(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 0 757 368 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
05.02.1997 Bulletin 1997/06

(51) Int Cl.[6]: **H01H 23/06**, H01H 23/12, H01H 9/16

(21) Application number: **96830366.9**

(22) Date of filing: **27.06.1996**

(84) Designated Contracting States:
DE ES FR GB PT
Designated Extension States:
SI

(30) Priority: **04.08.1995 IT BS950071**

(71) Applicant: **MOLVENO OEM S.r.l.**
37013 Caprino Veronese (Verona) (IT)

(72) Inventor: **Lamberti, Silvano**
25064 Gussago (Brescia) (IT)

(74) Representative: **Manzoni, Orazio**
Ufficio Internazionale Brevetti
MANZONI & MANZONI
Piazzale Arnaldo 2
25121 Brescia (IT)

(54) Rocker switch unit

(57) A rocker switch unit featuring a two-colour bi-component switch (14); a casing (11) with a small continuous channel (15) for collecting and draining liquids and/or condensate open on the front and having drainage outlets (15'); a base (12)made of a material different to that of the casing to make it more resistant to thermal shock; and a moving contact (13) acting as both a positioning spring and as a true contact.

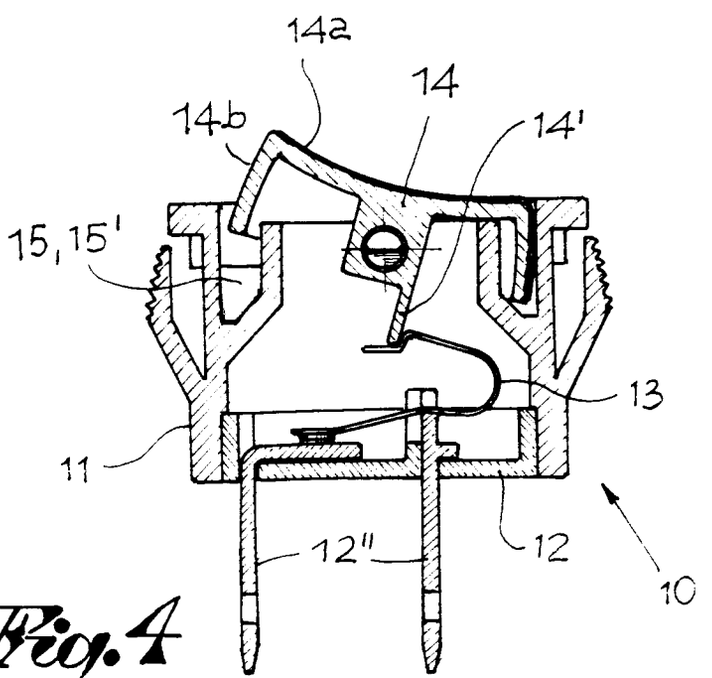

Fig. 4

EP 0 757 368 A2

Description

The present invention relates to rocker switch units particularly for small household and electronic appliances.

Various models of rocker switch units are already known, each with its own dimensional and constructive features.

The present invention has for its aim the presentation of a rocker switch unit which, by arrangement and combination of parts, proves more advantageous in terms of manufacture, assembly and costs and is suitable for applying to 19 x 13 mm and 27 x 12 mm boring templates.

Another aim of the present invention is to provide a rocker switch unit featuring never-assembled construction devices and elements contemplated for small-size switch units such as that presented here.

Such aims are achieved by a rocker switch unit in conformity, at least, with claim 1.

Greater details of the invention will in any event be clearer from the description hereunder with reference to the accompanying example drawings in which:

Fig. 1 shows an enlarged perspective view of the rocker switch unit;
Fig. 2 shows a side view of the switch unit;
Fig. 3 shows an end view of the switch unit; and
Fig. 4 shows a sectionla view of the switch unit according to line IV-IV in Fig.3.

Number 10 in this drawing indicates the switch unit comprising a casing 11 with means 11a for its fitting in operation, a base 12 holding 12" fixed contacts, a moving contact 13 and a switch 14 for controlling the moving contact 13.

The casing 11 is made of relatively flexible material.

It delimits a small continuous external channel 15, open at the front, i.e., towards switch 14, and having several 15' corner drainage openings. The purpose of the small channel 15 is to collect liquids and condensate and discharge these outside so they do not penetrate inside the casing 11, towards the power contacts.

The base 12 is made from a material different to that of the casing 11 so it is more resistant to heat.

Said base 12 has a number of 12' side dentils which snap fit into special 11' holes in the sides of the casing so the two fasten together.

The 12' fixed contacts consist of terminals to which the power leads are fastened; the base is made of material able to resist the heat generated during soldering of the power leads.

The fixed contacts, given the same dimensions of the switch casing, feature preferably a centre distance greater than that of known switches, of the same kind.

The arm and closing strength of the moving contact are thereby increased and better results are achieved with regard to the amperometric capacity of the switch unit itself.

The moving contact 13, housed in said casing 11, consists of a flexible metal foil, with a substantially asymmetric "C" shape which acts both as a positioning spring and a contact. The moving contact 13 is pivoted on a 12" fixed contact which rests on the other 12" fixed contact as a result of switch movement.

Control switch 14 consists of two materials of different colour 14a, 14b. This two-component, two-colour aspect of the switch facilitates location, by means of the visible colour only, of the off or on part of the switch without requiring other means of indication. The control switch 14 is fitted in a special housing of casing 11 on which it is centrally pivoted. It features a small fin under the pivot point, turned inwards with respect to casing 11 and which controls the moving contact 13 in the known manner.

Claims

1. A rocker switch unit, comprising a casing (11), a base (12) fitted to said casing and housing the fixed contacts (12"), a rocker switch (14) pivoted in said casing and a moving contact 13, controlled by the rocker switch and interacting with said fixed contacts, characterized in that said switch (14) consists of two materials of different colour (14a, 14b).

2. A rocker switch unit, comprising a casing (11), a base (12), fitted to said casing and housing the fixed contacts (12"), the rocker switch (14) pivoted in said casing and a moving contact (13) controlled by the rocker switch and interacting with said fixed contacts, wherein said casing (11) features a small continuous channel (15) for collecting and draining liquids and/or condensate, open at the front and having drainage outlets (15').

3. A rocker switch unit comprising a casing (11), a base (12), fitted to said casing and housing the fixed contacts (12"), the rocker switch (14) pivoted in said casing and a moving contact (13) controlled by the rocker switch and interacting with said fixed contacts, wherein the base (12) is made of a material different to that of the casing to make it more resistant to thermal shock.

4. A rocker switch unit comprising a casing (11), a base (12), fitted to said casing and housing the fixed contacts (12"), the rocker switch (14) pivoted in said casing and a moving contact (13) controlled by the rocker switch and interacting with said fixed contacts, wherein the moving contact (13) acts as both a positioning spring and as a true contact.

5. A rocker switch unit comprising a casing (11), a base (12), fitted to said casing and housing the fixed

contacts (12"), the rocker switch (14) pivoted in said casing and a moving contact (13) controlled by the rocker switch and interacting with said fixed contacts, wherein: the switch (14)is two-colour bicomponent; said casing (11) features a small continuous channel for collecting and draining liquids and/or condensate open on the front and having drainage outlets (15'), the base (12) is made of a material different from that of the casing to make it more resistant to thermal shock; the moving contact (13) acts as both a positioning spring and as a true contact.

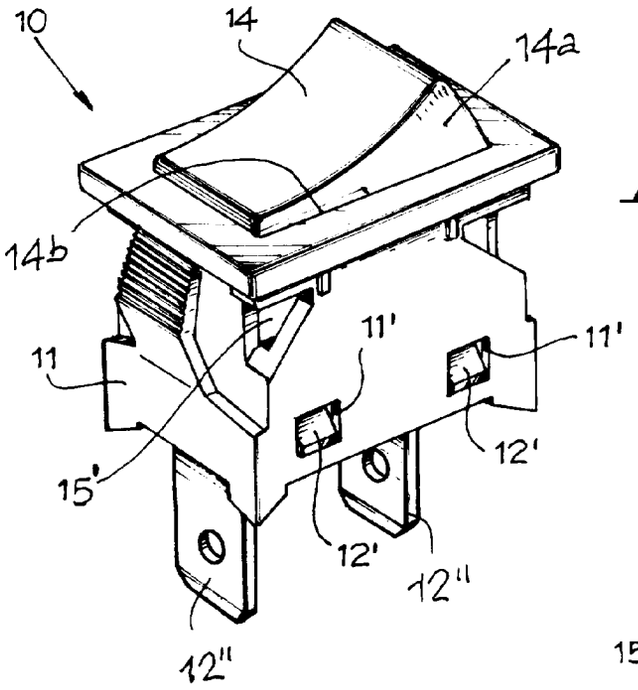

Fig.1

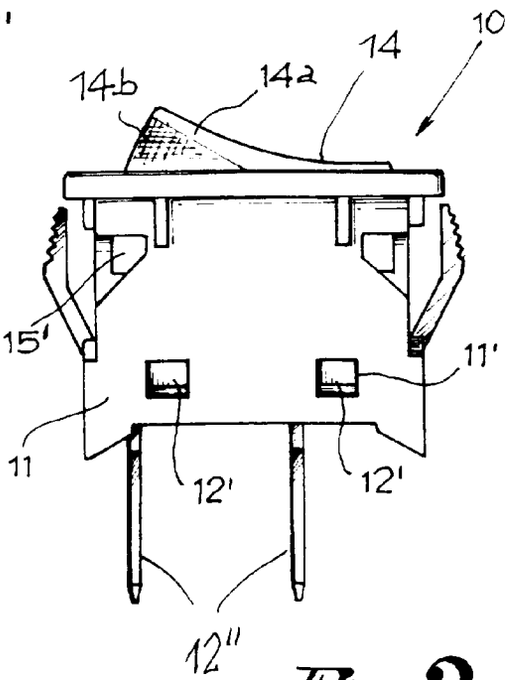

Fig.2

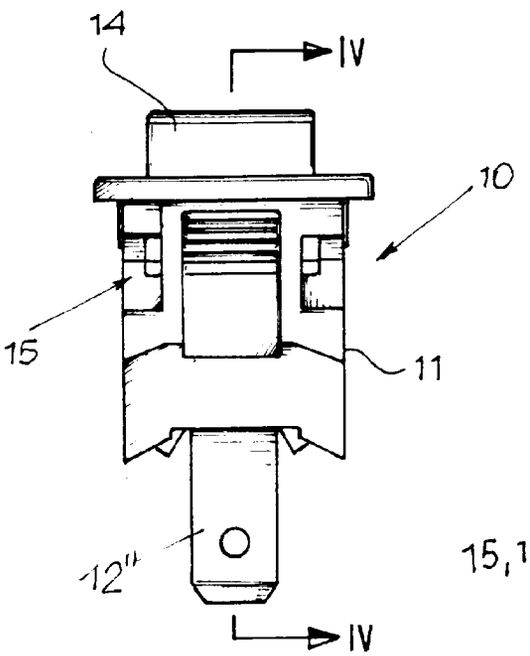

Fig.3

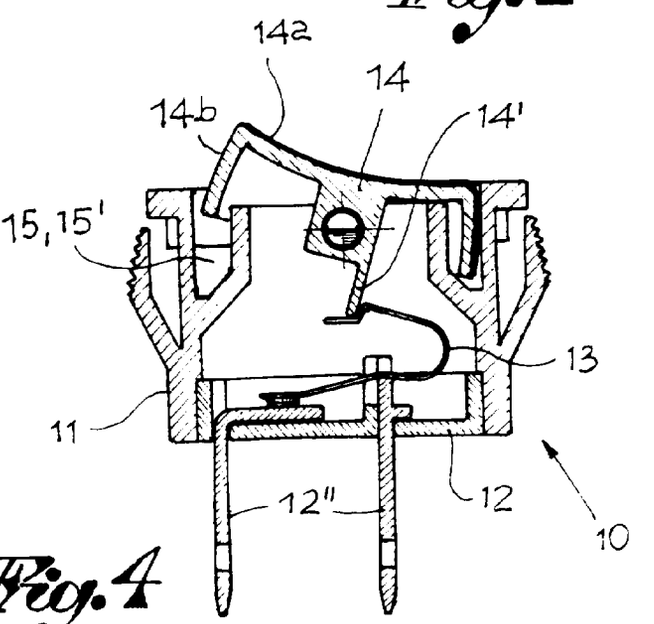

Fig.4