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Case Number: T 189 / 82

**DECISION**  
**of the Technical Board of Appeal 3.2.1**  
**of 23 March 1984**

**Appellant:** NATIONAL CAN CORPORATION  
8101 West Higgins Road  
Chicago, Illinois 60631  
U.S.A.

**Representative:** BROOME, GEOFFREY EDWARD  
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**Decision under appeal:** Decision of Examining Division 090 of the European Patent  
Office dated 2 July 1982 refusing European patent  
application No 79301117.2 pursuant to Article 97(1)  
EPC

**Composition of the Board:**

**Chairman:** G. Andersson  
**Member:** C. Maus  
**Member:** P. Ford

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Summary of Facts and Submissions

- I. European patent application No. 79 301 117.2, filed on 12 June 1979, published under publication number 0 007 178 and claiming the priority of previous applications of 15 June 1978 and 4 June 1979, was refused by the decision of the Examining Division 090 dated 2 July 1982.

The decision was based on Claims 1 to 5 received on 16 January 1982.

- II. In its decision, the Examining division stated that the subject-matter of Claim 1 did not involve an inventive step. In support of its view the Examining Division cited British patent specification No. 1 229 475 and held that the skilled person would have arrived at the ironing die according to Claim 1 in an obvious manner, starting from the device disclosed in the aforesaid document.

- III. On 6 September 1982, the appellants lodged an appeal against this decision. The fee for appeal was paid on 27 August 1982 and the statement setting out the grounds of appeal was received on 12 November 1982.

The appellants requested that the decision should be set aside in its entirety. Furthermore they requested the reimbursement of part or the whole of the appeal fee.

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- IV. During the procedure before the Board of Appeal, the appellants substituted new Claims 1 to 4 received on 21 July 1983 for the claims on which the decision was based. On 9 January 1984, they submitted a new description consistent with the claims.

Claim 1 reads as follows:

"1. An ironing die mounted in a holder (14), for use with a punch to reduce the wall-thickness of the side-wall of a metal cup, comprising a body (12) having a circular opening (28) therein extending from a leading surface (32) to a trailing surface (34) which are substantially parallel to each other, said opening having a land (30) spaced from said surfaces (32; 34) and defining a minimum diameter, characterised in that the circular opening (28) has a cylindrical portion (38) between said land (30) and said trailing surface (34), said cylindrical portion having a diameter (D2) in the range of 1.0003 to 1.0012 times said minimum diameter (D1) to guide said cup after a first portion of the free edge of the cup moves past said land."

The appellants were of the opinion that the device according to this claim involved an inventive step as against the device disclosed in British patent specification No. 1 229 475. They submitted however that that document was not concerned with a device of the kind which was subject-matter of the application.

- V. For the original claims and description reference is made to publication No. 0 007 178.

# Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC. It is, therefore, admissible.
2. Claim 1 comprises besides those features which were specified in original Claim 1 the feature that the ironing die is mounted in a holder. This feature is disclosed on page 7, lines 22 and 23 of the original description. The subject-matter of Claim 1 does not, therefore, extend beyond the content of the application as filed (Article 123(2) EPC).

The appellants derived the preamble of Claim 1 from the ironing die disclosed in German "Offenlegungsschrift" No. 1 527 908. In support, they urged that this device was closer to the subject-matter of the application than the one described in British patent specification No. 1 229 475.

The Board considers that the ironing die according to British patent specification No. 1 229 475 is intended to solve the problem of trimming the irregular edge of a hollow body in addition to the problem of reducing the wall thickness thereof. It is, therefore, more appropriate to refer to the ironing die disclosed in German "Offenlegungsschrift" No. 1 527 908 in the preamble of the appellants' Claim 1. That device is used simply for the reduction of the wall thickness of the metal cup and is thus closer to the subject-matter of Claim 1 than the ironing die according to British patent specification No. 1 229 475. This statement is

also true with regard to the devices disclosed in German patent specification No. 108 088 and in British patent specification No. 724 251.

The preamble of Claim 1 comprises all those features which, in combination, are part of the prior art according to German "Offenlegungsschrift" No. 1 527 908. The claim thus meets in this respect the formal requirements of the Convention.

3. It follows from the foregoing that the subject-matter of Claim 1 is not disclosed in any one of the aforementioned specifications. The device according to Claim 1 is, therefore, new having regard to the prior art.
4. On the question of whether or not this prior art could suggest the ironing die according to Claim 1 the following should be observed:
  - 4.1 According to the appellants' description, in practice the free edge of a cup which is being converted into a finished container in an ironing die tends to be uneven. The uneven edge will disrupt the steady state ironing process at the moment when the edge enters the working portion of the die, and this results in tear-offs of the longer part of the edge or "clip-offs" opposite the longer part or damage to the tools. These disadvantages appear likely to occur also with the ironing die disclosed in German "Offenlegungsschrift" No. 1 527 908.

The problem underlying the invention is, therefore, to eliminate tear-offs and "clip-offs" resulting from irregularities in the region of the free edge of the

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cup. This problem follows immediately from practical experience with the device according to German "Offenlegungsschrift" No. 1 527 908.

However, the Board has come to the conclusion that the ironing die specified in Claim 1 as the solution of the problem is not obvious having regard to the cited state of the art.

- 4.2 As is mentioned above (cf. paragraph 2) the ironing die according to British patent specification No. 1 229 475, on which the decision under appeal was based, is applied not only for reducing the thickness of the sidewall of a metal cup but also for trimming the irregular, i.e. uneven, edge of the cup. For this reason the punch has a collar with a cutting edge. The diameter of the cutting edge, compared with the diameter of the land of the ironing die, is such that in reducing the thickness by the cooperation of the working surface of the die and of the punch, the reducing capacity of the cup material is exceeded at the cutting edge and the material ruptures there. Thus the free edge of the cup is even when it arrives at the end of the land and it leaves the land immediately.

Hence, it follows that the problem underlying the invention and resulting from the unevenness of the free edge of the cup does not arise with the ironing die disclosed in British patent specification No. 1 229 475.

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This ironing die could not, therefore, suggest to the skilled person the idea of using the portion of the opening between the land and the trailing surface of the ironing die according to German "Offenlegungsschrift" No. 1 527 908 for guiding the cup after a first portion of an uneven free edge moves past the land, and of constructing this portion to this end as a cylinder having a diameter in the range specified in Claim 1.

It is, therefore, of no consequence that with the ironing die disclosed in British patent specification No. 1 229 475 according to the drawing, the portion of the opening beyond the land is already made cylindrical.

- 4.3 From German patent specification No. 108 088, the skilled person learns that the diameter of the circular opening of the ironing die should be constant along its entire length or should taper between the trailing and the leading surface.

According to British patent specification No. 724 251 which is cited in the original description, the ironing die has a land spaced from both aforementioned surfaces, and the portion of the opening between the land and trailing surface should become conically larger towards this surface.

These publications could not, therefore, suggest the subject-matter of Claim 1 either alone or in combination with the teachings according to the other documents.

- 4.4 Hence, the ironing die according to this claim involves an inventive step within the meaning of Article 56 EPC.
5. Claim 1 is, therefore, allowable (Article 52 EPC).
6. Dependent Claims 2 to 4 concern particular embodiments of the invention according to Claim 1. The amendment of the reference of Claims 3 and 4 with regard to the reference of the corresponding original claims is admissible. The skilled person will recognise immediately that the particular embodiments according to these claims can be realised by any ironing die according to any of the preceding claims. The correction of the number 1.003 into 1.0003 in Claim 4 is supported by the original description (cf. page 6, line 27).

Claims 2 to 4 thus are likewise allowable.

7. The amendments in the description serve the purpose of a clearer presentation of the problem which the invention should solve, and of the invention itself, or are necessary in order to introduce SI standards. Consequently, they are not open to objection.
8. The reason given by the appellants for the requested reimbursement of the appeal fee was that the only communication from the Examining Division relied on a misreading of the sole citation from the prior art and that the application had, in effect, been rejected without the applicants being given any opportunity to reply to the Examiner's position and that this was inequitable.

In fact, it seems clear from the file that the arguments of the appellants concerning misreading of the cited document did not convince the Examining Division and that the decision under appeal, therefore, was properly based on a document on which the appellants had had an opportunity to present their comments. A substantial procedural violation in the meaning of Rule 67 EPC in view of which the reimbursement would be equitable does not exist, therefore. The request thus cannot succeed.

Order

On these grounds,

it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to grant a European patent on the basis of the following documents:  
Claims 1 to 4, received on 21 July 1983,  
description, received on 9 January 1984,  
original drawings.
3. The request for the reimbursement of the appeal fee is rejected.

The Registrar:

J. Ruckerl

The Chairman:

G. Andersson

