Jan. 16, 1940. V. W. SCHULTZ 2,187,060

AUTOMOTIVE SIGNAL

Filed May 27, 1938

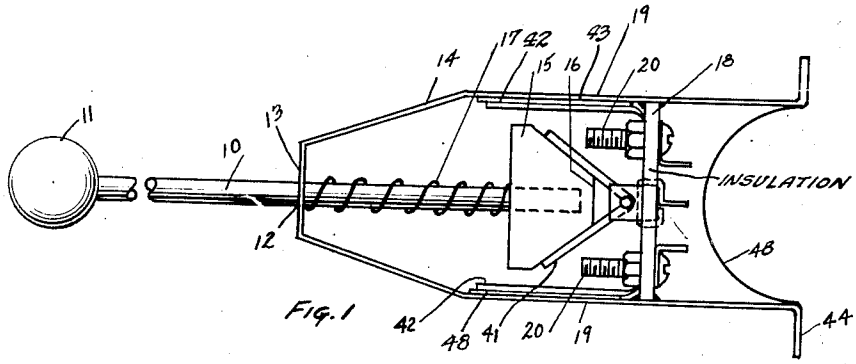


FIG. 1

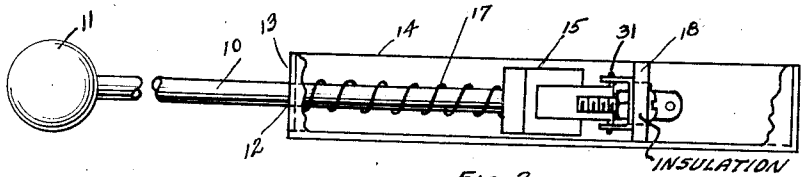


FIG 2

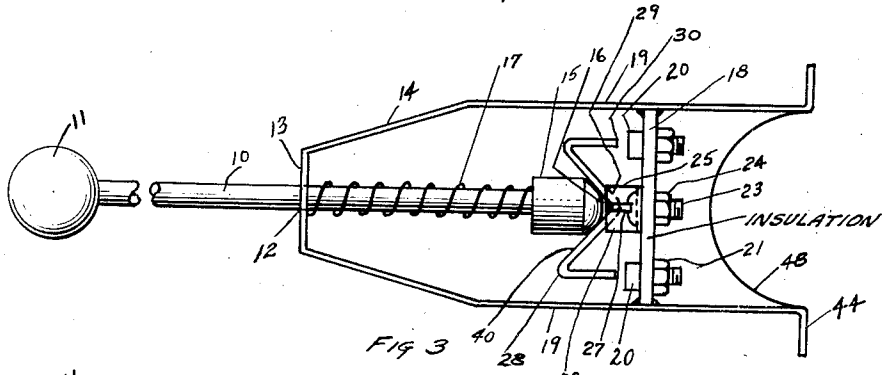


FIG 3

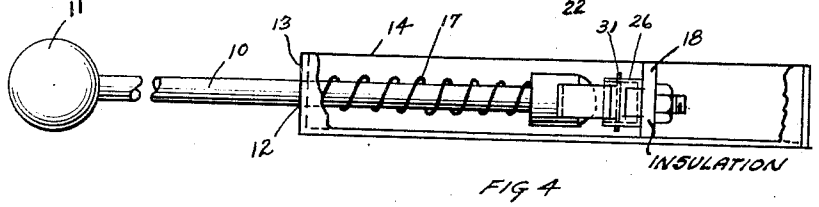


FIG 4

Vinton W. Schultz INVENTOR.

BY James R. McKnight,

ATTORNEY.

Patented Jan. 16, 1940

2,187,060

UNITED STATES PATENT OFFICE

2,187,060

AUTOMOTIVE SIGNAL

Vinton W. Schultz, Chicago, Ill., assignor of one-half to E. H. Anderson, Chicago, Ill.

Application May 27, 1938, Serial No. 210,342

3 Claims. (Cl. 200—6)

My invention relates to a signal switch device to indicate which way an automobile or other structure will turn.

Among the objects of my invention is to create a signal switch device in which the signal is actuated only when the user is actually operating the device and which will immediately and automatically cease to signal upon the user taking his hand off the device, and such other objects, advantages and capabilities as will later more fully appear and which are inherently possessed by my invention.

While I have shown in the accompany drawing a preferred embodiment of my invention yet I wish it understood that the same is susceptible of modification and change without departing from the spirit of my invention.

Referring to the drawing Figs. 1 and 3 are plan views of different embodiments of the switch mechanism of my automotive signal and Figs. 2 and 4 are side views thereof respectively.

The preferred embodiment selected to illustrate my invention comprises a metal rod 10 which may have at its upper end a grip means such as a knob, ball or handle 11 preferably adjacent the steering wheel of the automobile. Said rod 10 extends inwardly and adjacent its lower end passes through an opening 12 in an end wall 13 of body member 14. Attached to the inner end of rod 10 is a head 15 tapering to an end 16. A resilient member 17 is coiled around that portion of the rod 10 between the head 15 and the end wall 13, with opposite ends of said resilient member 17 contacting the inner side of end wall 13 and head 15.

A transverse member 18 of non-conductor material extends across said body member 14 and is attached to opposite side walls 19. A pair of spaced metal contact members 20 extend through said transverse member 18 and are positioned thereto by nuts 21 or rivets or other suitable means so that each contact member 20 is adjacent one of the oppositely disposed side walls 19 of the body member 14.

A metal bracket 22 is centrally attached to said transverse member 18 preferably by means of a metal bolt 23 or other suitable means extending through said transverse member and a nut 24 or other suitable means. Said bracket 22 has a pair of side walls 25 and a pair of end portions 26 having apertures 27. A metal movable member 28 is provided which may in one form be substantially M shaped with its middle portion 29 blunt or slightly curved and the ends 30 shorter than the middle portion 29. The middle portion 29 has a pair of oppositely disposed flanges 31 adapted to fit within aperture 27 so that the bracket 22 holds member 28 from displacement in the combination.

The end 16 of head 15 is formed to normally rest within middle portion 29 of movable member 28. In this position neither of the ends 30 touch spaced contact members 20.

Bolt 23 or other suitable means serves the double function of attaching the bracket 22 to the transverse member 18, and of acting as an electrical contact member. A connection leads from said bolt 23 through a fuse block to the ungrounded terminal of an electric battery, thus making the bolt 23 a live terminal. A connection leads from one of the contact members 20 to an electric lighting bulb behind a signal indicating one of a right or left hand turn. Another connection leads from the other of the contact members 20 to an electric lighting bulb behind another signal indicating the other of a right or left hand turn.

In use when the operator desires to indicate that he is going to make a right or left hand turn he moves the rod 10 in the same direction that he moves the steering wheel for such a turn. Movement of the rod 10 causes blunt end 16 to slide on one of the outer surfaces or arms 40 of the movable M shaped member 28 causing said member 28 to rock or pivot on bracket 22 so that one of the ends 30 tounches one of the spaced contact members 20. This completes an electric circuit and lights the bulb behind the signal desired by the operator.

Immediately upon release of pressure by the operator on rod 10 resilient member 17 exerts pressure on the end 16 causing the end 16 to slide in the opposite direction on arm 40 down to middle portion 29 and pivot M shaped member 28 back to normal position. This removes the end 30 from contact with contact member 20 and breaks the electric circuit so as to turn off at once the lighted signal.

My movable member 28 need not necessarily be M or W shaped as shown in my preferred embodiment. I may construct my member 28 as substantially V shaped, thus eliminating the ends 30 previously shown in the M shaped form. When the V shaped type is used the spaced contact members 20 will be longer so that when the V shaped member is rocked the upper ends 41 thereof will contact the end member 20 desired.

With either the M or V shaped movable member 28 or any modification thereof I may provide that the side walls 19 of the body member

14 have metal contact portions or conductors 42 leading to the spaced contact members 20. Insulation 43 will of course separate the side walls 19 from the conductors 42 if a metal body member is used. When the movable member is rocked its ends or upper portions will touch one of contact portions 42 to complete the electric circuit.

The body member 14 at its inner end 48 is rounded to fit around the steering column of an automobile or other structure, preferably directly under the steering wheel. The body member has outturned portions 44 or other suitable portions adjacent its inner end to receive attachment means to secure the same to the automobile or other structure.

The side walls 25 of bracket 22 act as stop members to prevent head 15 from disengagement with movable member 28.

With either the M or V shaped movable member 28, I may eliminate the side walls 25 of bracket 22. In this construction my head 15 must be on the same angle as the arms 40 of movable member 28, to aid in the normal centering of end 16 within middle portion 29 of movable member 28 when manual pressure is released on rod 10.

The head 15 may be of any desired shape, and its end 16 may be blunt as shown in one form or flat as shown in another embodiment or any other desired contour.

If the body member 14 is constructed of metal then I employ a head 15 of non-conductor material to insulate rod 10 from movable member 28.

Having thus described my invention, I claim:

1. A switch comprising a body member, a non-conductor member attached to said body member, a pair of spaced electrical contact members and a live terminal attached to said non-conductor member, a movable member pivotally attached to said non-conductor member, a manually operable rod extending through a wall of said body member and having a non-conductor head, a spring positioned on said rod between said wall and said head to normally position said head in the middle portion of said movable member, the middle portion of said movable member contacting said live terminal at all times, the ends of said movable member being shortened so that when said movable member is in normal position the ends are adjacent but do not touch said spaced electrical contact members, said head adapted to slide on said movable member in either direction upon manual pressure being applied to the rod so that said movable member is pivoted by the head until one of the ends contacts one of the electrical contact members to complete an electrical circuit, said spring upon release of manual pressure on the rod adapted to force the head of the rod back to normal position on the middle portion of said movable member and immediately break the electrical circuit.

2. A switch comprising a body member, a non-conductor member attached to said body member, a pair of spaced electrical contact members and a live terminal attached to said non-conductor member, a substantially M shaped member pivotally attached to said non-conductor member, a manually operable rod extending through a wall of said body member and having a head, a spring positioned on said rod between said wall and said head to normally position said head in the middle portion of said M shaped member, the middle portion of said M shaped member contacting said live terminal at all times, the ends of said M shaped member being shortened so that when said M shaped member is in normal position the ends are adjacent but do not touch said spaced electrical contact members, said head adapted to slide on said M shaped member in either direction upon manual pressure being applied to the rod so that said M shaped member is pivoted by the head until one of the ends contacts one of the electrical contact members to complete an electrical circuit, said spring upon release of manual pressure on the the rod adapted to force the head of the rod back to normal position on the middle portion of the said M shaped member and immediately break the electrical circuit.

3. A switch comprising a body member, a non-conductor member attached to said body member, a pair of spaced electrical contact members and a live terminal attached to said non-conductor member, a substantially V shaped member pivotally attached to said non-conductor member, a manually operable rod extending through a wall of said body member and having a rounded head tapering to a smaller rounded blunt end, a spring positioned on said rod between said wall and said head to normally position said head in the middle portion of said V shaped member, the middle portion of said V shaped member contacting said live terminal at all times, the ends of said V shaped member when said V shaped member is in normal position are adjacent but do not touch said spaced electrical contact members, the rounded blunt end of said head slidable on said V shaped member in either direction upon manual pressure being applied to the rod so that said V shaped member is pivoted by the head until one of the ends contacts one of the electrical contact members to complete an electrical circuit, said spring upon release of manual pressure on the rod cooperating with the rounded end of the head to slide the head back to normal position on the middle portion of said V shaped member and immediately break the electrical circuit.

VINTON W. SCHULTZ.