

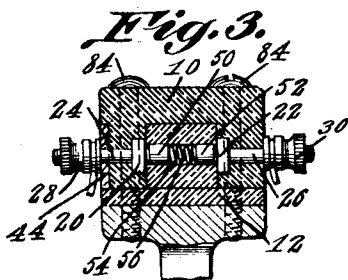
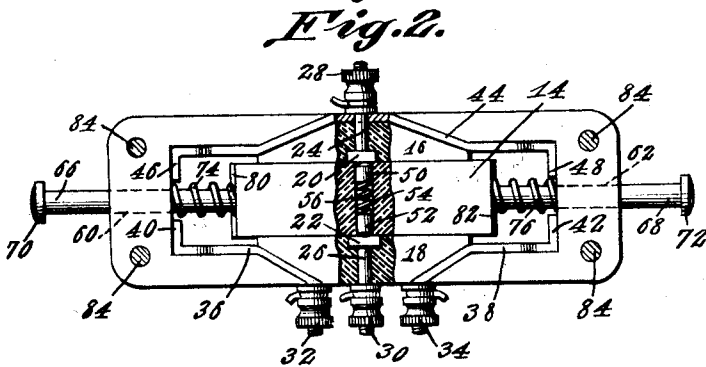
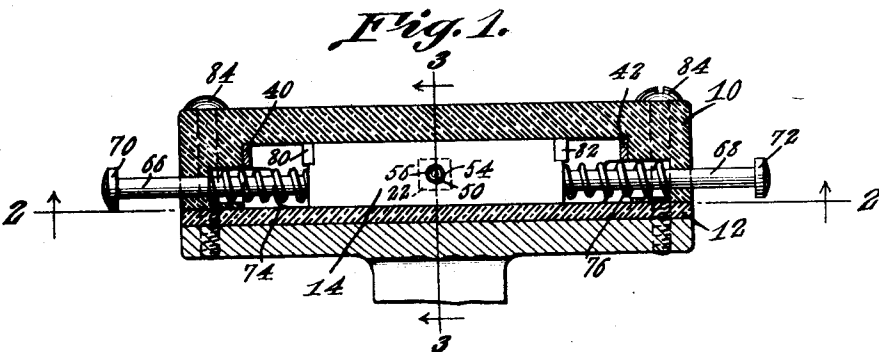
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R. E. FLEEK

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SWITCH

Filed Feb. 13, 1929



R. E. Fleek, INVENTOR
BY *Victor J. Evans*
ATTORNEY

UNITED STATES PATENT OFFICE

ROY E. FLEEK, OF OIL CITY, PENNSYLVANIA

SWITCH

Application filed February 13, 1929. Serial No. 339,671.

This invention relates to electrical apparatus and more particularly to a three way switch designed to be used in connection with a signalling device such as is shown in my co-pending application bearing Serial No. 310,544 and filed Oct. 5, 1928.

The principal object of the invention is to provide a switch which is designed to temporarily close one or the other of two circuits when manually operated but which when released will close a third circuit and maintain the same closed until the switch is again operated.

A still further object of the invention is to provide a switch which is simple but rugged in its construction, which will be extremely unlikely to get out of order and which is well adapted to perform the service required of it. Convenience of arrangement of parts, comparative durability, and comparative inexpense of manufacture are further desiderata that have been borne in mind in the production and development of this invention.

In the accompanying sheet of drawings forming a part of this specification, I have shown one embodiment of the invention and in these drawings:—

Figure 1 is a sectional view taken longitudinally thru the switch assembly.

Figure 2 is a sectional view taken substantially along the line 2—2 of Figure 1.

Figure 3 is a sectional view taken substantially along the line 3—3 of Figure 1.

In all of the above mentioned views, like characters of reference are employed to designate like parts thruout and the device involves in its general organization a casing 10 having a back plate 12 adapted to enclose the operative parts of the switch. While this casing may be formed in any suitable manner and of any suitable material, it is preferable to form the same of hard rubber, bakelite or the like on account of the strength and durability of the same.

Mounted within the casing 10 is a slidable member 14 loosely mounted between shoulders 16 and 18 formed on the casing. A pair of contacts 20 and 22 are embedded in the shoulders 16 and 18 respectively and these

contacts are connected to conductors 24 and 26 that extend thru the casing to binding posts 28 and 30 respectively. Binding posts 32 and 34 are positioned on the casing adjacent the binding post 30 and these latter binding posts are connected to conductors 36 and 38 respectively that extend thru the casing and terminate in contacts 40 and 42.

A conductor 44 in contact with the binding post 28 terminates in contacts 46 and 48 on the interior of the casing at either end thereof adjacent the contacts 40 and 42.

In order that a circuit may be closed between the binding posts 28 and 30, a pair of metallic plungers 50 and 52 are mounted in a transverse bore 54 in the slidable member 14. These plungers are connected to the coil spring 56 which spring is disposed between these members and tends normally to urge the same apart against the contact points 22 and 20 when the bore 54 is in alignment with these contacts. The casing 10 is provided with bores 60 and 62 in each end thereof and in these bores are mounted a pair of plungers 66 and 68 having buttons 70 and 72 thereon. Disposed between the ends of the casing and the slidable member 14 are a pair of coil springs 74 and 76 which coil springs normally urge slidable member 14 to its central position within the casing with the bore 54 in alignment with the contacts 20 and 22.

A pair of contacts 80 and 82 are secured to the ends of the slidable member 14 and these contacts are adapted to selectively engage the contacts 40 and 46 or the contacts 42 and 48 to close the circuit between these respective members.

In actual use, the switch assembly may be bolted to the dash board of an automobile or may be mounted on a plate secured to the steering wheel of a vehicle by means of cap screws 84. Normally the parts forming the switch assembly resume the position shown in Figure 2 with the plungers 50 and 52 together with the spring 56 closing the circuit between the contacts 20 and 22 leading from the binding posts 28 and 30 respectively. This circuit may if desired flow thru the tail

light of the vehicle which after dark is at all times lighted.

If it is desired to close the circuit between the contacts 40 and 46 leading from the binding posts 32 and 28 respectively, it is merely necessary for the operator to press the plunger 68 so that the contact 80 will close the circuit between these two contacts 40 and 46 when the member 14 is in its extreme left hand position. The circuit thus closed may if desired pass thru a lamp mounted in any convenient position on the vehicle and designed to indicate that the driver of the vehicle is about to make a left hand turn. When this latter circuit is closed, it will be seen that the plungers 50 and 52 are out of alignment with the contacts 20 and 22 and consequently the circuit permitting a flow thru the tail light will be open.

If it is desired to close the circuit between the contacts 42 and 48, it is merely necessary for the operator to press the plunger 66 so that the contact 82 will close the circuit leading from the binding post 28 to the post 34. This latter circuit may be passed thru an additional lamp mounted on the vehicle which when lighted will indicate that the driver of the vehicle is about to make a right hand turn.

While the invention is admirably adapted for use in connection with the motor vehicle signals, it is of course to be understood that the same is capable of many other uses. The invention is not to be limited particularly to signalling devices and only insofar as the same is specifically pointed out in the appended claim do I desire to be limited.

What is claimed is:—

In a switch of the class described, a casing of insulating material, a block of insulating material mounted for sliding movement longitudinally in the casing, means connected with the block whereby it may be adjusted, springs engaging the opposite ends of the block to yieldably hold the same in an intermediate position, fixed contacts upon opposite side walls of the casing intermediate the ends thereof, contacts slidably mounted in the opposite sides of the block, a spring disposed between the last mentioned contacts to hold the same in engagement with the first mentioned contacts when the block is in its normal, intermediate position, a pair of spaced fixed contacts upon each end wall of the casing, a corresponding contact of each pair being in circuit with one of the first mentioned fixed contacts, conductor wire connecting means in circuit with the said one of the fixed contacts, and a conductor wire connecting means in circuit with each of the other contacts of the pairs.

In testimony whereof I affix my signature.

ROY E. FLEEK.