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(54) Push button switch mounting

(57) A push button switch mounting comprises a mounting body 10 and a surrounding body 12 formed as separate plastics mouldings and securable together by inter-engageable fastening means, e.g. a single resilient hook 14 on the mounting body 10 and locatable within a single slot (16) (Fig. 5) provided through surrounding body 12. Four ribs (34) (Figs. 2, 3) engaging recesses 46 may define the mutual orientation. The mounting may be secured to a gaming or amusement machine support via a nut applied to threaded cylinder 18 of mounting body 10 aligned by pins (48) (Fig. 4). The arrangement facilitates the provision of switch components of varying shapes/colours.

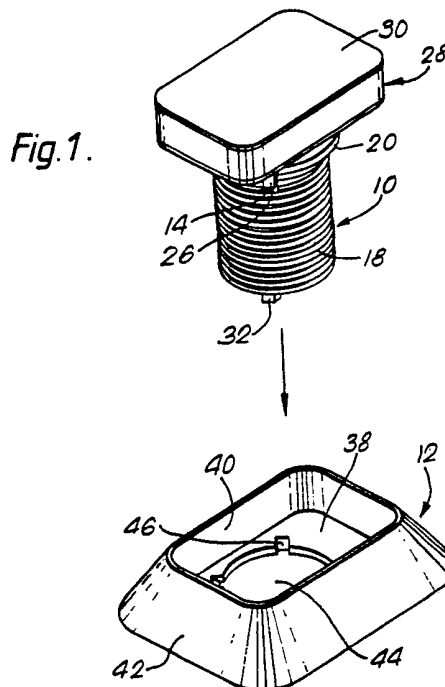
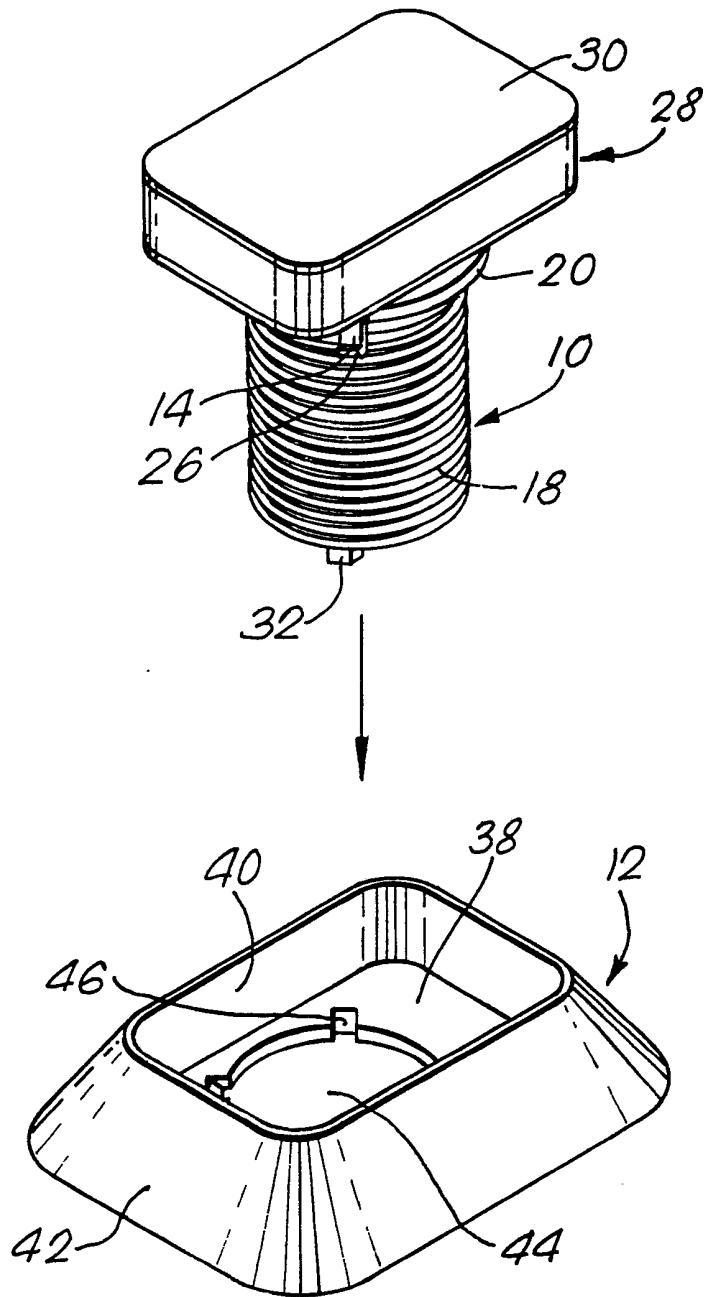
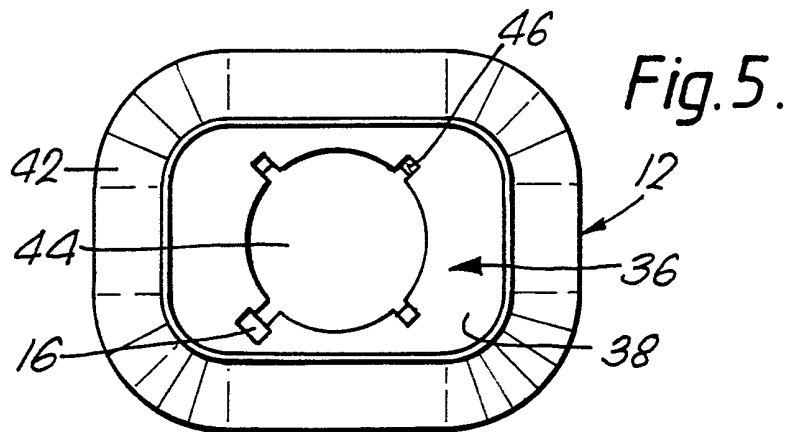
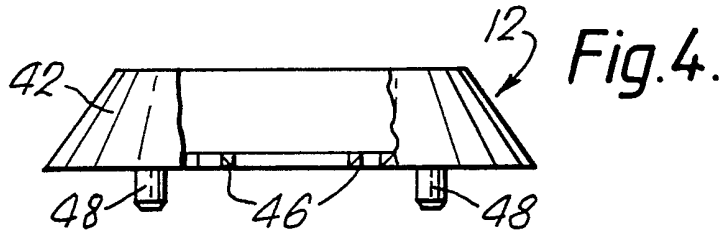
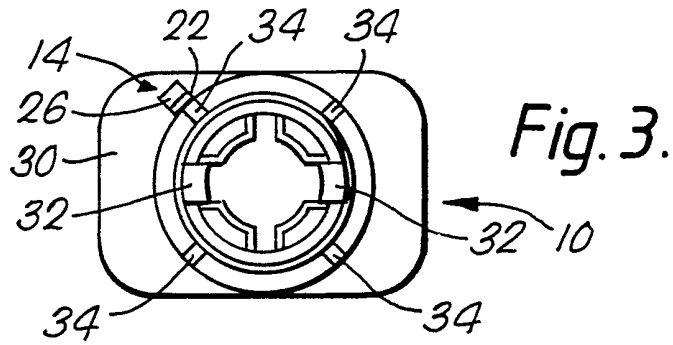
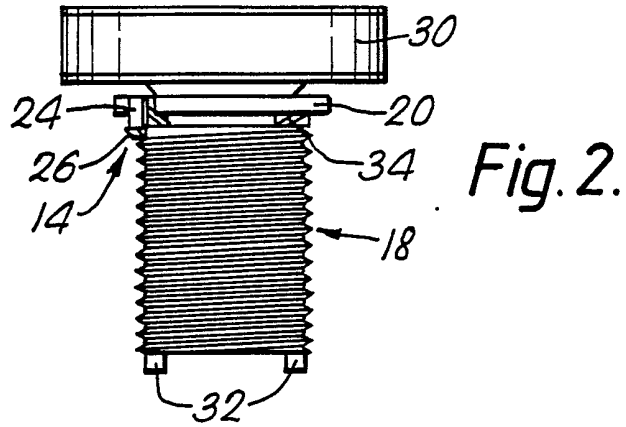


Fig. 1.





Push Button Switch Mounting

5 The present invention relates to a mounting for a switch of the push button kind typically used for controlling a function such as reel hold in a gaming or amusement machine.

10 There is often a plurality of push button switches of different colours and shapes, each of which is associated with a surrounding bezel of contrasting colour and complementary shape to enhance the appearance. It is thus often necessary to provide a large range of stock including different colours, such as red, orange or black, and
15 different shapes, such as circular, square or rectangular. Clearly it would be of particular utility if it was possible to maximise the number of components common to the mounting of different colours and shapes of push button switches.

20 According to the present invention, a push button switch mounting comprises a mounting body and a surrounding body initially formed as separate plastics mouldings and subsequently securable together by inter-engageable fastening means.

25 The mounting body may include a hollow externally threaded cylinder, one end of which is provided with a flange which carries one part of the fastening means. The surrounding body may include a bezel around a recess, one wall of which is provided with another part of the
30 fastening means.

 Preferably, the fastening means is in the form of a single resilient hook provided on the mounting body and locatable within a single slot provided through the surrounding body.

35 The hook may snap-engage with the slot when said flange of the mounting body is in abutment with said wall of the surrounding body.

Preferably, the orientation of the surrounding body relatively to the mounting body is controlled by inter-engageable locating means separate from the fastening means.

5 The mounting body and the surrounding body together form a push button switch mounting which is capable of being readily modified, for example by use of a surrounding body having a recess of different shape, to receive different types of push button switch, in particular
10 different shapes and colours of push buttons carried on plungers, which are reciprocable within the mounting body relatively to the surrounding body, such that the reciprocation causes operation of a conventional micro-switch.

15 A push button switch mounting, in accordance with the present invention, will now be described in greater detail, by way of example only, with reference to the accompanying drawings, in which:-

Figure 1 is an exploded perspective view of the push
20 button switch mounting;

Figures 2 and 3 are, respectively, side and bottom plan views of the upper exploded part of Figure 1; and

Figures 4 and 5 are, respectively, side and top plan views of the lower exploded part of Figure 1.

25 A push button switch mounting, in accordance with the present invention, comprises a mounting body 10 and a surrounding body 12 initially formed as separate plastics mouldings and subsequently securable together by inter-engageable fastening means, which is preferably in
30 the form of a single resilient hook 14 provided on the mounting body 10 and locatable within a single slot 16 provided through the surrounding body 12.

The mounting body 10 may include a hollow externally threaded cylinder 18 having a flange 20 at its upper end.
35 The hook 14, which is joined to the flange 20 by a radially extending arm 22, includes a laterally deflectable vertical piece 24 whose lower end has a lip 26 extending radially

outwardly therefrom. The cylinder 18 houses a conventional vertically-reciprocable plunger 28 formed with a rectangular button 30 at its upper end and a pair of latches 32 at its lower end. The upper end of the cylinder 18 is also provided with four equi-spaced angular ribs 34 protruding downwardly from the flange 20 for controlling orientation as indicated hereinafter.

The arrangement is such that the button 30 can be pressed downwards into contact with the flange 20. This also moves the latches 32 out of contact with the cylinder 18 against the action of a spring which restores the button 30 and the latches 32 to their initial positions when downward pressure is released. The downward movement of the latches 32, when the button 30 is pressed, is utilised to operate a conventional micro-switch (not shown) carried beneath the lower end of the cylinder 18. The spring can form part of the micro-switch or can be located in the cylinder 18. It will be appreciated that the vertically-reciprocable plunger 28 can be easily replaced by others with different shapes and colours of buttons 30.

The surrounding body 12 may include a recess 36 of complementary shape to the button 30, with the recess being defined by a lower wall 38 and an upstanding wall 40 leading to a sloping bezel 42. The lower wall 38 has a central aperture 44 for receiving the cylinder 18 and a series of equi-spaced recesses 46 for receiving respective ones of the ribs 34 as well as the slot 16 for receiving the hook 14. The lip 26 on the hook 14 can be snap-engaged beneath the slot 16 only when the flange 20 is in abutment with and is in the correct orientation relatively to the lower wall 38.

The ribs 34 and the recesses 46 together form inter-engageable locating means separate from the inter-engageable fastening means formed by the hook 14 and the slot 16.

Finally, the push button switch mounting is secured in the normal way to a gaming or amusement machine, by

inserting the mounting body 10 through an aperture in a support until the surrounding body 12 is in contact with one face of the support, and is possibly in a predetermined alignment under the control of pins 48 located in complementary registration holes in the support, whereupon
5 a threaded nut is applied to the mounting body 10 and brought into contact with the other face of the support.

CLAIMS

1. A push button switch mounting comprising a mounting body and a surrounding body initially formed as separate plastics mouldings and subsequently securable together by inter-engageable fastening means.
2. A push button switch mounting according to claim 1, in which the mounting body includes a hollow externally threaded cylinder, one end of which is provided with a flange which carries one part of the fastening means, and the surrounding body includes a bezel around a recess, one wall of which is provided with another part of the fastening means.
3. A push button switch mounting according to claim 1 or claim 2, in which the fastening means is in the form of a single resilient hook provided on the mounting body and locatable within a single slot provided through the surrounding body.
4. A push button switch mounting according to any preceding claim, in which the orientation of the surrounding body relatively to the mounting body is controlled by inter-engageable locating means separate from the fastening means.
5. A push button switch mounting substantially as hereinbefore described with reference to the accompanying drawings.