

J. V. SCHAFER.
SWITCH.
APPLICATION FILED MAR. 29, 1918.

1,359,435.

Patented Nov. 16, 1920.

Fig. 1

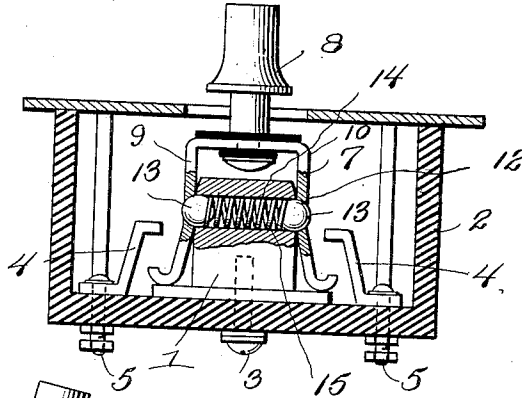


Fig. 2.

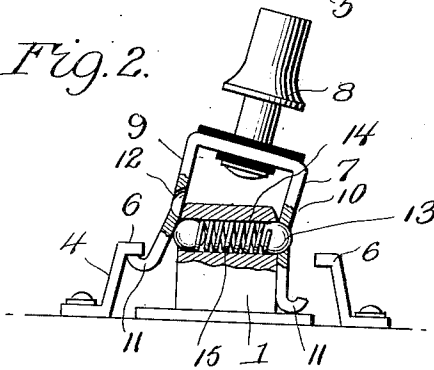


Fig. 3.

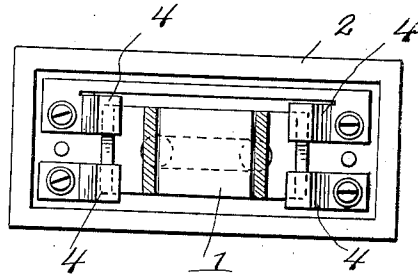
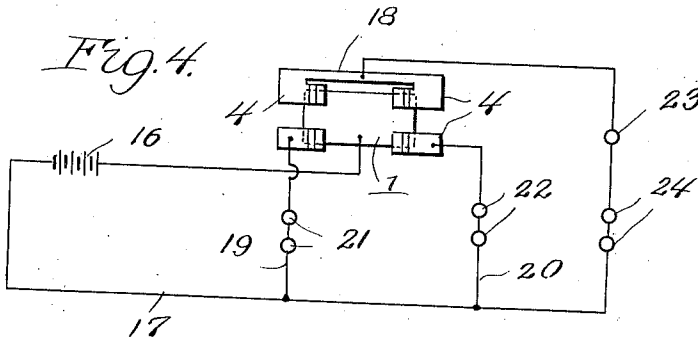


Fig. 4.



Witnesses

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SWITCH.

1,359,435.

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To all whom it may concern:

Be it known that I, JOHN V. SCHAFER, a citizen of the United States, residing at Marietta, in the county of Washington and State of Ohio, have invented new and useful Improvements in Switches, of which the following is a specification.

This invention relates to an electric switch and has for its primary object to provide a switch capable of closing a plurality of circuits upon simple operation thereof.

An object of the invention is to provide a switch of substantial construction consisting of few parts the movable member of which may be mechanically supported in any of its adjusted positions.

With these and other objects in view the invention will be better understood from the following detailed description taken in connection with the accompanying drawing wherein;

Figure 1 is a sectional view through the switch.

Fig. 2 is a detailed view showing one position of the blade.

Fig. 3 is a top plan view of the switch with the top removed.

Fig. 4 is a diagrammatic view showing one use of my improved switch.

My invention consists of a metallic base 1 supported in any suitable form of casing 2. To this base is connected a binding screw 3 to which one terminal of a circuit is connected. Spaced from the base is a plurality of contacts 4 each associated with a binding screw 5. These contacts are provided with hook shaped extremities 6 for a purpose hereinafter described.

Embracing the base 1, but disconnected therefrom, is a substantially inverted U shaped blade 7 to the horizontal portion of which is connected the handle 8 projecting exteriorly of the casing. Each of the arms 9 and 10 of the blade are bent in a manner to allow a rocking movement of the blade upon the base and further provided with curved extremities 11 adapted to engage with the extremities 6 of the contacts and in this particular showing the blade 7 is of a width great enough to connect the contacts in pairs as clearly shown in Fig. 3. Intermediate of the length of the arms 9 and 10, I provide openings 12 of a size to engage portions of the surface of the balls 13 slidably mounted in an opening 14 in the base. These balls are normally

forced into engagement with the openings 12 by a coil spring 15.

From the foregoing description it will be seen that in a very simple manner the blade may be rocked for electrically connecting pairs of contacts together and with the base 1 thus closing a number of circuits and besides the arrangement of the balls 13 are such that the blade 7 will be held in any of its adjusted positions. One use of my switch is clearly shown in Fig. 4, wherein the switch is capable of closing the lamp circuits of an automobile or other vehicle. One terminal of the battery 16 is connected by the conductor 17 to a strip 18 that connects one contact of each pair together. At this point I wish to call attention to the fact that in certain uses of the switch the strip 18 will be dispensed with. The remaining contact of one pair is connected by a conductor 19 to the conductor 17 while the remaining contact of the other pair is connected by a conductor 20 to the conductor 17. Arranged in the conductor 19 are the "head lights" 21 while arranged in the conductor 20 are the "side-lights" or other suitable auxiliary lights 22. The "tail-light" 23 and dash-lights 24 are arranged in the conductor 17. Thus it will be seen that when the switch is thrown to a position as shown in Fig. 2 the head lights, tail lights and dash lights or other suitable lights are illuminated while the remaining lights are illuminated when the switch is thrown into its other position. It is of course to be understood that the invention may be constructed in various other manners than that shown. It is my intention by the following claims to fully protect the novel manner of connecting the switch blade to the base 1 so that the same may assume a plurality of positions and connect the contacts in pairs, therefore I do not wish to be limited in the exact showing except as set forth in the appended claims.

Having described my invention, what I claim is;

1. In an electric switch, a metallic base, a blade of substantially inverted U-shape straddling the base and fitting snugly over the same, and contact members positioned at opposite sides of the base and insulated therefrom, said blades being tiltably mounted on the base so as to move either arm of the blade, optionally, into contact with the adjacent contact member, the other

arm of the blade being in contact with the base.

2. In an electric switch, a metallic base, a blade of substantially inverted U-shape straddling the base, contact members positioned at opposite sides of the base and insulated therefrom, said blade being tiltably mounted on the base so as to move either arm of the blade, optionally, into contact with the adjacent contact member, the other arm of the blade being moved into contact with the base, and means for holding said blade in adjustment.

3. In an electric switch, a metallic base, a blade of substantially inverted U-shape straddling the base and fitting snugly about the upper portion thereof, the lower portions of the arms of the blade extending outwardly to permit tilting of said blade in either direction upon the base transversely thereof, and contact members at opposite sides of and insulated from the base, said members being positioned to contact with the adjacent arm of the blade when said blade is tilted into operative position.

4. In an electric switch, a metallic base, a substantially U-shaped blade member straddling the base and being tiltably mounted thereon for movement transversely of the base, said blade member being movable vertically of the base in either direction, the arms of the blade member being provided at their lower ends with outwardly projecting contact elements, and contact members mounted at opposite sides of and insulated from the base,

said contact members being provided with contact elements projecting inwardly toward the base and positioned over the contact elements of the arms of the blade member.

5. In an electric switch, a metallic base, a blade member including two arms extending downward along the sides of the base, said member being tiltably mounted upon the base for movement in either direction transversely thereof, and contact members adjacent to the sides of and insulated from the base, said members being so positioned as to contact with the adjacent arm of the blade member when said member is tilted into operative position upon the base.

6. In an electric switch, a metallic base provided with a transverse bore, a substantially inverted U-shaped blade member straddling said base and having the lower portions of its arms bent outwardly, locking balls mounted in said bore, an expansion spring confined between said balls, the arms of the blade member being provided with openings for reception of the balls positioned to hold the said member in lowered position while permitting tilting thereof transversely of the base, and contact members mounted adjacent to the sides of and insulated from the base member, said contact members having elements projecting above the lower ends of the arms of said blade member.

In testimony whereof I affix my signature.
JOHN VINCENT SCHAFER.