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H01R 13/46

(52) UK CL (Edition K)
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(56) Documents cited
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ZA 7601807 A ZA 7503334 A
Electrical Review, 21 March to 6 April 1990, p23,
"Plug reveals all down under"

(58) Field of search
UK CL (Edition K) H2E EDCL EDCX EDLJ EDLL
EDLP EDT EX
INT CL[5] H01R
Online database: WPI

(54) Electrical plug with transparent casing

(57) A plug has a body wholly transparent (fig 5) or with a cap transparent (figs 7, 9), or with the base transparent (not shown), for ease of inspection of the innards of the plug.

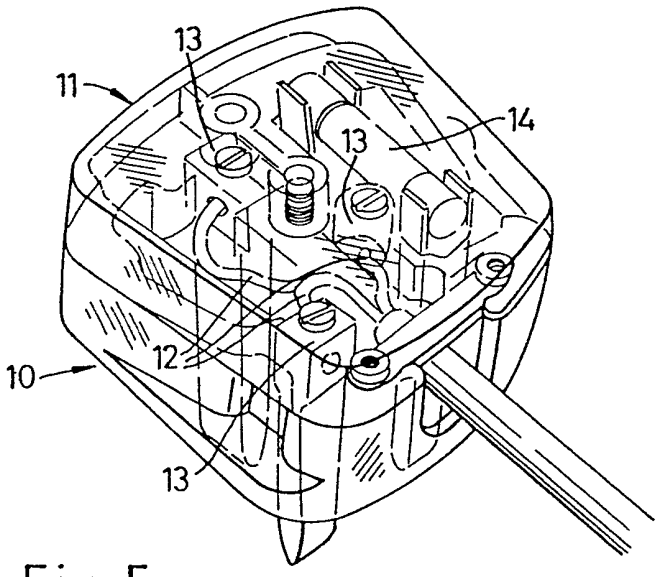


Fig. 5

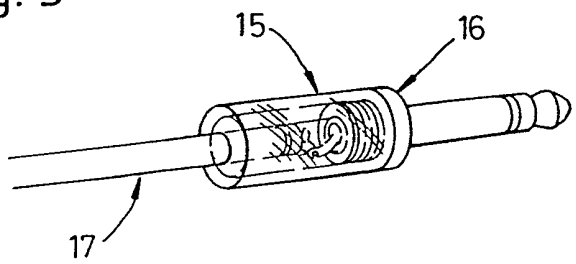


Fig. 7

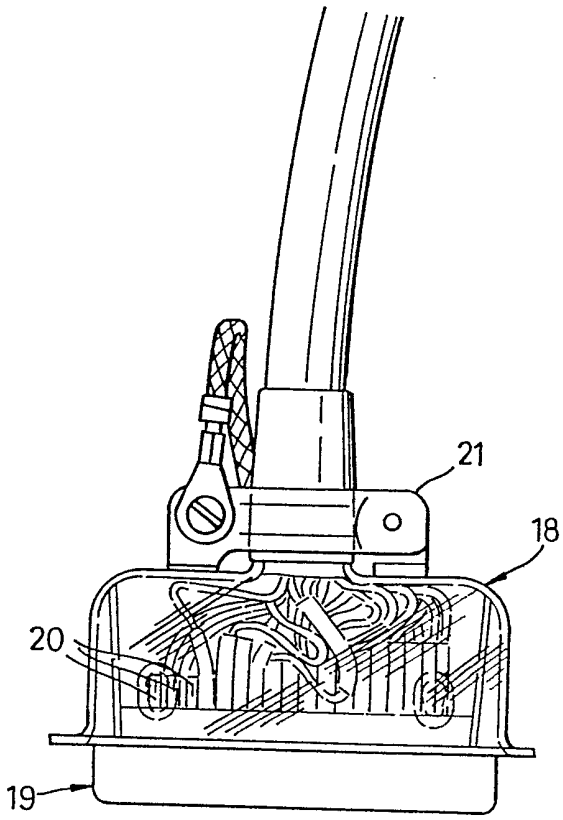


Fig. 9

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

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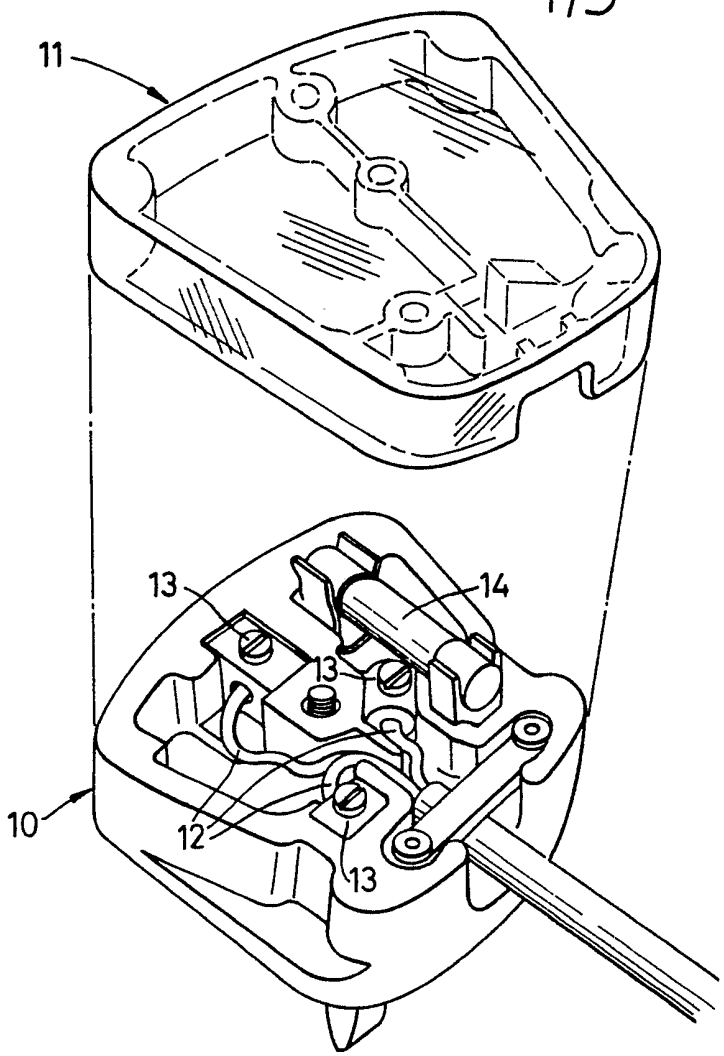


Fig. 1

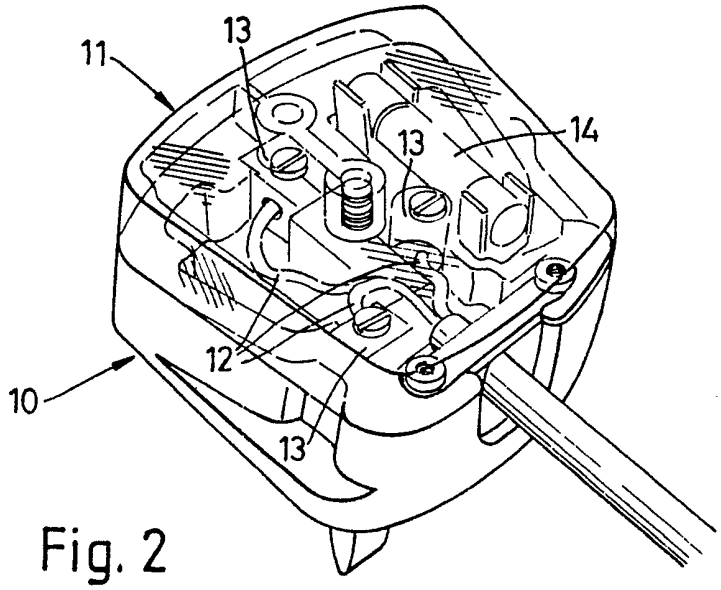


Fig. 2

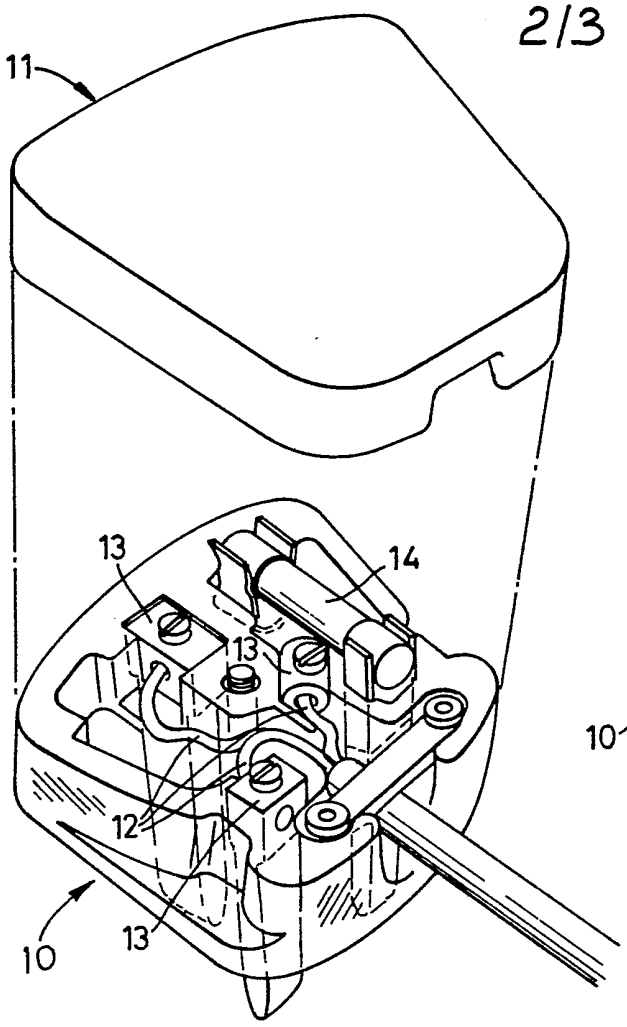


Fig. 3

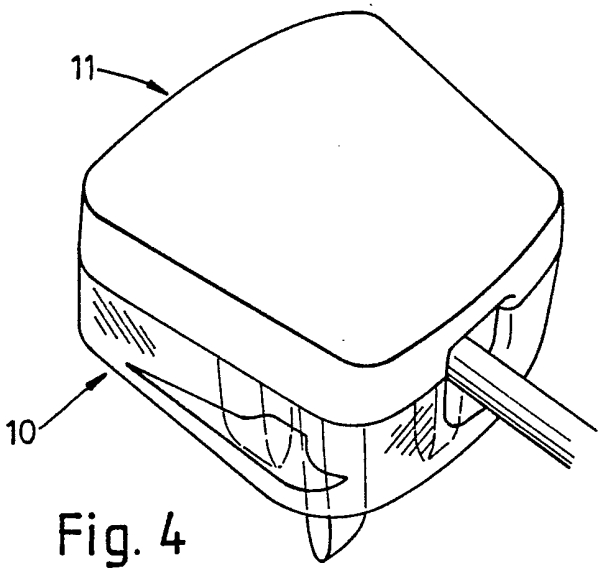


Fig. 4

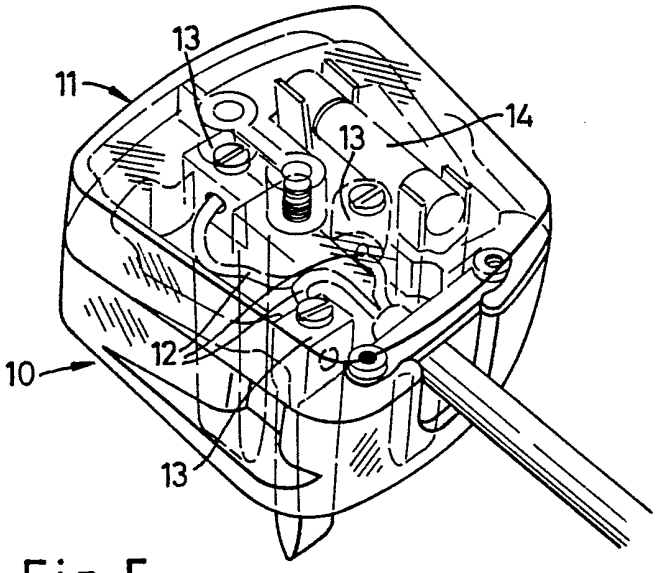


Fig. 5

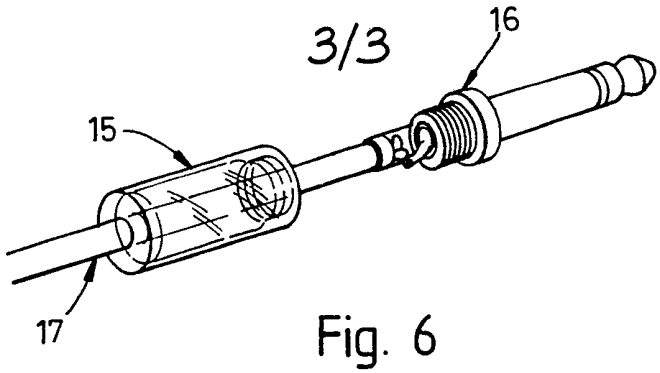


Fig. 6

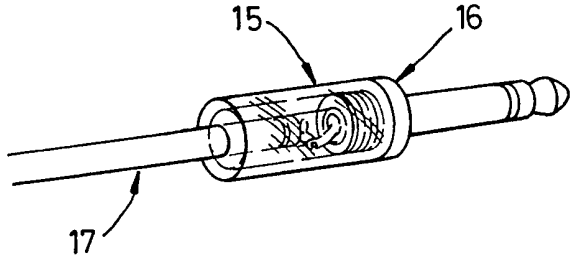


Fig. 7

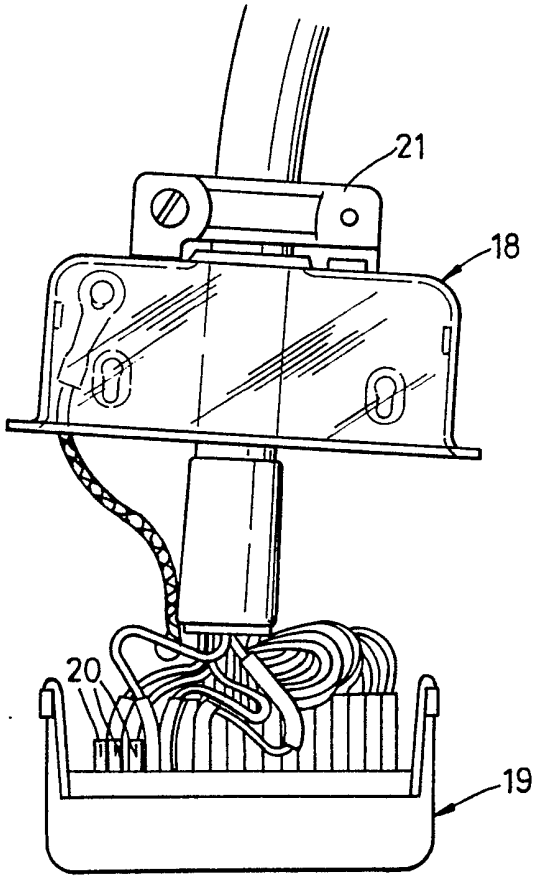


Fig. 8

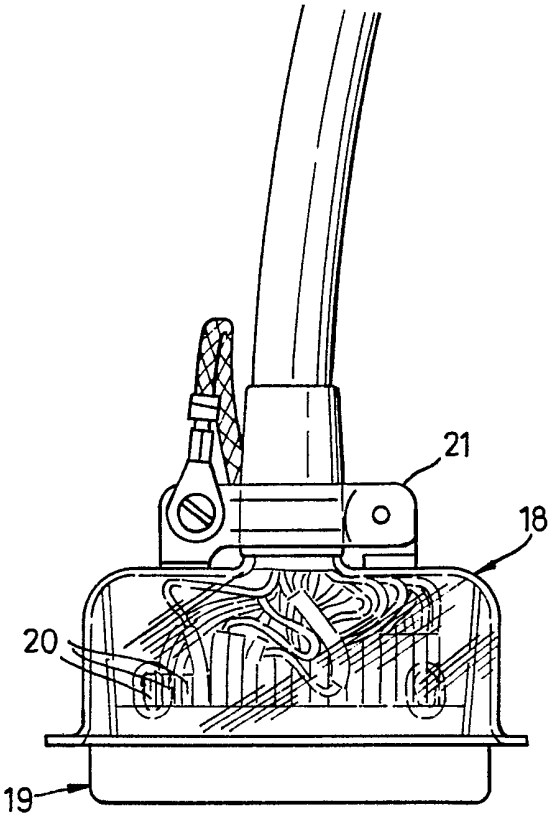


Fig. 9

ELECTRICAL PLUGS AND THE LIKE

This invention relates to electrical and like plugs, sockets etc., terminations, hereafter referred to simply as "plugs", and has for its object the facilitation of fault finding in plugs.

According to the present invention, a plug has at least a part formed of transparent material, e.g., plastics, through which all internal components are visible.

Thus it will not normally be necessary to open up the plug to check for a fault, but when a fault is observed through the transparent "window" part, the plug can be opened up with confidence. The internal components could for instance be terminals, connections, fuses, etc.

The invention is applicable to many forms of plugs having leads connected to terminals or other connectors inside the plugs, e.g., electrical power plugs or computer or other electronic equipment leads.

In the case of an electrical power plug in which pins (whether two-pin or three-pin) project from one part housing terminals, while another part is a cover or closure part for the housing part, the whole of the housing part may be made of transparent plastics, so that the entire contents of the plug can be viewed without them normally being visible when the plug is coupled to a socket, because the cover or closure part is made of the usual opaque plastics.

A number of embodiments of the invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is an exploded perspective view of a three-

pin fused plug having an opaque housing part and a transparent cover part;

Figure 2 shows the transparent cover part of Figure 1 secured in place on the opaque housing part;

Figures 3 and 4 correspond to Figures 1 and 2 but show a three-pin fused plug having a transparent housing part and an opaque cover part;

Figure 5 corresponds to Figure 2 or Figure 4 but shows a three-pin fused plug having both a transparent housing part and a transparent cover part;

Figure 6 is a perspective view of a jack-plug having a transparent cover part ready for screwing on to a body part;

Figure 7 corresponds to Figure 6 but shows the transparent cover part screwed on to the body part;

Figure 8 is a side elevation of a computer plug having a transparent cover part withdrawn from a terminal part; and

Figure 9 corresponds to Figure 8 but shows the transparent cover part clipped in place on the terminal part.

In Figures 1 and 2 a three-pin fused plug has an opaque housing part 10 and a transparent cover part 11 whereby, when the cover part is secured on the housing part, it is possible to see whether any one of the leads 12 is broken or not connected to the respective terminal 13, or whether a fuse 14 is present and/or in working order. The transparent cover part 11 also makes it readily possible to see if any arcing is taking place within the plug, or if there is any evidence of scorching of insulation or the materials of the plug itself.

In Figures 3 and 4 the three-pin fused plug has a

transparent housing part 10 and an opaque cover part 11, so that the entire contents of the plug can be viewed without them normally being visible when the plug is coupled to a socket (not shown), while in Figure 5 the three-pin fused plug has both a transparent housing part 10 and a transparent cover part 11.

In Figures 6 and 7 a jack-plug has a transparent cover part 15, which screws on to a body part 16 and enables the connections of a co-axial cable 17 to be seen.

Finally, in Figures 8 and 9 a computer plug has a transparent cover part 18 which clips in place on a terminal part 19, thus enabling the terminal connections to be checked, and also allowing a check to be made on spare terminals 20 without having to withdraw the cover part from the terminal part. A cable clamp 21 carried by the cover part 18 may be made of metal (as indicated) or of plastics material, which may be the same transparent plastics from which the cover part is made.

CLAIMS

1. A plug having at least a part formed of transparent plastics through which all internal components are visible.

2. An electrical power plug in which pins project from one part housing terminals, while another part is a cover or closure part for the housing part, the whole of the housing part being made of transparent material, so that the entire contents of the plug can be viewed without them normally being visible when the plug is coupled to a socket, because the cover or closure part is made of the usual opaque plastics.

3. An electrical power plug having an opaque housing part and a transparent cover part.

4. An electrical power plug having both a transparent housing part and a transparent cover part.

5. A jack-plug having a transparent cover part screwing on to a body part.

6. A computer or like plug having a transparent cover part fitting over a terminal part.

7. A three-pin fused plug substantially as hereinbefore described with reference to Figures 1 and 2 or Figures 3 and 4 or Figure 5 of the accompanying drawings.

8. A jack-plug substantially as hereinbefore described with reference to Figures 6 and 7 of the accompanying drawings.

9. A computer plug substantially as hereinbefore described with reference to Figures 8 and 9 of the accompanying drawings.

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