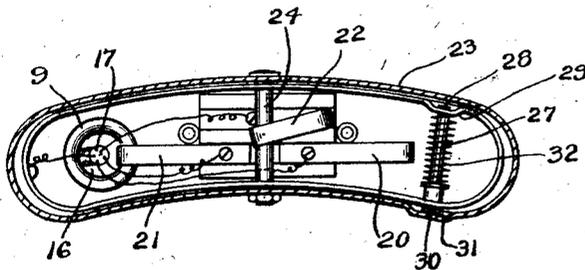


Fig. 4

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RALPH CLIFTON PATTON, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO PATTON-MACGUYER COMPANY, OF PROVIDENCE, RHODE ISLAND, A CORPORATION OF RHODE ISLAND.

SWITCH.

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To all whom it may concern:

Be it known that I, RALPH C. PATTON, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Switches, of which the following is a specification.

This invention relates to improvements in electric switches more particularly adapted for use on motor vehicles for controlling the light and the horn circuits; and the object of this invention is to provide a simple and effective device of this character which may be readily applied to the steering wheel of the vehicle within easy reach of the hand of the driver so that by simply pressing downward on one end of the device it is caused to tip or rock and complete a corresponding circuit and by pressing down on its opposite end the first circuit may be broken and another completed, and by positioning the device on neutral both circuits may be opened.

Another object of my invention is the provision of a push button in the casing whereby a separate and independent circuit to the horn may be closed as often as desired regardless of the relative position of the rocking casing.

The invention further consists in the provision of a detent for retaining the rockable casing in adjusted position.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawing:—

Figure 1 is a top view of my improved electric switch.

Figure 2 is a side elevation of the switch shown as mounted upon the arm of the steering wheel.

Figure 3 is a sectional side elevation of the switch showing the cover in neutral position.

Figure 4 is a top view sectioned on line 4—4 of Figure 3, showing the internal mechanism.

Figure 5 is a sectional end view sectioned on line 5—5 of Figure 2.

It is found in practice desirable to provide a simple and practical switch for motor vehicles adapted to be readily attached

to a spoke of the steering wheel adjacent the natural steering position of the hand of the operator so that by a simple pressure on either end of the casing the cover is tipped and a contact made or broken either to light, dim or extinguish the lights as desired, also the horn may be blown all without requiring the operator to remove his hand from the wheel, and the following is a detailed description of one means by which this result may be accomplished:—

With reference to the drawings, 10 designates the body portion of my improved electric switch which is preferably formed of sheet stock drawn up into substantially trough shape and curved from end to end to fit the general curvature of the steering wheel rim 11 of a motor vehicle.

The lower wall or bottom 12 of this body member is provided with inturned socket portions 13 adapted to be threaded to receive binding screws 14 by which the device may be clamped or secured to a spoke 15 of the wheel. An opening 16 is also formed in this bottom wall near one end thereof through which the cable 17 carrying the circuit wires is passed into the casing and an insulating grommet 9 may be secured in this hole if desired. I have also secured to this bottom wall a block 18 preferably of insulating material by means of a screw 19.

On this block I have mounted a flexible contact arm 20 extending on an incline upwardly towards one end of the body and I have attached another and independent contact arm 21 to this block to extend upwardly towards the opposite end of this body member.

On this insulating block I have also mounted a spring contact strip 22 for the purpose presently described. Over this body member of the switch I have placed a cover member 23 which is similar in shape to the body member but is of a little greater length and width and this cover member is pivotally connected to this body member by means of a pin 24 which passes transversely through the side walls of both.

In the upper wall of this cover member I have provided an opening 25 in which is mounted a push button 26 of insulating material adapted to rest upon and be held in position by the curved contact spring 22.

In order to releasably retain the cover member in adjusted position on the body

member I have provided a detent comprising a bolt 27 set transversely adjacent one end of these members, one end 28 of this bolt being mounted to slide endways through an inwardly depressed portion 29 of the side wall of the body. The opposite end 30 of this bolt is in chisel shape and extends through the opposite wall of this body portion to engage any one of a series of depressions 31 in the side wall of the cover, the bolt being pressed into engagement with these depressions by a spring 32 whereby when the right end of the cover is pressed downwardly the inner surface at this end of the cover engages the contact member 20 and so completes an electric circuit to the dim lights, the detent at this time entering the upper recess 31 to retain the cover in that position, and when the left end of the cover is depressed the detent will snap from one to another of these depressions to engage the lower one and so retain the contact member 21 in contact with the under surface of the cover to complete a circuit to light the bright or head lights.

In order to sound the horn it is only necessary to press the button 26 inwardly which carries its contact 22 into engagement with the pivot pin 24, which pin being in circuit with the metal body portion, completes a circuit to the horn causing the same to sound. It will be noted by my improved construction that dirt and foreign matter are completely prevented from getting into the device, the contacts being all adjacent the top or under side of the cover thereby effectually preventing dirt from lodging thereon; and then again the contacts are of the wiping or sliding type which again assists in keeping them bright and clean.

In securing the device to a spoke of a steering wheel, I may use a clamp bar 33 and in this case the spoke may be wound or covered with a strip or layer of insulating material 34 and the wire-carrying cable 17 as led out from the casing, may be wound about the spoke, if desired, to the center of the wheel and then about the steering post to be connected to the lamps, the horn and the source of energy.

The device is extremely simple and practical in construction and is adapted to be readily applied to a spoke of a steering wheel and positioned to be readily engaged

by the hand of the operator to be operated without removing his hand from the wheel to either control the dim or bright lights or to blow the horn.

It will be noted that the horn button projects sufficiently above the surface of the device so that it can be readily felt and found by the hand even in the dark.

The foregoing description is directed solely towards the construction illustrated, but I desire it to be understood that I reserve the privilege of resorting to all the mechanical changes to which the device is susceptible, the invention being defined and limited only by the terms of the appended claims.

I claim:

1. An electric switch comprising a trough-shaped body member, a correspondingly-shaped sheet metal cover member having a portion of its wall corrugated to form a series of recesses, said cover fitting over and being pivoted to said body, electric contacts in said body operated by a tipping movement of said cover to close and open a circuit, and a spring actuated detent mounted on said body for engaging any one of said recesses for retaining said cover in different adjusted positions.

2. An electric switch comprising a trough-shaped body member, a cover member fitting over and pivoted to said body, electric contacts at opposite ends of said body whereby the tipping of said cover in opposite directions closes and opens corresponding circuits, and a press button in said cover for closing an independent circuit.

3. An electric switch comprising an elongated trough shaped body member, a correspondingly-shaped cover member inverted over said body both having their side walls pivotally connected together intermediate their ends, electric contacts located within and adjacent the opposite ends of said body, each to contact with the under side of its end of the cover when the same is tipped downward towards it, a spring-pressed detent housed in the body for retaining the cover in any adjusted position, and a central push button in said cover for completing an independent circuit.

In testimony whereof I affix my signature.

RALPH CLIFTON PATTON.