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D E C I S I O N
of 16 June 2005

Case Number: T 0913/03 - 3.5.2

Application Number: 99963078.3

Publication Number: 1142068

IPC: H01R 13/703

Language of the proceedings: EN

Title of invention:

Adaptive/reactive safety plug receptacle

Applicant:

Power-off Products LLC

Opponent:

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Headword:

-

Relevant legal provisions:

EPC Art. 56
EPC R. 71(a)

Keyword:

"Inventive step - main request (no)"
"Admissibility of the late-filed auxiliary requests (no)"

Decisions cited:

T 1105/98, T 0681/02

Catchword:

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Case Number: T 0913/03 - 3.5.2

D E C I S I O N
of the Technical Board of Appeal 3.5.2
of 16 June 2005

Appellant: Power-off Products LLC
901 Washington Avenue
Detroit Lakes, MN 56501 (US)

Representative: Benech, Frédéric
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 28 January 2003
refusing European application No. 99963078.3
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: M. Ruggiu
Members: J.-M. Cannard
C. Holtz

Summary of Facts and Submissions

I. The appellant contests the decision of the examining division to refuse European patent application No. 99 963 078.3. The reason given for the refusal was that the subject-matter of claim 1 according to the request filed with the letter of 12 July 2002 did not involve an inventive step in the sense of Article 56 EPC.

II. The decision under appeal cites the following documents of the state of the art:

D1: US-A-5 708 551,

D2: US-A-5 222 164, and

D3: EP-A-0 512 208.

III. Claim 1 according to the main request, which was filed with the grounds of appeal and corresponds to claim 1 refused by the examining division, reads as follows:

"An electrical receptacle (120, 720, 1600) which provides power only to a properly inserted plug, said receptacle comprising:

a contact assembly, a relay assembly (1390, 1496, 1509), two plug component sensors (140, 160; 240, 260, 340, 360; 440, 460; 540, 560; 640, 660; 740, 760; 840, 860; 1640, 1650) and a control circuit (1030, 1050, 1070, 1080; 1140, 1150, 1160, 1170; 1230, 1240, 1250, 1260, 1280, 1292, 1290; 1340, 1350, 1360, 1370; 1450, 1460, 1470, 1480, 1490, 1492; 1590, 1593, 1508) the contact assembly being adapted and configured to conductively

couple each blade (100, 200, 300, 400, 500) of the plug to the relay assembly; the relay assembly being adapted and configured to conductively couple the contact assembly to conductors;

characterised in that the control circuit determines presence of a properly inserted plug and provides power only upon substantially simultaneously sensing by the plug component sensors."

Claims 2 to 14 of the main request are dependent on claim 1.

IV. In a communication annexed to summons to attend oral proceedings, the Board stated that it was not convinced that the subject-matter of claim 1 involved an inventive step. Furthermore, the communication indicated that if the appellant wished the Board to consider amended claims and description, they should be filed at least one month before the oral proceedings. The communication also listed a series of passages of the description that appeared to be inconsistent with the claims. The oral proceedings were held on 16 June 2005 in the course of which the appellant filed for the first time a first, a second and a third set of claims, as auxiliary requests.

V. The arguments of the appellant can be summarized as follows:

Document D1 did not disclose an electrical receptacle which comprised a second plug component sensor and provided power only upon simultaneous sensing by a first and a second plug component sensor. To arrive at

the claimed subject-matter starting from D1, the skilled person would not only have to provide a second plug component sensor, but would also have to add a control circuit, including for instance a latch, a timer and a comparator, for determining the simultaneity of the sensing by the plug component sensors. D1 described a complex and expensive receptacle which provided power only when given conditions on the load and voltage were satisfied at the time of insertion of the plug. This taught away from the invention. Even if a second redundant plug component sensor might be included in the receptacle of D1 for increasing security, this would neither imply nor suggest to consider the simultaneity of the sensing of the insertion by the plug component sensors for powering the receptacle. There was no obvious reason for the skilled person to consider a combination of document D1 with document D2 or D3, because D2 and D3 concerned a cable identification system and a purely mechanical receptacle, respectively. A standard was being developed in the USA based on the present invention. This showed the importance of the invention.

The auxiliary requests had been filed at the oral proceedings because instructions from the appellant had not been received in time to meet the term set by the Board in its communication. Furthermore, filing the auxiliary requests earlier would have entailed the risk of weakening the appellant's position. The first and second sets of claims went further into details of the invention defined by claim 1 of the main request. At least, the third set of claims was allowable because it was neither known, nor suggested in the available prior

art to include a motion sensor for determining the proper insertion of a plug in an electrical receptacle.

- VI. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of either the main request (claims 1 to 14 filed with letter of 6 June 2003) or the first, second or third set of claims filed during the oral proceedings on 16 June 2005.

Reasons for the Decision

1. The appeal is admissible.

Main request - Inventive step

2. The closest prior art among the documents cited by the examining division is D1, which discloses an electrical receptacle that provides power only to a properly inserted plug. The receptacle according to the embodiment described with reference to figures 4 to 7 of D1 has the following features in common with the receptacle according to claim 1 of the main request: a contact assembly (108,109,110), a relay assembly (114,115), a first plug component sensor (107) and a control circuit (117,118), the contact assembly being adapted and configured to conductively couple a blade (106) of the plug to the relay assembly and the relay assembly being adapted and configured to conductively couple the contact assembly to conductors (D1, column 4, line 15 to column 5, line 34).

3. The subject-matter of claim 1 differs from the receptacle known from D1 in that a second plug sensor is provided, each blade of the plug is connected to the relay assembly, and the control circuit provides power only upon substantially simultaneous sensing by the plug component sensors, as recited in the characterizing part of the claim.
4. According to column 5, lines 46 to 58 of D1, the plug sensor is arranged next to the neutral aperture of the receptacle for safety reasons. If an unattended child inserts an object similar to a blade of the plug in the neutral aperture of the receptacle and this object is recognized as a blade, the receptacle is powered without entailing any danger. If the object is inserted in another receptacle aperture, the receptacle is not powered.
5. However, an accident would occur with the prior art receptacle if a child, after the insertion of a first object similar to a blade in the neutral receptacle aperture, attempts to insert a second object in any one of the other receptacle apertures. Starting from D1 and having regard to the effects provided by the claimed invention, the objective technical problem addressed by the invention can be seen in preventing such an accident.
6. It is known (see for example document D3) to use for security purposes the fact that the blades of a plug are substantially simultaneously inserted in the apertures of an electrical receptacle or outlet. Thus, it will be obvious to the skilled person wishing to solve the technical problem above to prevent the

receptacle from being powered, unless the insertion of a second blade into one of the receptacle apertures connected to the conductors of the electrical line is sensed. An obvious way to implement this solution would be to provide power only if a second plug component sensor senses an insertion of a second plug blade at the same time as the insertion of a first blade is sensed by the first plug component sensor. Moreover, configuring the contact assembly for coupling each blade of the plug to the relay assembly is an independent trivial measure.

7. Accordingly, having regard to the teaching of D1, the Board concludes that the subject-matter of claim 1 does not involve an inventive step within the meaning of Article 56 EPC.

First, second and third auxiliary requests

8. According to the case law of the Board of appeal (see for instance T 1105/98 and T 681/02), Rule 71(a) (2) EPC is applicable to the proceedings before the Boards of Appeal. This means that, when an applicant appellant has been notified of the grounds prejudicing the grant of a patent and invited to submit before a final date written submissions in preparation for the oral proceedings, as in the present case, it has to comply with the deadline for reply and that, under Rule 71(a) (1) EPC (fourth sentence), new documents presented after that date need not to be considered unless admitted on the grounds that the subject of the proceedings has been changed.

9. There was no change in the facts of the case at the oral proceedings of 16 June 2005. Nor could the appellant give any convincing reason for explaining the late filing of these requests. In particular, the allegation that difficulties of communication with the applicant were experienced and that an earlier filing of auxiliary requests would have weakened the appellant case cannot be regarded as legitimate excuses.

10. Claims 1 of the first and second sets of claims differ in substance from claim 1 of the main request only in that they further specify sensing insertion of plug blades by two plug component sensors and insertion of two conducting blades by first and second component sensors, respectively. *Prima facie*, these further features do not seem to be inventive (see point 6 above). Claim 1 of the third set of claims comprises the features of claim 1 of the first set of claims and in addition thereto specifies that "the plug component sensor further comprises a motion sensor". *Prima facie*, this additional feature does not seem to be the result of an inventive step because a sensor sensing the insertion of a plug blade in a receptacle aperture may be seen as a motion sensor. Hence, none of the first, second and third sets of claims is clearly allowable. Moreover, no attempt was made to remedy the defects in the description which had been detailed in the communication annexed to the summons to oral proceedings.

11. Accordingly, the Board decided to use the discretionary power conferred by Rule 71(a) EPC not to admit the first, second and third sets of claims filed as auxiliary requests because they were not submitted in

due time, the appellant did not provide legitimate excuses for their late submission and they were not clearly allowable.

12. Since claim 1 according to the appellant's main request does not meet the requirements of the EPC and the auxiliary requests are inadmissible, neither of these requests can be granted and the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

D. Sauter

M. Ruggiu