

H. E. STOUT,
DIRECTION INDICATOR.
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1,158,083.

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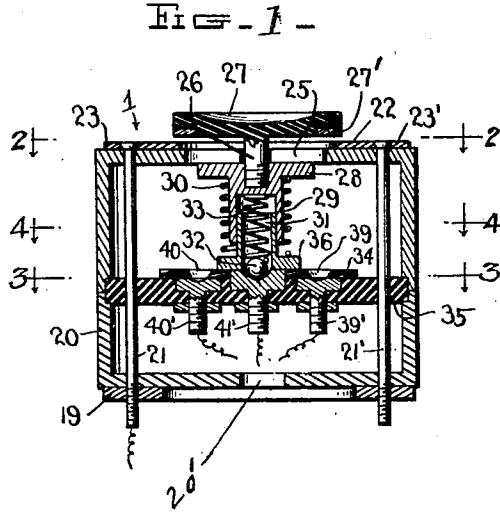
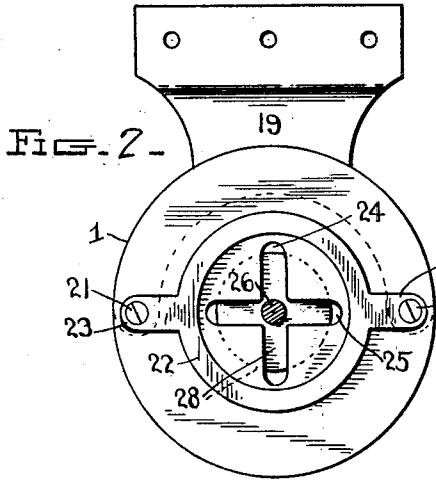


FIG. 3 -

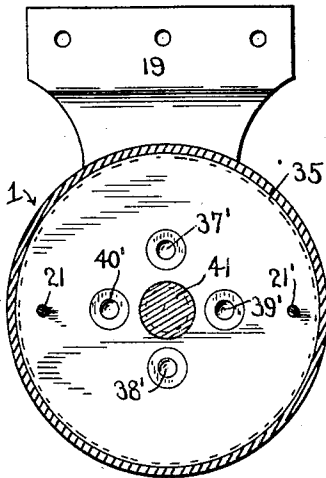
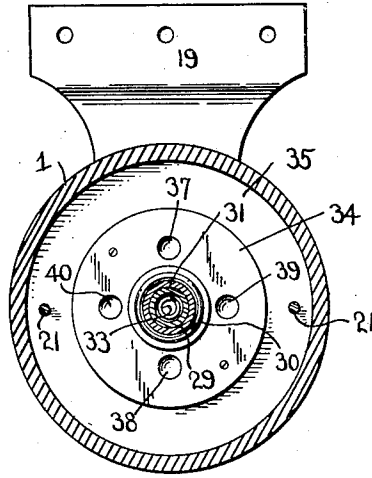


FIG. 4 -



Witnesses

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DIRECTION-INDICATOR.

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To all whom it may concern:

Be it known that I, HAROLD E. STOUT, a citizen of the United States of America, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Direction-Indicators, of which the following is a specification.

This invention has reference to selective switches, and it proposes, briefly, an improved device of that general class or type which is designed primarily for application to the signal system of a motor vehicle for the purpose of indicating the direction in which the vehicle is about to be driven or in other words any immediate change in course.

More especially, the invention comprehends a switch of the character stated, the movable member, or controller of which is adapted to close any one of a plurality of electric circuits at the will of the driver, thereby actuating the signal or signals included in that particular circuit.

The invention further contemplates certain hereinafter-described improvements in or relating to the construction of the switch proper, whereby the afore-mentioned controlling member thereof is enabled to close a supplemental or auxiliary circuit in addition to and independently of the main signal circuits, in order to actuate a signal of a different character from the main signals and with or without actuation of the same.

An embodiment of the invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a vertical sectional view of the invention; and Figs. 2, 3 and 4, are sectional views taken on the lines 2—2; 3—3; and 4—4 of Fig. 1.

The switch 1 is preferably connected in some suitable manner to the steering wheel as, for instance, by means of the bracket 19, owing to which construction the driver may manipulate the switch without entirely removing his hand from the wheel. As shown, the switch consists of a case 20 in the form of a hollow box fastened by bolts 21 and 21', to said bracket, and having arranged upon its top a metal ring 22 formed with two diametrically opposed extensions 23 and 23' with which the heads of said bolts are engaged. The aforementioned top member is provided with two slots 24 and 25, which bisect each other at right angles,

and in these slots is guided the stem 26 of a push button 27, or other movable operating member of like character. The push button 27 is provided with a contact plate 27' which makes an electrical contact with the metal ring 22 when the push button is depressed. The inner portion of said stem has a threaded connection with the head 28 of a sleeve 29 that is contained within the switch-case, the said head 28 being yieldingly held in elevated position against the under face of the top member by means of a spring 30, while the lower portion of the sleeve fits loosely over a second sleeve 31. The latter sleeve contains a contact device 32, here shown as a metal ball, and, above said ball, a spring 33 that exerts a downward pressure upon said ball and also assists spring 30 in holding sleeve 29 elevated.

Below the inner sleeve 31 there are arranged two superposed plates 34 and 35, made of some suitable insulating material and fastened together in any desired manner, the head 36 of said sleeve resting upon the upper plate, as depicted in Fig. 6. The said upper plate 34 is formed with four dished openings 37, 38, 39, and 40, which respectively register with depressions provided in the heads of four contact screws 37', 38', 39', and 40'. The screws just mentioned are carried by the lower plate 35, and the outer faces of their heads are exposed, as will be understood, while their stems project through said plate and extend below the same to permit the connection of the wires thereto. In addition to these screws, plate 35 carries a central screw 41', the head 41 of which extends not only through that plate, but also through the upper plate 34, the dished center of said head being located exactly beneath the lower end of the bore of sleeve 31 when the latter is in neutral position.

Referring to Fig. 1, it will be seen that the head 36 of sleeve 31 contacts directly with the head 41 of screw 41', and that in the neutral position of the push-button 27, the ball 32 rests in the seat or depression in said screw head. Now when said button is moved toward either end of either slot 24 or 25, the sleeves 29 and 31 will be shifted in the same direction, the latter sleeve carrying the ball 32 with it. These slots are so located in the top member of the switch case that their ends lie directly above the four openings 37, 38, 39, and 40, and as a result

of this construction, it will be apparent that when the stem 26 of the button has reached a slot end, the ball will have been brought into the opening directly beneath that end and will project into contact with the wall of the depression in the screw therebeneath. It may here be stated that the diameter of the head 36 of sleeve 31 is such as to permit it to electrically bridge connection between the central or main screw head 41 and the particular auxiliary screw with the head of which the ball happens at that time to make contact; but it will be understood that such connection is effected only when the ball has been shifted into contact with one of the auxiliary screws, since otherwise the sleeve head and the heads of the said auxiliary screws are insulated from each other by the interposed plate 34.

The wires leading from the contacts are brought through an opening 20' in the case bottom and are in circuit with the signal lamps, and electric horn so that by movement of the push button in the desired direction in any selected one of the four arms of the cruciform case slot, the desired light may be lighted or the horn sounded.

What is claimed is:

1. A selective switch comprising a case having an interiorly-arranged plate provided with a plurality of electrical contacts; a contact plate mounted upon the exterior of said case; an operating element mounted for vertical and lateral movement in said case and having a head which is disposed exteriorly of the case for engagement with the second-named plate when said element is depressed; and a movable electrical contact carried by said element for interchangeable

engagement with the first-named contacts during the lateral movements of said element.

2. A selective switch comprising a case having a slot of cruciform in its top, a plate within the case having a central contact at the center of the cruciform slot and having a contact for each arm of the slot, a pair of telescopic sleeves between the plate and the top of the case having heads on their outer ends, an operating member on the exterior of the case having a connection with one of the sleeves which connection extends through the slot, a coil spring surrounding the outer sleeve and engaged at its ends with the heads of the sleeve, a ball in the inner sleeve engageable with the contacts, and a coil spring on the interior of the inner sleeve bearing against the ball.

3. A selective switch comprising a case having a slot of cruciform in its top, a plate within the case having a central contact at the center of the cruciform slot and having a contact for each arm of the slot, an operating member exterior of the case, a pair of spring pressed telescopic members between the plate and the top of the case, a spring pressed contact borne by one of said telescopic members, and a connection between said operating member and said telescopic members extending through said cruciform slot.

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

HAROLD E. STOUT.

Witnesses:

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LELA RITCHIE.