

Title (en)
Improvements in or relating to electrically-powered heating panels.

Title (de)
Verbesserungen an elektrisch getriebene Heizungspaneelle.

Title (fr)
Améliorations à des panneaux chauffés par courant électrique.

Publication
EP 0570246 A1 19931118 (EN)

Application
EP 93303760 A 19930514

Priority
GB 9210340 A 19920514

Abstract (en)
With reference to Figure 3, an electrically-powered heating panel 1 of flexible construction, in the form of an under-carpet heater comprises, a dual wire heating cable 2, with inner 3 and outer 4 heating wires thereof connected in series together, with fuse means 5, the inner and outer heating wires 3, 4 being of substantially equal electrical resistance. The inner and outer heating wires 3, 4, which are of coiled form, are electrically insulated from each other by inner insulation 6 of thermoplastics material. (Polyethylene.) Under normal conditions, the current flow from line L to neutral N is by way of fuse 5, inner heating wire 3, and then outer heating wire 4. As the inner insulation sheath 6 is of polyethylene, this sheath will soften/melt and allow substantial electrical contact, (creating a short circuit), to occur between the inner and outer wires 3, 4 in the event of excessive overheating at any point along the length of the heating cable 2. If a short circuit takes place at point "A" current will flow from the line L, through fuse 5 and inner wire 3 and onto the neutral N. Thus only the inner heating wire 3 remains in use, the outer wire 4 being by-passed. This halves the nominal resistance of the heating cable 2, and doubles the current flow. The increase in current flow may not be sufficient to blow the fuse 5 at once. However, the increased current will cause the inner insulation sheath 6 to further overheat, (and soften/melt), so as to cause further short circuits between the heating wires 3 and 4, and increase current flow sufficiently to ensure that the fuse 5 does indeed blow. The current supply is therefore terminated. Wherever an initial short circuit occurs, the nominal resistance is halved. <IMAGE>

IPC 1-7
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IPC 8 full level
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CPC (source: EP)
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Citation (search report)

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Designated contracting state (EPC)
AT DE NL

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EP 0570246 A1 19931118; GB 2267189 A 19931124; GB 9210340 D0 19920701; ZA 933331 B 19931118

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EP 93303760 A 19930514; GB 9210340 A 19920514; ZA 933331 A 19930513