

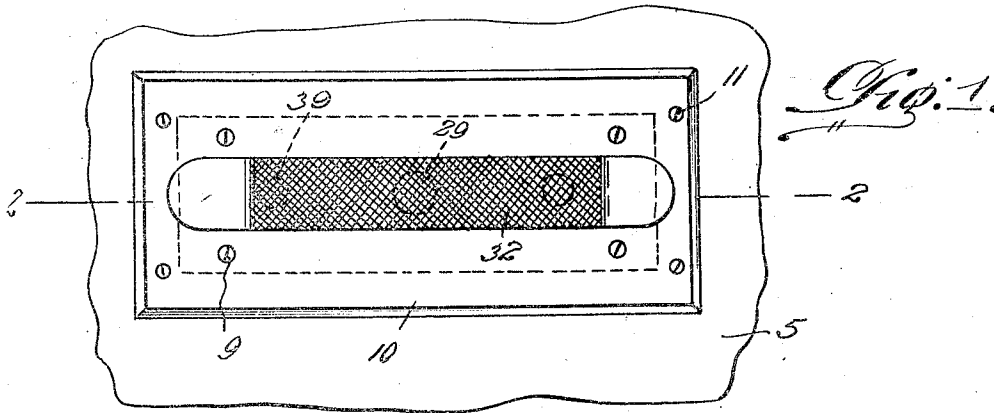
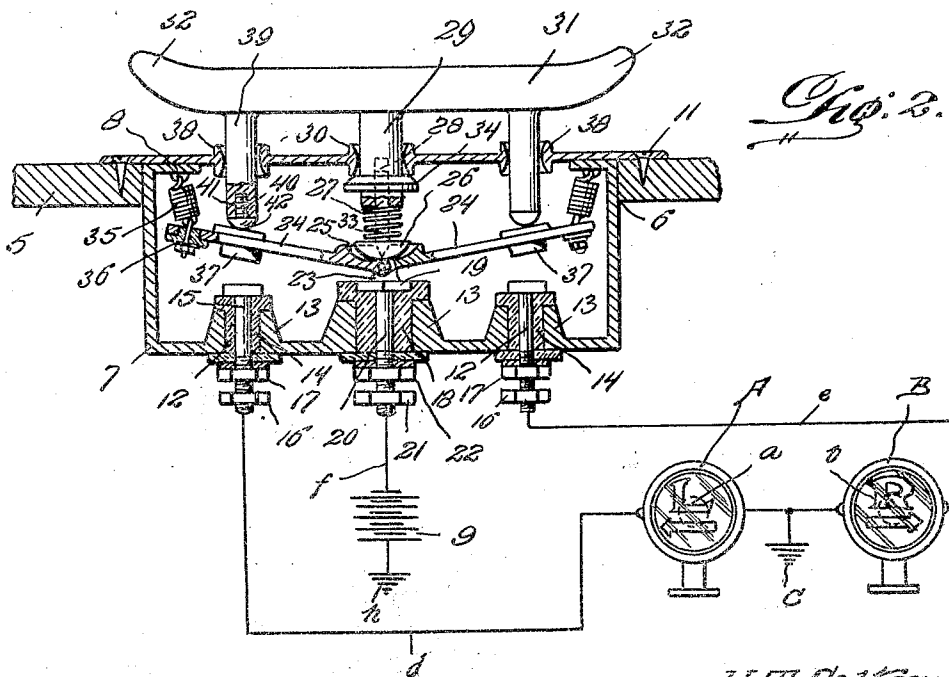
May 25, 1926.

1,585,651

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SWITCH FOR DIRECTION INDICATORS

Original Filed March 24, 1924



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SWITCH FOR DIRECTION INDICATORS.

Application filed March 24, 1924, Serial No. 701,556. Renewed October 20, 1925.

This invention relates generally to direction indicators for vehicles of the electrical type, and particularly those comprising a pair of electrical signal members to indicate the intentions of the driver to make a right or left hand turn, the invention having specific reference to a foot controlled switch whereby the electric current from a source of electric supply may be directed to either of said signal members at the will of the operator.

The primary object of the invention is to provide an electric signal switch of this character that may be readily disposed within an opening of the floor board of the machine, in order that the same may be controlled by the foot of the operator of the machine, without requiring the removal of the hands from the steering wheel, which is now generally essential in the actuation of signal switches with which I am familiar.

A further object is to provide a switch of this character that is relatively simple of construction, inexpensive of manufacture, and easy of operation, and one that is not liable to become readily out of order, the same comprising but few parts, and these correlated in such a manner as to reduce the possibility of disarrangement to a minimum.

With the foregoing and other objects in view as the nature of the invention will be better understood, the same comprises the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

The drawing indicates like reference characters and corresponding parts throughout both of the views:

Figure 1 is a top plan view of an electric vehicle signal switch, constructed in accordance with the present invention, and

Figure 2 is a detail vertical longitudinal sectional view thereof, this view also disclosing the wiring diagonal between said switch, the source of electric current and the signal elements of the vehicle direction indicator with which said switch is to be employed.

Now, having particular reference to the drawing, 5 designates the foot board of a motor vehicle, that in this instance is provided with a rectangular shaped opening 6 at any desirable point thereon, and preferably at a point between the accelerator of the vehicle and the brake pedal thereof.

My novel switch per se, constitutes the provision of an open upper sided rectangular shaped metallic casing 7, that is adapted to be positioned within the opening of the floor board 5 in a manner as clearly indicated in Figure 2. The upper open side of this casing 7 is formed with an inwardly extending flange 8, to which is secured through the medium of set screws or the like 9 a cover plate 10 of relatively greater length and width than said casing 7. Adjacent the four corners of this cover plate 10, the same is provided with counter-sunk openings for permitting the casing to be rigidly secured within the opening of the floor board through the medium of wood screws 11.

The bottom wall of the casing 7 is provided with three spaced openings 12, coaxial with which are hollow bosses 13, formed upon the inner surface of the bottom wall of said casing 7.

Disposed within the endmost openings as well as their associated bosses 13 are sleeves 14 of dielectric material, that are flanged upon their inner ends for preventing the downward movement of the sleeves within said bosses. Positioned within said sleeves 14 are posts 15, that are also headed upon their inner ends and screw threaded upon their outer ends for receiving binding nuts 16 and 17.

Disposed within the central opening of the bottom wall of said casing 7 as well as its coaxial boss is a sleeve 18 of dielectric material, that is substantially similar to the sleeves 14—14 above described. The upper end of this dielectric sleeve is also headed for engagement upon the upper end of the box 13, and in this instance, said head is formed with an angular shaped socket for receiving the angular shaped head 19 of a post 20, that is positioned within said dielectric sleeve. The lower end of this post 20 is likewise threaded for receiving binding nuts 21 and 22.

The head 19 of the last mentioned post 20 is provided with upstanding spaced ears 23, between which are pivoted the inner ends of a pair of oppositely extending upwardly directed metallic arms 24—24. The adjacent ends of these arms are so formed as to provide a cup 25, for receiving the dielectric head or button 26 formed upon the lower end of a pin 27. The upper end of this

pin 27 is slidably disposed within a socket 28 formed within the lower end of a pin 29 of relatively large cross sectional area, that is movable through a collared opening 30, centrally of the casing cover plate 10.

The inner wall of the collar of said opening is curved as shown in Figure 2 for allowing of a rocking movement of said pin 29, which pin is formed integrally upon the underside of a foot actuated bar 31, that is milled at 32 intermediate its ends, and upon its top side for preventing slipping of the foot thereon. The opposite ends of this foot bar are curved upwardly at 32 for preventing the accidental disengagement of the foot from said bar when the foot is placed thereon in an emergency.

The foot bar 31 is normally maintained in an upwardly extending position as shown in Figure 2 through the medium of a coiled spring 33 that surrounds the pin 27 between the head or button 26, and the pin 29 carried by said foot bar 31. For preventing the total disengagement of the foot bar carried by pin 29 from the collared opening of the casing cover plate 10, said pin 29 is formed adjacent its inner end with a stop flange 34. The bars 24—24 above described are maintained in the upwardly extending position shown in Figure 2, through the medium of retractile springs 35, that are anchored at their opposite ends to said bars, and to the flange 8 respectively of the casing 7, and in this instance, it will be noted that an insulated connection 36 is provided between the lower ends of said springs and said arms.

The bars 24 are provided adjacent their outer ends with contact buttons 37 that are adapted to engage the heads of the posts 12 when said bars are moved in a downward direction upon their point of pivotal connection to the post 20.

Extending through collared openings 38 formed adjacent the opposite ends of the casing cover plate 10 are pendent pins 39, formed adjacent the opposite ends of the foot bar 31 and extending downwardly through said collared openings into the casing 7. The lower ends of these pins are formed with screw threaded sockets 40 for receiving the threaded stems 41 of buttons 42 of dielectric material that normally engage the contacts 37 of said bars 24. The collars of the openings in the casing cover plate are also formed with rounded inner edges for allowing of a rocking movement of the pins 39 therein.

The direction indicator with which the present switch is shown as being associated, constitutes a pair of indicating lamp boxes designated A and B respectively. The general construction of these lamp boxes is well known, and a detailed description thereof is not necessary, it only being necessary to set forth that each of said signal boxes is

equipped with an electric lamp, and in this instance, said electric lamps are designated respectively *a* and *b*.

Certain terminals of these electric lamps are grounded to the machine frame at *c*, while the remaining terminal of the lamp *a* is electrically connected as at *d* to the left hand post 12 of the switch. The other terminal of the electric lamp *b* is similarly electrically connected as at *e* with the right hand post 12 of the switch. The central post 20 of this switch is electrically connected at *f* to one post of the usual vehicle storage battery *g*, while the other post of said storage battery is grounded to the machine frame at *h*.

It will thus be apparent that preliminary to making a right hand turn of the vehicle, the driver thereof will depress the right hand end of the foot bar 31 through the medium of his foot, which depression of the foot bar will manifestly control a downward swinging movement of the right hand bar 24 within the switch casing for engaging its contact 37 with the right hand post 12 for obviously completing the circuit from the battery through the right hand post 12, thence through the electric lamp *b*, through the frame of the machine, and thence back to the other pole of the battery *g*. Similarly, the circuit may be completed to the bulb *a* of the signal box A when the left hand end of the foot bar is depressed.

Further details of operation as well as numerous advantages of a switch of this character will be at once appreciated by those skilled in the art, and even though I have herein shown and described the most practical embodiment of the invention with which I am at this time familiar, it is nevertheless to be understood that minor changes may be made therein, without departing from the spirit and scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a switch of the character described, an open sided casing, a cover plate for the open side of said casing, a binding post disposed centrally within said casing, a pair of binding posts extending within said casing upon the opposite sides of said first mentioned binding post, a pair of bars pivotally secured at their inner ends to said first mentioned binding post, means for normally maintaining said bars away from said pair of binding posts, and means slidably connected to said cover plate and extending outwardly thereof for selectively moving the contacts of said pivoted bars into engagement with said pair of binding posts.

2. In a switch of the character described, an open sided casing, a cover plate for the open side of said casing, a binding post dis-

posed centrally within said casing, a pair of binding posts extending within said casing upon the opposite sides of said first mentioned binding post, a pair of bars pivotally secured at their inner ends to said first mentioned binding post, means for normally maintaining said bars away from said pair of binding posts, means slidably connected to said cover plate and extending outwardly thereof for selectively moving the contacts of said pivoted bars into engagement with said pair of binding posts, said means comprising a foot bar formed with a pendent pin disposed for rocking movement within a central opening in said casing cover, and other pins adjacent the opposite ends of said foot bar disposed for rocking movement within openings adjacent the opposite ends of said cover plate for engagement with said bars pivotally disposed within said casing.

3. In a switch of the character described, an open sided casing, a cover plate for the open side of said casing, a binding post disposed centrally within said casing, a pair of binding posts extending within said casing upon the opposite sides of said first mentioned binding post, a pair of bars pivotally secured at their inner ends to said first mentioned binding post, means for normally maintaining said bars away from said pair of binding posts, means slidably connected to said cover plate and extending outwardly thereof for selectively moving the contacts of said pivoted bars into engagement with said pair of binding posts, said means comprising a foot bar formed with a pendent pin disposed for rocking movement within a central opening in said casing cover,

and other pins adjacent the opposite ends of said foot bar disposed for rocking movement within openings adjacent the opposite ends of said cover plate for engagement with said bars pivotally disposed within said casing, and automatic means for maintaining said foot bar in an elevated position.

4. In a switch of the character described, an open sided casing, a cover plate for the open side of said casing, a binding post disposed centrally within said casing, a pair of binding posts extending within said casing upon the opposite sides of said first mentioned binding post, a pair of bars pivotally secured at their inner ends to said first mentioned binding post, means for normally maintaining said bars away from said pair of binding posts, means slidably connected to said cover plate and extending outwardly thereof for selectively moving the contacts of said pivoted bars into engagement with said pair of binding posts, said means comprising a foot bar formed with a pendent pin disposed for rocking movement within a central opening in said casing cover, and other pins adjacent the opposite ends of said foot bar disposed for rocking movement within openings adjacent the opposite ends of said cover plate for engagement with said bars pivotally disposed within said casing, automatic means for maintaining said foot bar in an elevated position, and means for preventing the total disengagement of the bar carrying pins from the openings in said switch casing cover plate.

In testimony whereof I affix my signature.
HERBERT T. COLTON.