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D E C I S I O N
of 7 May 2002

Case Number: T 0380/00 - 3.4.2

Application Number: 91903041.1

Publication Number: 0510083

IPC: H01M 10/14

Language of the proceedings: EN

Title of invention:

Method for the assembly of lead-acid batteries and associated apparatus

Patentee:

SEALED ENERGY SYSTEMS, INC.

Opponent:

CHLORIDE INDUSTRIAL BATTERIES LIMITED

Headword:

-

Relevant legal provisions:

EPC Art. 123, 56, 114(2), 104

Keyword:

"Request for postponement of the oral proceedings because of change of ownership of the opponent/appealing company (refused)"

"Late filed and insufficiently substantiated allegation of public disclosure during a job interview (not admitted into the procedure)"

"Apportionment of costs in favour of the patentee/respondent (refused)"

Decisions cited:

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Catchword:

-



Case Number: T 0380/00 - 3.4.2

D E C I S I O N
of the Technical Board of Appeal 3.4.2
of 7 May 2002

Appellant: CHLORIDE INDUSTRIAL BATTERIES LIMITED
(Opponent) PO BOX 5, Clifton Junction, Swinton
Manchester M27 9LR (GB)

Representative: Parker, Nigel Edward
N E Parker & Co
The Annex
Tameway Tower
Bridge Street
Walsall, West Midlands WS1 1QD (GB)

Respondent: SEALED ENERGY SYSTEMS, INC.
(Proprietor of the patent) 2214 Country Club Drive, Suite A
Pittsburgh, PA 15241 (US)

Representative: Kehl, Günther, Dipl.-Phys.
Patentanwaltskanzlei
Günther Kehl
Friedrich-Herschel-Straße 9
D-81679 München (DE)

Decision under appeal: Interlocutory decision of the Opposition Division
of the European Patent Office posted
8 February 2000 concerning maintenance of
European patent No. 0 510 083 in amended form.

Composition of the Board:

Chairman: E. Turrini
Members: A. G. Klein
V. Di Cerbo

Summary of Facts and Submissions

- I. European Patent No. 0 510 083 (application no. 91 903 041.1) was maintained in an amended form by an interlocutory decision of the opposition division.
- II. The appellant (opponent) filed an appeal against the interlocutory decision.

In its statement of the grounds of appeal filed on 19 June 2000 the appellant first pointed at an error in claim 1 as maintained, consisting in the omission of a feature.

The appellant further submitted that claim 1 was objectionable under Article 123(2) EPC and that the subject-matter of independent claims 1 and 10 lacked an inventive step within the meaning of Article 56 EPC having regard to a non confidential disclosure by an engineer, Mr Fairlee, during his visit to the company Oldham Batteries in 1986 for a job interview. In support of this argument, which had not been raised during the opposition procedure, the appellant filed a statutory declaration by Mr Fairlee and a series of drawings which had allegedly been produced during the interview.

- III. In its response of 4 October 2000 to the statement of the grounds of appeal, the respondent (patentee) denied that the claims had been amended in contravention of Article 123(2) EPC, and requested that Mr Fairlee's statutory declaration be excluded from the proceedings for having been introduced late and because the alleged public disclosure was not adequately substantiated, account being taken of the fact that it can be

considered a matter of basic decency and is standard employment practice that employees have an obligation of confidentiality to their employer and do not disclose the contents of internal technical drawings during job interviews with companies competing against their employer in the same markets.

- IV. Following the respondent's request of 7 December 2001 that the procedure be expedited since the existence of the opposition significantly reduced patentee's ability to licence the technology, the Board on 8 February 2002 summoned oral proceedings to be held on 7 May 2002.

In its communication annexed to the summons to attend oral proceedings, the Board expressed its provisional view that, given the late filing of the arguments and evidence based on Mr Fairlee's interview with a prospective employer, it would first have to decide whether they shall be admitted into the procedure - and the case consequently be remitted to the first instance under Article 111(1) EPC to avoid the loss of an instance - or whether they shall be disregarded under Article 114(2) EPC.

The Board in this respect noted that the exact date of the interview and the names and quality of the other persons present had not been specified, that it had not been established whether the technical content of the alleged disclosure could have been fully understood by those persons, and that despite the appellant's submission that the disclosure by Mr Fairlee was non-confidential, the drawings attached to Mr Fairlee's statutory declaration all bore a mention to the contrary.

The Board also indicated that it tended to agree to the respondent's submission that, according to general business standards, internal information obtained during a job interview from an applicant on sensitive aspects of the operation of a competitor must at least implicitly be considered confidential, and that the appellant did not demonstrate that any information so obtained was actually made public by the interviewer(s).

- V. By letter dated 21 February 2002 the appellant's representative informed the Board that the appealing company was in the process of being sold to a third party. In order to ensure that the new proprietors have proper time to review their interests in the appeal proceedings and to appoint a professional representative of their choosing, it was requested that the oral proceedings which were due to take place on 7 May 2002 be deferred by at least three months.

In its response of 27 February 2002 the respondent disagreed to the requested postponement and insisted that the hearing be held on 7 May 2002 as scheduled.

In a communication dated 7 March 2002 the Board's registry informed the parties that the appellant's request for postponement of the date of the oral proceedings was denied.

By letter dated 29 April 2002 the appellant's new representative reiterated the request for postponement of the oral proceedings. It submitted that the new owner only had a scanned few days in order to consider all the prevailing issues in the case, appoint a professional representative and enter new submissions.

This was nowhere sufficient time to consider all the very considerable materials amassed during the opposition proceedings or to properly prepare an appeal.

VI. Oral proceedings were held as scheduled on 7 May 2002.

The appellant at the beginning of the oral proceedings again requested that they be deferred to a later date in case the Board considered the disclosure by Mr Fairlee to have an impact on the maintenance of the patent in amended form. The Board heard the parties both on this issue and on the admissibility of the late filed arguments and evidence in relation to the alleged disclosure by Mr Fairlee. After deliberation it expressed its provisional view that the oral proceedings should not be adjourned and that the alleged public disclosure should be disregarded.

The appellant thereafter did not reiterate its request for postponement of the oral proceedings, nor did it further rely upon the alleged disclosure by Mr Fairlee.

At the end of the oral proceedings, the appellant requested that the decision under appeal be set aside and that the European patent be revoked.

The respondent for its part requested that the appeal be dismissed and that the patent be maintained on the basis of a set of claims of which claims 1 and 10, the only independent claims, filed with the letter dated 28 February 2002, read as follows:

"1. An automated method of making a lead-acid battery cell assembly comprising:

providing compressible separators, providing a stack of individual positive battery plates (81, 98) and a stack of individual negative battery plates (89, 93) and providing a battery cell container (28) containing at least one chamber of a size that requires compression of said cell assembly prior to insertion therein, characterised in that a cell assembly zone (38) is provided wherein said cell assembly is automatically sequentially established, introducing a first individual positive or negative plate into the assembly zone (38), introducing said separator into said assembly zone (38) and positioning said separator in surface-to surface adjacency with respect to said first plate, introducing a second individual positive or negative plate of a different polarity than the first individual plate into said cell assembly zone, and positioning said second plate generally in surface to-surface adjacency with respect to said intermediate separator on the opposite side from said first individual plate, automatically compressing the assembly of said plates and separator by acting upon it by a compression means such that the compressed cell assembly is aligned with the opening of said battery cell container and automatically inserting said assembly into said battery cell container (28) by acting upon said compressed cell assembly by a reciprocating means which slides said cell assembly laterally relative to said compression means into said battery cell container, whereby said assembly may be created by sequential assembly of the individual components into said assembly zone without intermediate storage."

"10. Apparatus for automated manufacture of a lead-acid battery including:

means for supplying individual positive plates (81, 98), means for supplying compressible separators, means for supplying individual negative plates (83, 93), characterised in that assembly means (38) for sequentially receiving said separator and said plates and establishing an assembly thereof is provided and means for positioning said assembly means (38) adjacent to a battery cell container (28) and means for compressing the assembly of said separator and said plates (40), said means acting upon it such that the compressed cell assembly is aligned with the opening of said battery cell container, and means for automatically inserting said assembly into the battery cell container (28) by using reciprocating insertion means which slides said cell assembly laterally relative to said compression means, is provided."

The respondent also requested a decision of apportionment of costs.

VII. The arguments put forward by the appellant in support of its requests can be summarised as follows:

Independent claim 1 was amended by the inclusion at the end of the claim of features stating that the assembly of plates and separator is acted upon by a compression means and that the compressed cell assembly is acted upon by a reciprocating means. These features were disclosed *expressis verbis* in the application documents as originally filed, but only in conjunction with the first embodiment which clearly does not fall within the scope of claim 1. Claim 1 as amended therefore defines a combination of features which was not disclosed in the application documents as originally filed, in contravention of the provisions of Article 123(2) EPC.

Moreover, whilst the original description of the other embodiments always disclosed the assembly as being first moved to the cell insertion station to be compressed there and then inserted, claim 1 in the amended version now also allows for the compression being partially or totally performed at a distant location.

The original description also specified that the cell assembly is indexed to a particular position before compression, and that it is compressed downwardly. The present claims do not however specify these features and they thus define an unallowable generalisation of the technical arrangement originally disclosed.

Independent claim 10 as granted required that the compression and the insertion of the cell assembly be performed by a single means. The amended claim 10 however no longer defines such double function since it allows for the means for compressing being different from the means for inserting. It therefore extends the scope of protection beyond the scope of the claim as granted, in contravention of the provisions of Article 123(3) EPC.

The amended designation of the subject-matter of claim 1 as an automated method of making a lead-acid battery assembly is also unclear, insofar as the method involves steps in which a battery cell assembly is compressed and inserted in a battery cell container.

Concerning the issue of inventive step, the opposition division in the decision under appeal expressly stated that claim 1 as granted was not allowable because it did not provide any clear definition of the sequence of

operations and of the means used for the compression and the insertion of the cell assembly into the battery cell container. This objection is still valid against claim 1 as amended, the subject-matter of which does not in fact solve any technical problem.

In any case, the claimed subject-matter does not involve an inventive step in the sense of Article 56 EPC, in view of the following documents

D1: US-A-4 351 106;

D5: GB-A-2 051 464; and

D6: The Battery Man, July 1986, pages 14, 16 and 17.

In particular, the skilled person starting from the assembly method of document D1, which does not use compressible separators, and knowing for instance from documents D5 or D6 that battery cells may also be provided with compressible separators would immediately contemplate compression of the cell assemblies before insertion in the battery cell container, in the manner set out in claim 1.

VIII. The respondent in respect of the appellant's objections under Article 123(2) EPC submitted that for the skilled technical expert having experience in the assembly of battery cells, it is evident from the description of the patent as originally filed that what matters is simply that the cell assembly be aligned after compression. Whether any specific indexing technique is employed or whether compression is achieved in an upward or a downward direction is clearly of no importance whatsoever.

Concerning the appellant's objection against independent claim 10 under Article 123(3) EPC, the reference in claim 10 as granted to means for compressing the cell assembly and inserting it into a battery cell container was no more than a linguistic simplification, which already encompassed the possibility of such means comprising different structures, each dedicated to one of the specified purposes.

The respondent also submitted that the statement in claim 1 that there is no intermediate storage of the individual components can reasonably be understood only as meaning that the manufacture of the cell assembly is a continuous process, no element or assembly being caused to wait at a storage location before being further processed. In that sense the embodiments disclosed in the patent all fell under the scope of the claims.

In respect of the issue of the patentability of the claimed subject-matter, the prior art in the file neither disclosed nor even hinted at an automated manufacturing method which allowed to dispense with manual compression and insertion of cell assemblies into a battery cell container.

Finally, the request for apportionment of the costs in the respondent's favour was justified by the fact that the appeal was based in substance only on a clearly insufficiently substantiated and late filed allegation of public disclosure. The appeal proceedings could have been avoided, had the appellant exercised all due care when filing the opposition.

Reasons for the Decision

1. The appeal is admissible.
2. *Procedural matters*
 - 2.1 Admissibility of the late filed arguments and evidence in respect of an alleged public disclosure by Mr Fairlee.

The appellant with its statement of the grounds of appeal for the first time relied on the disclosure of technical features of the invention by Mr Fairlee during a job interview.

In respect of the circumstances of the disclosure the statutory declaration by Mr Fairlee, filed with the statement of the grounds of appeal, only refers to the year 1986, without any further precision, and it does not identify the persons present at the interview. Although Mr Fairlee in its declaration submits that he was under no obligation to confidentiality, the technical drawings he submits to have shown at the interview all bear the mention "This drawing is confidential and may not be used in any manner detrimental to Oldham and Son". The drawings numbered 10259 and 10261 are dated May 85 and June 85, respectively, which suggests that they illustrate a quite recent development of Mr Fairlee's employer.

The respondent convincingly submitted that according to standard practice the persons present at the interview on behalf of the prospective employer would have felt bound by an at least implicit obligation of confidentiality. The appellant did not with its

statement of the grounds of appeal provide any evidence to the contrary, nor did it even seek to demonstrate that information obtained by the interviewer(s) during the interview was actually passed over to the general public.

In these circumstances, the Board considered that the alleged public disclosure by Mr Fairlee, as relied upon late by the appellant in its statement of the grounds of appeal, is too poorly substantiated to justify that the matter be further investigated, which incidentally would have called for the case being remitted back to the first instance to avoid a loss of instance.

The submissions made by the appellant in respect of Mr Fairlee's job interview shall therefore be disregarded under Article 114(2) EPC.

2.2 Postponement of the oral proceedings

The appellant both before and during the oral proceedings of 7 May 2002 requested that the oral proceedings be postponed on the ground that the owner of the appealing company had changed and that the new owner should be given an appropriate opportunity to review the opposition and appeal files, and also to obtain any information from Mr Fairlee which they contended was required by the Board. This had not been possible because of the short time interval between the change of owner, which became effective only on 25 March 2002 and was followed by a phase of disorganisation comparable in effect of a situation of bankruptcy preventing adequate consideration of the matters involved in the present procedure.

However, as is apparent in particular from a press release dated 7 January 2002 as filed by the respondent with its letter of 27 February 2002, the change of ownership had been agreed upon even before the Board issued the summons to oral proceedings.

Accordingly, taking into account also the early request by the respondent, as filed on 7 December 2001, that the prosecution of the appeal be expedited, the Board at the oral proceedings of 7 May 2002 announced its provisional view that postponement of the oral proceedings was not considered justified, which was not challenged further by the appellant.

3. *Compliance of the amendments brought to the patent with the requirements of Article 123(2) and (3) EPC*

3.1 As compared to claim 1 as originally filed claim 1 now specifies that the claimed method is "automated" and that compressing of the assembly of plates and separator is also performed "automatically". The automatic character of the claimed method was stressed for instance in the last paragraph of page 9 of the original patent application as published under the PCT, and in all the specific embodiments described.

In addition, claim 1 now further specifies that automatic compression of the assembly of plates and separator is achieved "by acting upon it by a compression means such that the compressed cell assembly is aligned with the opening of said battery cell container" and that insertion into the battery cell container is achieved "by acting upon said compressed cell assembly by a reciprocating means which slides said cell assembly laterally relative to said

compression means into said battery cell container". These features were disclosed expressly in the application as originally filed in conjunction with the first embodiment described there (see page 31, line 15 to page 32, line 3).

The appellant in this respect submitted that this first embodiment, in which the plates are cut from a continuous length of battery plate stock, was not covered by claim 1 which was directed to the use of plates from a stack of individual plates. The respondent insisted that claim 1 actually covered such a method using plates cut from a continuous length of plate stock. In the Board's view at least the third and the fourth embodiments as originally disclosed (see page 33, line 21 to page 43, line 25) clearly encompass the manufacturing of cell assemblies from stacks of individual battery plates. Concerning the compression and insertion of the cell assemblies into the cell container, the original description in relation to these embodiments explicitly refers to the arrangement disclosed earlier in relation to the previous embodiments (see page 42, lines 23 to 25). The third and the fourth embodiments as originally disclosed thus provide an adequate support for the amendments brought to claim 1.

The appellant submitted that further details of the compression arrangement as originally disclosed, in particular the indexation of the cell assembly at the cell compression station and the downward direction of the compression means, should also have been taken up into claim 1. The Board in this respect, however, concurs with the respondent's view that various options are obviously available for the positioning of the cell

assembly at any stage of the manufacturing process and for the direction of compression, among which the skilled person can select in accordance with the circumstances of a particular application. The description as originally filed does not comprise any suggestion that the specific indexing arrangement and compression direction disclosed there would be essential nor even particularly recommended, and the skilled person cannot reasonably be considered to have understood that they were so.

Thus, claim 1 as granted was amended only by the addition of features adequately supported by the application documents as originally filed.

- 3.2 The same conclusion applies to independent claim 10, which was amended by the inclusion of substantially equivalent features.

The appellant submitted that the amendments brought to claim 10 offended against the provisions of Article 123(3) EPC. In its view, claim 10 as granted by referring to "means for compressing ... and automatically inserting" required the compression and insertion being performed by the same structure, whilst the expression "means for compressing ... and means for automatically inserting" in claim 10 as amended no longer required a single means to perform a double function.

The Board, however, concurs with the respondent's view that claim 10 as granted already encompassed the possibility of the means for compressing and inserting" comprising different structural elements, each dedicated to one of the two functions, as is clearly

disclosed in all the embodiments described in the specification. The scope of this claim therefore was not extended.

- 3.3 The dependent claims and the description of the patent as granted remained unamended.
- 3.4 For these reasons, the amendments brought to the patent in accordance with the respondent's request meet the requirements of Article 123(2) and (3) EPC.
- 4. *Clarity of the claims and their support by description*

In the course of the oral proceedings the appellant submitted that claim 1 lacked clarity insofar as its subject-matter was designated as a method of making a battery cell assembly, whilst it comprised steps in which such cell assembly was actually compressed and inserted into a container, rather than being manufactured. The appellant also contended that none of the embodiments disclosed in the patent were actually covered by claim 1, since they all involved intermediate storage of the individual components before they were processed.

These objections do not arise from the amendments brought to claim 1 and they cannot therefore constitute valid grounds for opposition under Article 100 EPC.

These objections are also clearly unfounded. Claim 1 defines a method of manufacturing a lead-acid battery cell assembly, in which compression and insertion of sub-assemblies formed of plates and separator only constitute intermediate processing steps. Moreover, all the embodiments disclosed in the specification involve

sequential assembly of individual cell components in a continuous manufacturing process, without substantial interruption of the processing flow nor actual storage of sub-assemblies before they are finally assembled.

5. *Novelty*

Document D1 discloses an automated method of making a lead-acid battery in which a stack of battery plates, which does not comprise any compressible separator, is inserted into an empty battery container 72 by a reciprocating means 87 (see Figure 2 and column 5, line 61 to column 6, line 14). The method and apparatus disclosed in document D1 does not involve compression of any battery cell assembly.

Documents D5 and D6 provide evidence that battery cells comprising compressible separators were known at the date of the patent, but they do not disclose or suggest any method or apparatus for their automated assembly.

The remaining documents on the file do not come closer to the claimed subject-matter, which therefore is novel within the meaning of Article 54 EPC.

6. *Inventive step*

The parties agreed to consider document D1 as disclosing the closest prior art.

The claimed method and apparatus are distinguished from this prior art essentially by the features directed to the automatic compression of the cell assembly so that it is aligned with the opening of the battery cell container and to the sliding of the cell assembly

laterally relative to that compression means into that battery cell container.

The Board agrees with the appellant to consider that the formulation of the technical problem solved by these features, which is to allow for the automated insertion of a cell assembly comprising compressible separators in a cell container, does not in itself provide any positive contribution to inventive step. As a matter of fact, compressible cells being known per se, it is no more than a normal endeavour for the skilled person to strive at designing methods and apparatuses for their automated assembly.

However, the Board cannot endorse the appellant's view that the claimed features, in particular the sliding of the compressed cell assembly laterally relative to the compression means, are obvious.

In particular, the method and apparatus of document D1 clearly call for the battery cell exhibiting dimensions so as to fit into the cell container when acted upon by the reciprocating means. The skilled person could easily realize that the very same technique might still be used with battery cells comprising compressible separators, provided these were simply compressed beforehand and maintained in a compressed state, e.g. by means of fixing clamps or strips. The so maintained cell assemblies could then be freely inserted into a cell container using the same reciprocating means as disclosed in document D1 for the insertion of a non-compressed cell assembly.

Moreover, the claimed technique cannot merely be considered as a straightforward automatisisation of a

manual procedure. In such manual procedure, the cell assembly would be compressed by hand and, whilst so maintained, directly engaged into the opening of the cell container. Straightforward automatisations of this procedure would at best result in a clamping tool being used both to compress the cell assembly and to move it towards and engage it with the opening of the cell container. Such procedure would not however result in lateral sliding of the cell assembly relative to the compression means as is set out in independent claims 1 and 10.

The appellant did not show, nor even contend, that the claimed insertion procedure was known already for the insertion of different compressible elements, and that the skilled person would have applied it in an obvious way also to the manufacture of compressible battery cells.

For these reasons, and taking into due account also the fact that the prior art is devoid of any disclosure of a fully automated procedure for inserting a compressible cell-assembly into a cell container, the board is satisfied that the subject-matter of independent claims 1 and 10 involves an inventive step within the meaning of Article 56 EPC.

7. *Apportionment of costs*

According to Article 104 EPC each party to the proceedings shall meet the costs it has incurred, unless a different apportionment of costs during taking of evidence or in oral proceedings is ordered for reasons of equity.

In the present circumstances, the Board notes that besides the late filed submissions relating to Mr Fairlee's alleged public disclosure, on which the respondent bases its request for apportionment of the costs, the statement of the grounds of appeal also invoked an objection under Article 123(2) EPC and it further pointed at an obvious mistake in the version of the amended claims as maintained by the opposition division, which did not correspond to what had actually been decided.

The appellant's submissions in respect of the objection under Article 123(2) EPC cannot be considered unreasonable, even if they could not convince the Board. The respondent also implicitly admitted the correctness of the appellant's point that the version of claim 1 as proposed for grant by the opposition division was erroneous, and it actually took the opportunity of the appeal to redress this error by filing new claims which have been discussed with reference to novelty and inventive step at the oral proceedings.

Accordingly, the Board sees no reason to depart from the general principle laid down in Article 104 EPC that each party shall meet the costs it has incurred.

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 with the order to maintain the patent in amended form on the basis of claims 1 and 10 filed with the respondent's letter dated 28 February 2002 and claims 2 to 9 and 11 to 16, description and drawings as in the patent specification.
3. The respondent's request of apportionment of costs is rejected.

The Registrar:

The Chairman:

P. Martorana

E. Turrini