July 18, 1950 R. H. THOMSON 2,515,324

ELECTRIC SWITCH

Filed Jan. 12, 1948

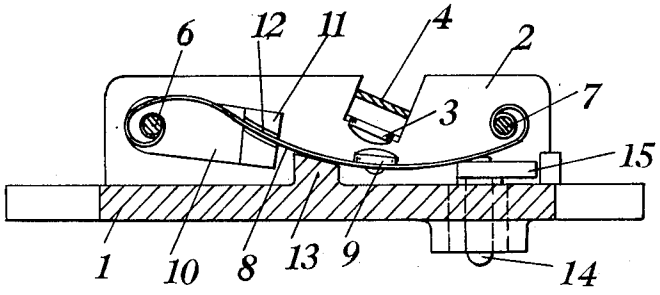


Fig.1

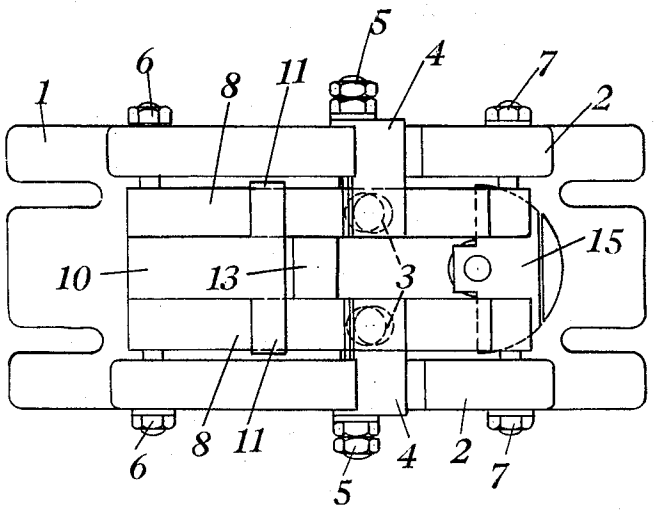


Fig.2

Inventor
R. H. Thomson
By Glascock Downing Seebold
Attys.

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ELECTRIC SWITCH

Ronald Hugh Thomson, Middlesex, England, assignor to Rotax Limited, London, England

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2 Claims. (Cl. 200—67)

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This invention relates to electric switches of the kind in which a movable contact arranged to co-operate with a fixed contact is carried by a resilient metal blade, this latter being anchored at both ends and slightly curved between its ends in two opposite directions. Actuation of the switch is effected by the pressure of a push button on the blade, and due to the curvature of the blade the opening and closing movements of the switch are effected by a snap action.

For some purposes it is required to employ in such a switch a pair of similar blades each carrying a movable contact, the blades being arranged side by side and operable by the one push button, and it has been found that merely to duplicate a switch of ordinary construction is unsatisfactory as it is then difficult to ensure simultaneous action of both blades. The object of the present invention is to enable this difficulty to be overcome in a simple and satisfactory manner.

In the accompanying drawings:

Figure 1 is a sectional elevation of an electric switch constructed in accordance with the invention.

Figure 2 is a plan view of the switch.

In one convenient manner of constructing a snap action switch in accordance with the invention as illustrated in the drawings, a convenient base 1 is provided having side walls 2 and carrying a pair of fixed contacts 3 which are preferably resiliently mounted on flexible arms 4 secured to the walls 2 by nuts 5. Transverse studs 6 and 7 also secured in the walls 2 form supports for the opposite ends of a pair of resilient blades 8 each of which is curved between its ends in two opposite directions, giving the blade an S form as shown. Each blade has secured to it a movable contact 9 for co-operating with the associated fixed contact 3. Each of one adjacent pair of ends of the blades is anchored directly to the base in any convenient manner, as by securing the blades to the stud 7 which is carried in the side walls 2. For anchoring the other adjacent pair of ends, a separate anchor piece 10 is employed having a T shape which is pivoted upon the transverse stud 6. The adjacent ends of the blades 8 are secured to the stud in any convenient manner and the side pieces 11 of the anchor piece 10 are provided with inclined slots 12 through which the blades pass, so that the faces of the slots bear on the opposite surfaces of the blades at a convenient distance from the pivot. An upward extension 13 on the base acts as a stop to determine the position of the blades. A push button 14 is slidably mounted in the base and has a plate 15

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secured thereto which on actuation of the push button is adapted to press on the underside of both blades.

It will be seen that with the above described arrangement any deflection of either of the blades will be transmitted to the appropriate face of the slotted side piece of the anchor piece and will be accompanied by pivotal movement of the anchor piece. Consequently if when the push button 14 is actuated, either blade tends to move in advance of the other this condition is compensated by the action of the pivotal anchor piece on the other blade, and simultaneous movement of both blades is ensured.

By this invention a desired result is obtained in a very simple manner. The invention is not, however, restricted to the example described as subordinate details of construction may be modified to suit different requirements. Further, if desired, a pivoted anchor piece may be provided at both ends of the blades.

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

1. An electric snap-action switch comprising in combination a base, a pair of similar resilient metal blades arranged side by side and anchored at their ends to said base, contacts on said base, complementary contacts on said blades for co-operating with the contacts on said base, each of said blades being slightly curved between its ends in two opposite directions so that deflection of said blades causes the contacts thereon to move with a snap action, a single push button for deflecting both blades, and at least one guide piece pivotally mounted on said base and engaging both blades so that movement of either blade is accompanied by simultaneous movement of the other.

2. An electric snap-action switch as claimed in claim 1, in which said guide piece is of T form and is slotted to engage said blades.

RONALD HUGH THOMSON.

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