

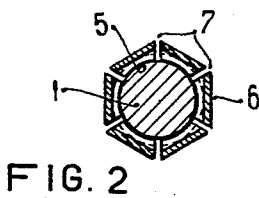
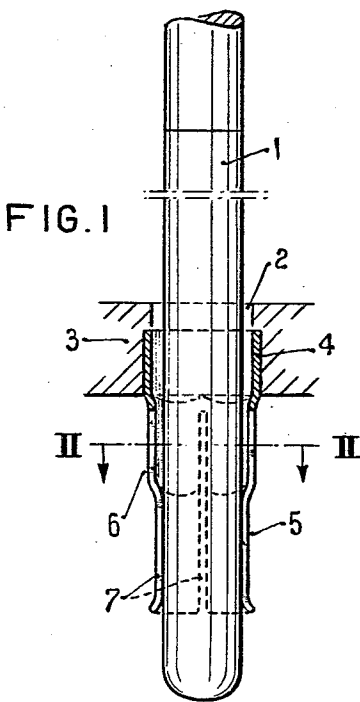
Oct. 22, 1957

H. A. HIDDE NIJLAND

2,810,893

ELECTRIC SWITCH

Filed April 26, 1955



1

2,810,893

ELECTRIC SWITCH

Hendrik A. Hidde Nijland, Laren, Netherlands, assignor to N. V. "COQ," Utrecht, Netherlands, a company of the Netherlands

Application April 26, 1955, Serial No. 504,012

Claims priority, application Netherlands June 1, 1954

1 Claim. (Cl. 339—9)

The invention relates to an electric switch having an axially movable switching rod and a stationary contact member, which is in permanent contact with said rod and serves to connect said rod with the electric circuit to be closed and opened by said switch.

In known switches of this kind the stationary contact member, referred to, the so-called bushing contact, consists of a circular series of contact blocks, which are kept in sliding engagement with the switching rod by means of individual springs. This construction requires rather much room in radial direction and also a good screening, especially when the switch is meant for very high voltages.

The invention has for its object to provide a stationary bushing contact member which has a very simple construction, requires little material and uses in radial direction only slightly more room than the switching rod. It consists in that said stationary contact member is constituted by a metal tube surrounding the movable switch rod, one end portion of said tube being attached to a stationary conducting member for leading the current to the switching rod, said end portion leaving an annular clearance space between itself and the rod, the other end portion of said tube being in permanent sliding engagement with said rod, the tube portion intermediate said end portions having a polygonal cross section and said metal tube being axially slit with slots extending through its last-mentioned end portion and the edges of its polygonal intermediate portion. This intermediate portion enables, due to its polygonal shape, the portion which is in permanent sliding fit with the switching rod to engage said rod resiliently. The bushing contact consists of a tubular piece, which can be formed easily from a cylindrical tube.

For the elucidation of the invention reference is made to the accompanying drawing, in which:

Fig. 1 is an axial sectional view of the stationary bushing contact of an electric switch according to the invention, and

Fig. 2 is a cross sectional view on the line II—II in Fig. 1.

2

In the drawing 1 is an axially movable switching rod of an electric switch. This rod is passed through an opening 2 having a somewhat greater diameter than said rod and made in a stationary conducting member 3 for leading the current to the switching rod. Said conducting member may be formed as a ring. Attached to said conducting member 3 is a metal tube surrounding the switching rod. The upper end portion 4 of said tube has a circular cross section and leaves a clearance space 5 between itself and said rod. This end portion penetrates the conducting member 3 and is electrically conductively secured thereto. The lower end portion 5 of said tube has also a circular cross section and tightly fits the switching rod 1. The portion 6 of the tube intermediate the end portions 4 and 5 thereof has a hexagonal cross section. The tube is slit by means of slots 7 extending from the lower end of the tube near the upper end portion 4. Said slots 7 coincide with the edges of the hexagonal portion 6. Said slots divide the metal tube into six contact members 5, which are in permanent sliding engagement with the switching rod 1 and are connected, through plane strips 6, to the annular end portion 4 attached to the conducting member 3. The strips 6 having a rectangular cross section enable the contact members 5 to be spring-loaded in radial directions and to engage the switching rod 1 with pressure.

What I claim is:

In an electric switch, a stationary electrical contact member, said contact member being connected to an electric circuit to be opened and closed by the switch, a metal tube having an end portion fixed to said stationary contact member so as to provide an electrical path between the tube and the stationary contact member, an axially intermittently movable switching rod positioned axially in said tube, said tube end portion fixed to the stationary contact member having a greater internal diameter than the diameter of said switching rod, whereby an annular clearance space is defined between the rod and said end portion, said tube having the other end portion permanently and slidably engaging said rod, said tube having an intermediate portion between said end portions having a polygonal cross-section and a diameter smaller than the diameter of said fixed end portion and greater than the diameter of said rod, whereby an annular space is defined between said rod and said intermediate tube portion, said tube having a plurality of circumferentially spaced slots beginning at the edge of said other end portion and extending axially through said intermediate portion, whereby said other end portion of said tube engages said rod resiliently.

References Cited in the file of this patent

UNITED STATES PATENTS

55 1,237,718 Speice Aug. 21, 1917