

**Internal distribution code:**

- (A) [ ] Publication in OJ  
(B) [ ] To Chairmen and Members  
(C) [ ] To Chairmen  
(D) [X] No distribution

**Datasheet for the decision  
of 24 October 2006**

**Case Number:** T 0599/05 - 3.2.06

**Application Number:** 97927330.7

**Publication Number:** 0998604

**IPC:** D06F 75/38

**Language of the proceedings:** EN

**Title of invention:**

Iron and soleplate for an iron

**Patentee:**

Koninklijke Philips Electronics N.V.

**Opponent:**

Braun GmbH

**Headword:**

-

**Relevant legal provisions:**

EPC Art. 54(2), 56, 111(1), 104(1)

**Keyword:**

"Novelty (yes)"

"Inventive step (no) - main, first and second auxiliary requests"

"Third auxiliary request filed at the oral proceedings - not admitted because not clearly allowable"

"Remittal - fourth auxiliary request including feature taken from the description"

"Apportionment of costs (no)"

**Decisions cited:**

T 0092/93

**Catchword:**

-



Case Number: T 0599/05 - 3.2.06

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.06  
of 24 October 2006

**Appellant:** Koninklijke Philips Electronics N.V.  
(Patent Proprietor) Groenewoudseweg 1  
NL-5621 BA Eindhoven (NL)

**Representative:** van der Veer, Johannes Leendert  
Philips  
Intellectual Property & Standards  
P.O. Box 220  
NL-5600 AE Eindhoven

**Respondent:** Braun GmbH  
(Opponent) Frankfurter Strasse 145  
D-61476 Kronberg (DE)

**Representative:** -

**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 28 February 2005  
revoking European patent No. 0998604 pursuant  
to Article 102(1) EPC.

**Composition of the Board:**

**Chairman:** P. Alting Van Geusau  
**Members:** G. Pricolo  
K. Garnett

## Summary of Facts and Submissions

- I. The appeal is from the decision of the Opposition Division posted on 28 February 2005 revoking European patent No. 0 998 604, granted in respect of European patent application No. 97 927 330.7.
- II. In the decision under appeal the Opposition Division considered that the amendments made by the patent proprietor in accordance with the main request were not allowable due to non-compliance with the requirements of Article 123(2) and 84 EPC and of Rule 57(a) EPC, and that the patentee's auxiliary request was not allowable due to lack of novelty of the subject-matter of claim 1 over the prior art disclosed by:
- D2 : DE-C-36 44 211;
- D3 : DE-A-1 454 212.
- III. The appellant (patent proprietor) lodged an appeal, received at the EPO on 9 May 2005, against this decision and paid the appeal fee on the same day. With the statement setting out the grounds of appeal, received at the EPO on 8 June 2005, the appellant filed amended claims in accordance with main and first to third auxiliary requests.
- IV. With letter dated 24 February 2006, the respondent (opponent) submitted, inter alia, that the subject-matter of claim 1 in accordance with the appellant's main request was not novel over the disclosure of document:

D1 : EP-A-640 714.

- V. In a communication accompanying the summons to oral proceedings pursuant to Article 11(1) of the Rules of Procedure of the Boards of Appeal, the Board expressed the preliminary opinion that D1 disclosed an iron with a stainless steel plate having an anti-friction layer containing an inorganic polymer but did not clearly and unambiguously disclose the presence of an aluminium part in which the heating resistance was embedded.
- VI. In response to the preliminary opinion of the Board, the appellant filed with letter dated 18 September 2006 amended claims forming the basis for a new main request (set A) and new first to third auxiliary requests (sets B to D) for maintenance of the patent in amended form.
- VII. Oral proceedings, at the end of which the decision of the Board was announced, took place on 24 October 2006.

The appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main (set A), first auxiliary (set B) or second auxiliary (set C) requests as filed with the letter dated 18 September 2006, or on the basis of the new third auxiliary (set D) or fourth auxiliary (set E) requests filed during the oral proceedings.

The respondent (opponent) requested that the appeal be dismissed or, in the event of the remittal of the case to the Opposition Division, an order for an apportionment of its costs of the appeal proceedings.

VIII. Claim 1 according to the main request reads as follows:

"1. A metal soleplate (2) for an iron which is provided with an anti-friction layer (5) containing an inorganic polymer, characterized in that the part of the soleplate (2) which faces the anti-friction layer (5) is made of aluminium, and an intermediate layer (4), with a hardness which is at least twice that of aluminium is provided between the soleplate and the anti-friction (5) layer and the inorganic polymer of the anti-friction layer is provided by means of a sol-gel process."

In addition to the features of claim 1 according to the main request, claim 1 according to the first auxiliary request recites, after the expression "characterized in that", that

"the anti-friction layer is an inorganic polymer layer".

In addition to the features of claim 1 according to the first auxiliary request, claim 1 according to the second auxiliary request defines the feature according to which the inorganic polymer is "with or without a quantity of filler".

Claim 1 according to the third auxiliary request reads as follows:

"1. A metal soleplate (2) for an iron which is provided with an anti-friction layer (5) containing an inorganic polymer, characterized in that the part of the soleplate (2) which faces the anti-friction layer (5) is made of aluminium, and an intermediate layer (4),

which consists of a plate-shaped hard layer of hardened steel or CrNi- steel provided with said anti-friction layer on one side, whereafter they are secured with the uncoated surface to the surface of the aluminium part with a thickness that ranges between 0.2 and 4.0 mm, preferably of CrNi-steel with a hardness which is at least twice that of aluminium is provided between the soleplate and the anti-friction (5) layer and wherein the inorganic polymer of the anti-friction layer is provided by means of a sol-gel process."

Claim 1 according to the fourth auxiliary request reads as follows:

"1. A metal soleplate (2) for an iron which is provided with an anti-friction layer (5) containing an inorganic polymer, characterized in that the part of the soleplate (2) which faces the anti-friction layer (5) is made of aluminium, and an intermediate layer (4), obtained by hardening the surface of the soleplate by a nitration or a carbonation process, with a hardness which is at least twice that of aluminium is provided between the soleplate and the anti-friction (5) layer and the inorganic polymer of the anti-friction layer is provided by means of a sol-gel process."

IX. The arguments of the appellant in support of its requests, insofar as they are relevant for this decision, can be summarized as follows:

D1 related to an iron having a soleplate comprising a metal plate and an anti-friction layer containing an inorganic polymer which was provided by means of a sol-gel process. According to a particular embodiment, the

metal plate was made of stainless steel. There was no explicit or implicit disclosure in D1 that an additional part of aluminium was present. In fact, soleplates made only of steel were known in the art.

The closest prior art was an embodiment in accordance with D1 in which the metal plate was made of aluminium. The provision of a hard intermediate layer, which solved the technical problem of improving the soleplate's resistance to scratching, was not rendered obvious by the available prior art. It was known in the art that soleplates could either be made entirely of aluminium, usually for "low-end" irons, or comprised of a plate of aluminium to which a plate of steel was attached, normally for "high-end" irons. The embodiment of D1 in which the metal plate was made of aluminium was for a cheap "low-end" iron. There was no reason to complicate such an iron by applying an additional plate of steel. Nor was there any reason to apply an additional part of aluminium to the other embodiment of D1 in which the soleplate was made of steel. Accordingly, the subject-matter of claim 1 of the main, first and second auxiliary requests was novel and involved an inventive step.

Claim 1 according to the third and fourth auxiliary requests introduced additional features taken from the description of the application as filed. Claim 1 according to the third auxiliary request was restricted to a soleplate in which the intermediate layer was secured to the aluminium part after having been provided with the anti-friction layer. This feature did not leave room for any ambiguity and accordingly claim 1 was clear.

X. In response to these submissions, the respondent essentially argued as follows:

It would be implicit for the skilled person that an aluminium part was present in the embodiment of D1 according to which the soleplate comprised a stainless steel plate, because the standard construction of irons in the last decades comprised a cast aluminium part in which the heating resistance was embedded. Though it could not be excluded that other exotic constructions existed, the skilled person would only consider the standard constructions when reading the disclosure of D1. Since stainless steel had a hardness at least twice that of aluminium, the soleplate of D1 consisting of the aluminium part, the stainless steel plate, and the anti-friction layer, was prejudicial to the novelty of the subject-matter of claim 1 of the main request. In any event, the subject-matter of claim 1 of the main request did not involve an inventive step, because it was obvious for a skilled person to provide such an aluminium part in the soleplate of D1 having a stainless steel plate, in view of the generally known standard construction of modern irons.

Claim 1 according to the third auxiliary request introduced added subject-matter, contrary to Article 123(2) EPC, because it encompassed an embodiment in which the intermediate layer was welded to the aluminium part after having been provided with the anti-friction layer. Such an embodiment was not disclosed in the application as filed. In any event, the claim was not clear, contrary to Article 84 EPC,



because it was not clear whether this embodiment fell under the scope of the claim or not.

If the case was remitted to the first instance for further prosecution on the basis of the fourth auxiliary request, then the respondent was entitled to a reimbursement of the costs incurred for the oral proceedings. This was justified by the appellant's behaviour, who had filed the fourth auxiliary request only during the oral proceedings. The late-filing of this request put the respondent in a disadvantageous situation. The Rules of procedure of the Boards of Appeal were intended to prevent situations of this kind. In accordance with the Rules of procedure, a case should be ready for decision at the end of oral proceedings and amendments to the appellant's case should not be admitted if they would result in an adjournment of the oral proceedings.

## **Reasons for the Decision**

1. The appeal is admissible.
2. *Main request - set A of claims*
  - 2.1 Document D1 undisputedly discloses (see the Figure) a metal soleplate according to the preamble of claim 1, namely a metal soleplate (2) for an iron which is provided with an anti-friction layer (3) containing an inorganic polymer (see claim 1 of D1). As acknowledged by the appellant during the oral proceedings, D1 also discloses the feature of the characterizing portion, according to which the organic polymer of the anti-

friction layer is provided by means of a sol-gel process (see claim 1 of D1).

D1 further discloses that the metal soleplate (2) comprises a stainless steel alloy layer, the stainless steel being in particular an AISI 304 alloy (col. 3, lines 52, 53 and col. 4, lines 36, 37). D1, undisputedly, does not explicitly disclose an aluminium layer in combination with a stainless steel alloy layer.

The respondent argued that the known iron must also have an aluminium part provided on top of the stainless steel layer, in which the heating resistance was embedded. The respondent did not dispute that irons without such an aluminium part existed, but argued merely that it was found in the standard construction of all modern irons available on the market. Under these circumstances, the Board can only accept the appellant's submission that iron constructions without such an aluminium part are known. Therefore, when reading D1, the skilled person would be faced with the question of whether the iron of D1 has a "standard" construction with an aluminium part or, rather, a different known construction without the aluminium part. Accordingly, it must be concluded that the presence of the aluminium part cannot be clearly and unambiguously derived from the disclosure of D1.

Hence, since D1 does not disclose a part of the soleplate made of aluminium in combination with a stainless steel layer as intermediate layer, the subject-matter of claim 1 is novel over the disclosure of D1 (Article 54(2) EPC).

2.2 However, the subject-matter of claim 1 does not involve an inventive step (Article 56 EPC).

When reading D1, the skilled person would consider the technical problem of how to realize, in practice, an iron in accordance with the above-mentioned embodiment of D1 in which the metal soleplate comprises a stainless steel alloy layer. An aspect of this problem is providing the iron with the necessary heating element.

The Figure of D1 shows that there are further parts on top of the stainless steel alloy layer (2). These parts must necessarily include the heating element. The provision of a heating element in the form of a heating resistance embedded in an aluminium cast part is, undisputedly, generally known in the art. It is also generally known, as acknowledged by the appellant itself during the oral proceedings, to attach a steel plate to such an aluminium part, in particular for expensive "high-end" types of irons. It is further undisputed that in these types of irons the combination of the steel plate and the aluminium part constitutes the soleplate.

The skilled person would therefore consider it as obvious, having regard to his common general knowledge, to provide, as one of the parts on top of the stainless steel layer (2) shown in the Figure of D1, an aluminium part containing the heating resistance. In doing so, he would realize a soleplate comprising a part made of aluminium, an intermediate layer made of an AISI 304 stainless steel, and the above-mentioned anti-friction

layer. Since AISI 304 stainless steel has, undisputedly, a hardness which is at least twice that of aluminium, the skilled person would in this manner arrive at a metal soleplate falling within the scope of claim 1 without the exercise of inventive activity.

2.3 Therefore, the appellant's main request is rejected for lack of inventive step, Article 56 EPC.

3. *First and second auxiliary requests (sets of claims B and C)*

In addition to the features of claim 1 according to the main request, claims 1 according to the first and second auxiliary requests define, respectively, the feature that "*the anti-friction layer is an inorganic polymer layer*", and the feature that the inorganic polymer is "*with or without a quantity of filler*".

As pointed out by the Board during the oral proceedings, these features do not provide any further distinction over D1. Stating that the inorganic polymer is with or without a quantity of filler does not limit the claimed subject-matter but is simply an indication of the fact that the filler is optional. The anti-friction layer disclosed by D1 is, undisputedly, an inorganic polymer layer (see col. 4, lines 32 to 44).

Therefore, the subject-matters of claims 1 of the first and second auxiliary requests lack an inventive step for the same reasons as given in respect of claim 1 of the main request.

It follows that the appellant's first and second auxiliary requests are rejected for lack of inventive step, Article 56 EPC.

4. *Third auxiliary request - set D of claims*

The third auxiliary request counts as late-filed because it was filed during the oral proceedings, after the discussion of the third auxiliary request previously on file, in respect of which the Board expressed concerns under Article 123(2) EPC.

Claim 1 of the third auxiliary request is amended to define a metal soleplate in which the intermediate layer is provided with the anti-friction layer on one side, "*whereafter they are secured with the uncoated surface to the surface of the aluminium part*". In accordance with the appellant's intention, as expressed during the oral proceedings, claim 1 requires that the intermediate layer is firstly coated with the anti-friction layer and then secured to the aluminium part.

The amendments thus introduce, in the claim directed to a product, a reference to the steps of the method for manufacturing the product. Since it is not immediately clear what limitations for the claimed product derive from the reference to the method steps, the claim is *prima facie* objectionable under Article 84 EPC.

Accordingly, since the third auxiliary request is considered late-filed and claim 1 is not clearly allowable under Article 84 EPC, this request is rejected as inadmissible (see e.g. T 92/93, Reasons, point B.1).

5. *Fourth auxiliary request - set E of claims*

5.1 Claim 1 according to the fourth auxiliary request additionally defines, as compared to claim 1 of the main request, that the intermediate layer is obtained by hardening the surface of the soleplate by a nitration or a carbonation process. This feature is disclosed in the description of the application as filed (see page 2, lines 16 to 19). In the application as filed there is support for combining this feature with the remaining features of claim 1 (see claim 1 and page 2, lines 13, 14 and 16 to 19 of the application as filed).

Dependent claims 2 to 5 correspond to claims 5 to 8 of the patent as granted (see claims 5 to 8 of the application as filed).

Accordingly, the amendments made to the claims do not give rise to objections under Article 123(2) EPC.

5.2 Since it is taken from the description, the above-mentioned feature might not have been searched at all. Its introduction constitutes a substantial amendment in the sense that it could lead to a different assessment of inventive step as compared to the main request. No decision was taken by the first instance as to inventive step.

In view of these circumstances, the Board considers it appropriate to give the parties the possibility of having this matter considered by two instances of jurisdiction. The Board thus makes use of its power

under Article 111(1) EPC to remit the case to the Opposition Division for further prosecution.

### 5.3 *Apportionment of costs*

The respondent's request for an apportionment of the costs of the oral proceedings in the event of such a remittal is based on the allegation that additional costs have been created by the appellant having filed late the fourth auxiliary request, whereby a final decision could not be taken at the oral proceedings.

It is clear that additional costs are occasioned by a remittal. However, the respondent failed to show what additional costs it incurred in relation to the oral proceedings held before the Board by reason of the filing of the fourth auxiliary request during said oral proceedings. In fact, the oral proceedings was rendered necessary by the appellant's other requests previously filed in writing. Nor can the Board recognise an abuse of procedure in the appellant's behaviour: the fourth auxiliary request corresponds to the previous third auxiliary request filed in writing with letter dated 18 September 2006, which included two independent claims 1 and 2, and which was amended only by way of deletion of claim 1 in reaction to an objection of the Board under Article 123(2) EPC raised during the oral proceedings. Moreover, the added feature concerning the nitration or the carbonation process was already present in the third auxiliary request filed with the grounds of appeal.

Finally, it is true that in accordance with the Rules of procedure of the Boards of Appeal (Article 11(6) and

10b(3) RPBA), a case should be ready for decision at the end of oral proceedings and amendments to the appellant's case should not be admitted if they would result in an adjournment of the oral proceedings. This, however, does not mean that the decision at the end of oral proceedings shall be a final decision in the sense that it terminates the proceedings. A remittal for further prosecution, as in the present case, does not terminate the opposition proceedings, but terminates the current appeal proceedings. Moreover, this possible outcome of the oral proceedings had already been hinted at in the communication annexed to the summons for oral proceedings (point IV).

Therefore, there are no reasons of equity which in accordance with Article 104(1) EPC could justify a different apportionment of costs incurred during oral proceedings. The respondent's request cannot therefore be allowed.



**Order**

**For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The case is remitted to the Opposition Division for continuation of the opposition proceedings.
3. The request for an apportionment of the opponent's costs is rejected.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau