W. V. MUELLER.

SWITCH.

APPLICATION FILED AUG. 16, 1918.

1,297,390. Patented Mar. 18 1919.

Fig. 1.

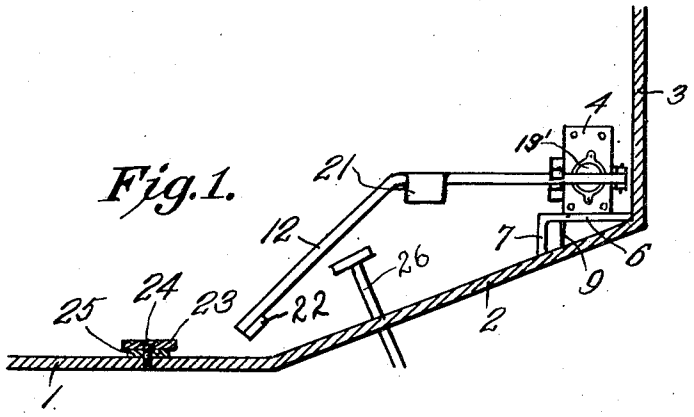


Fig. 2.

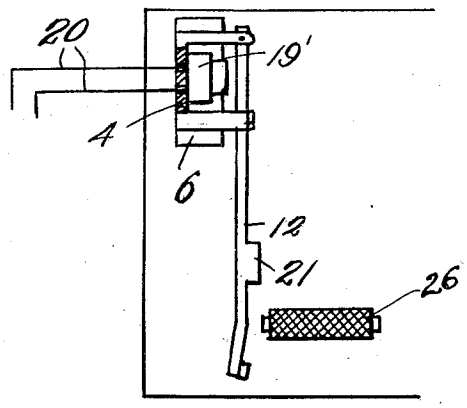
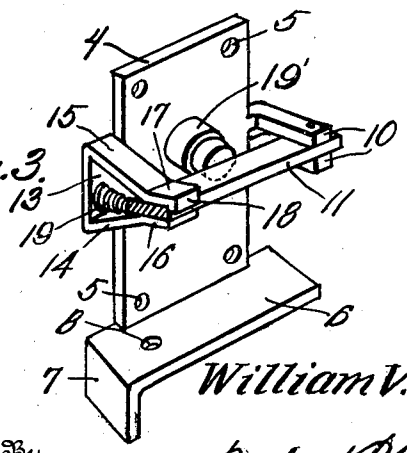


Fig. 3.



Witnesses

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SWITCH.

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To all whom it may concern:

Be it known that I, WILLIAM V. MUELLER, a citizen of the United States, residing at Millstadt, in the county of Saint Clair and State of Illinois, have invented certain new and useful Improvements in Switches, of which the following is a specification.

This invention relates to switches and more particularly to a switch of the type used upon motor vehicles to control or actuate a horn or other signal.

The principal object of this invention is to provide means whereby a switch of the character mentioned can be easily operated by the foot of the driver thus permitting the driver to sound a warning when an emergency arises without relaxing his control of the steering wheel.

Another object of the invention is to construct and arrange the different parts of the invention in such manner that the operating means for the switch will be disposed in proximity to one of the foot controlled pedals, preferably the clutch pedal whereby the switch and pedal may be simultaneously actuated by the foot of the operator.

A still further object of the invention resides in the specific construction and combination of parts whereby the device is rendered efficient, comparatively simple and inexpensive, and capable of being quickly and conveniently attached to practically any type of motor vehicle without necessitating any substantial modifications in the construction of the vehicle.

Other objects of the invention as well as the specific construction and arrangement of the various parts thereof will be more readily understood from the following description and accompanying drawings, in which:—

Figure 1 is a fragmentary sectional view taken through a standard vehicle body showing my invention applied thereto.

Fig. 2 is a plan view of the construction shown in Fig. 1, a portion of the supporting plate being broken away to show the conducting wires leading from the switch or push button.

Fig. 3 is a perspective view of the supporting plate or bracket to which the operating lever is attached, the lever being broken off to show the arrangement of the spring in connection therewith.

Referring to the drawings by numeral, 1 designates the foot board of the vehicle body, 2 the toe board thereof and 3 the dashboard. A vertical supporting plate indicated at 4 is adapted to be secured to one side of the vehicle body adjacent the dash board 3 and for this purpose is provided with a plurality of openings 5 through which suitable fastening members may be passed. At its lower edge this plate is provided with an integral supporting foot consisting of the horizontal portion 6 engaging the dash board 3 at one end and having its opposite end bent downwardly at right angles as indicated at 7 and extended into engagement with the toe board 2 to assist in maintaining the plate 4 in a vertical position. Adjacent the downwardly extending end or portion 7 this foot is provided with an opening 8 through which a suitable fastening member 9 may be extended into engagement with the toe board to further assist in holding the foot member and plate in position.

A pair of spaced supporting lugs 10 are formed integral with one of the longitudinal edges of the plate 4 and extend outwardly at right angles thereto substantially as shown in Fig. 3. Received between these lugs and pivotally secured thereto is one end of a lever 11. This lever extends across the plate 4 and beyond the opposite longitudinal edge thereof and has its free end bent downwardly at an angle as indicated at 12. The edge of the plate 4, opposite the lugs 10 is provided with an integral side extension 13 from which extends the guide arms 14 and 15. These guide arms 14 and 15 converge inwardly toward one another for a portion of their length substantially as shown and are then turned to extend in spaced parallelism to provide the parallel guide portions 16 and 17 which engage opposite side faces of the lever 11 to guide the latter during its swinging movement in a horizontal plane. The extremity of the guide arm 15 is turned down or enlarged to provide an abutment lug 18 which is adapted to limit the outward swinging movement of the lever to prevent the same from passing out of engagement with said guide arms. A spring 19 is confined between the inner edge of the lever 11 and the adjacent face of the side extension 13 and normally holds said lever against the abutment 18 thus keeping the same spaced from the switch as will be hereinafter set forth. The switch designated at 19′ is of the usual push button type and may be mounted upon the plate 4 in any ap-

proved manner, being arranged in such relation with the lever 11 that when said lever is pressed toward the plate the push button will be moved to a circuit closing position thus actuating the horn or other signal to which it is adapted to be connected by means of the conductors 20 shown in Fig. 2.

Intermediate its length, the lever 11 is provided with an integral depending side extension or toe plate 21 and at its free end 12 with a similar toe plate 22, these plates being for a purpose to be hereinafter set forth. A rotatable disk 23 is secured upon the foot board 1 by means of a suitable supporting screw 24 which passes through the center of the disk and through a washer 25 mounted between the disk and foot board. By pressing the foot upon this disk, the slight turning movement of the foot necessary to engage the plate 22 and move the lever will be facilitated, as this disk is mounted to rotate freely in a horizontal plane upon the washer plate therebeneath. When the foot is on the vertically movable clutch pedal 26 the plate 21 instead of the plate 22 may be pressed by the toe to swing the lever to a switch closing position, and thus it will be seen that the switch can be readily operated either when the foot of the operator is resting upon the foot board 1 or is engaged with the clutch pedal as set forth.

In the operation of the signal, the foot of the operator if resting upon the foot board 1 may be engaged with the disk 23 and swung to one side to press the toe against the plate 22 and thus force the lever 11 inwardly against the push button 19'. After the signal has been operated and the toe disengaged from the plate 22, the spring 19 will swing the lever 11 to normal position against the abutment 18.

Owing to the provision of the plate or extension 21 it will be seen that the lever can also be operated as readily when the foot is engaged with the foot pedal 26.

The foregoing description and accompanying drawings have reference to what might be considered to be the preferred or approved form of my invention. I desire it to be understood that I may make such changes in construction, combination, and arrangement of parts, materials, dimensions, et cetera, as may prove expedient and fall within the scope of the appended claims.

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

1. An attachment for automobiles and other motor vehicles comprising a lever swinging in a horizontal plane, and extending past the vertically movable pedal and down to a point near the floor boards, and toe plates on said lever, one forward of said pedal and the other at its lowermost end, whereby the operator's toe may be borne against said lever in either of two positions.

2. An attachment for automobiles and other motor vehicles comprising a switch, a lever swinging laterally over the floor boards and adapted to actuate said switch when moved in one direction, the lever leading past a clutch pedal and having toe plates forward and rearward of said pedal, and a foot-rest on the floor of the machine in rear of the rearmost toe plate, whereby the operator's foot may engage the toe plate in either of two positions.

3. An attachment for automobiles and other motor vehicles comprising a switch, a lever laterally movable for controlling said switch, the lever extending over the floor boards and alongside a foot pedal, an upright plate on the lever just forward of said pedal whereby the operator may actuate said pedal with his foot and push said plate aside with his toe simultaneously, and means at the rear end of said lever whereby the operator may actuate the lever when his foot is not on the pedal.

4. An attachment for automobiles and other motor vehicles comprising a switch, a lever laterally movable for controlling said switch, the lever extending over the floor boards and alongside a foot pedal, an upright plate on the lever just forward of said pedal whereby the operator may actuate said pedal with his foot and push said plate aside with his toe simultaneously, a second plate depending from the lever at its rear end, and a rotary disk mounted on the floor boards in rear of the second plate whereby the operator may push the lever aside by putting his foot on this plate and his toe against the rear toe plate.

5. An attachment for automobiles and other motor vehicles comprising a switch, a pivotally mounted foot lever operable to close said switch, and a rotatable foot supporting member positioned in proximity to the free end of said lever to facilitate actuation thereof.

6. An attachment for automobiles and other motor vehicles comprising a supporting plate, a switch mounted thereon, a lever pivotally secured to said plate and extending across said switch, means for guiding said lever during swinging movement thereof in a horizontal plane, and a foot supporting member positioned in proximity to the free end of said lever and movable in another plane.

7. An attachment for automobiles and other motor vehicles, comprising a supporting plate, a switch mounted thereon, a lever pivotally secured to said plate and extending across said switch to operate the same, guide arms extending from said plate and engaging opposite sides of said lever, a

spring secured between said arms and engaging the inner edge of the lever to normally space the same from contact with said switch, and an abutment carried by one of said guide arms to limit outward swinging movement of the lever.

8. An attachment for automobiles and other motor vehicles comprising a supporting plate, a switch mounted thereon a lever pivotally secured to said plate and extending across said switch to operate the same, a side extension formed on one of the longitudinal edges of said plate, guide arms extending from said extension and engaging opposite sides of said lever, an abutment carried by one of said arms to limit outward swinging movement of the lever, and a spring confined between the inner edge of the lever and the adjacent face of said extension and normally holding said lever spaced from said switch.

9. An attachment for automobiles and other motor vehicles comprising a supporting plate, a foot portion carried by the lower edge of said plate and adapted for engagement with the toe board of a vehicle, a switch mounted on said plate, a lever pivotally secured to said plate and extending across said switch to operate the same, guide arms extending from said plate and engaging opposite sides of said lever, a second guide member engaged beneath the lever at a point between the free end thereof and said supporting plate, and a foot supporting member positioned adjacent the free end of said lever to facilitate operation thereof.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM V. MUELLER.

Witnesses:
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GEORGE NOLTE.