BESCHWERDEKAMMERN DES EUROPÄISCHEN PATENTAMTS

BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE

CHAMBRES DE RECOURS DE L'OFFICE EUROPEEN DES BREVETS

Internal distribution code:
(A) [ ] Publication in OJ
(B) [ ] To Chairmen and Members
(C) [X] To Chairmen

D E C I S I O N
of 9 August 1995

Case Number: T 0308/92 - 3.4.1

Application Number: 86307655.0

Publication Number: 0223376

IPC: G21C 21/02

Language of the proceedings: EN

Title of invention:
Method and apparatus for automatically stacking of elements

Patentee:
British Nuclear Fuels PLC

Opponent:
Siemens AG

Headword:
Stacking of elements/BRITISH NUCLEAR FUELS

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step - denied"

Decisions cited:
-

Catchword:
-

Case Number: T 0308/92 - 3.4.1

D E C I S I O N
of the Technical Board of Appeal 3.4.1
of 9 August 1995

Appellant: (Opponent)
Siemens AG
Postfach 22 16 34
D-80506 München (DE)

Representative:
-

Respondent: (Proprietor of the patent)
British Nuclear Fuels PLC
Risley
Warrington
Cheshire WA3 6AS (GB)

Representative:
McCormack, Derek James
British Nuclear Fuels plc
Patents Section
Legal Department
Risley
Warrington
Cheshire WA3 6AS (GB)

Decision under appeal:
Decision of the Opposition Division of the European Patent Office dated 12 February 1992 rejecting the opposition filed against European patent No. 0 223 376 pursuant to Article 102(2) EPC.

Composition of the Board:

Chairman: G. D. Paterson
Members: R. K. Shukla
H. J. Reich

Summary of Facts and Submissions

I. European patent No. 0 223 376, relating to a method and apparatus for automatically stacking elements, was opposed on the ground that the subject-matter of the patent did not fulfil the requirements of novelty and inventive step (Article 100(a) EPC) in view of, inter alia, documents

D1: GB-A-906 706
D2: DE-A-2 130 001

and the common general knowledge.

The Opposition Division rejected the opposition.

II. Claim 1 of the patent in suit has the following wording:

"A method for automatically stacking bodies in end-to-end relation to form a stack of predetermined length, said method including the steps of mechanically segregating said bodies according to length into a plurality of groups, initially drawing on said groups to build-up the stack part-way towards its overall length, measuring the length of the partly-formed stack and, depending on the extent, or deviation if any, to which the measured length deviates from a predetermined value, compensating for any such deviation by selecting between said groups in continuing to build up the stack."

The independent Claim 10 relating to an apparatus for automatically stacking bodies reads as follows:

"Apparatus for automatically stacking bodies in end-to-end relation to form a stack of predetermined length, said apparatus comprising means for feeding said bodies from a supply to a stacking zone, means upstream of the stacking zone for measuring the lengths of said bodies and segregating them according to length into a plurality of lanes, means for measuring the stack length in said stacking zone and selector means responsive to said stack measuring means for selectively supplying bodies from said lanes to the stacking zone."

III. According to the above decision, the claimed subject-matter is novel and involves an inventive step since, in particular, none of the cited prior art documents discloses that the bodies are automatically segregated according to their length into several groups, that the length of a partly formed stack is measured, and that any deviation of the measured length from a predetermined value is compensated by selecting a body from the groups. Any assertion that the claimed subject-matter is obvious, therefore, according to the decision, relies on an ex post facto analysis.

IV. The Appellant (Opponent) lodged an appeal against the above decision and requests the cancellation of the decision and the remittal of the case to the Opposition Division with an order to examine Claim 1 having regard to the everyday common general knowledge. As an auxiliary request, revocation of the patent is requested on the ground that Claim 1 is not novel or does not involve an inventive step.

The Appellant's submissions in support of its requests are essentially as follows:

(a) Remittal of the case to the Opposition Division

In the opposition proceedings it was submitted by the Opponent that the basic principles and the stacking steps of the method according to Claim 1 belonged to the everyday common general knowledge of a brick layer or a housewife packing biscuits in a box. In its decision, however, the opposition division did not give its opinion on this common general knowledge, but only referred in paragraph 14 of the decision to the submissions made by the Proprietor in respect of the common general knowledge. It is therefore not clear whether or not the stated common general knowledge was taken into consideration in the examination of the claimed subject-matter or for what technical or legal reasons it was not considered to be relevant. The decision is therefore not reasoned, so that the case should be remitted to the opposition division for further prosecution having regard to the every day common general knowledge.

(b) Inventive step

A brick layer stacking bricks up to a certain length or a housewife packing biscuits into a box employs the same basic principles as the ones involved in the method of stacking bodies as defined in Claim 1 of the patent in suit. Thus, it belongs to the every day common general knowledge of a skilled person to build a stack up to a certain height mainly with relatively large objects, estimate the size of the gap and then

fill the gap by selecting an object of appropriate size from the objects separated from the large objects. In the case of an industrial stacking process, it would be obvious to make the process automatic and **measure** the length of a partly formed stack instead of merely estimate it.

Document D2 discloses that bodies (nuclear fuel pellets) are automatically stacked in an end-to-end relationship. From page 7, second paragraph and page 9, third paragraph it is clear that the length of the stack is measured and that additional bodies are added to the stack in order to compensate for any deviation from a predetermined length. The fact that in the method of document D2 the additional bodies may be of a different kind than the nuclear fuel pellets which form the main part of the stack is irrelevant, since in the claimed subject-matter the type of bodies is not specified. Furthermore, the requirement of "segregating bodies according to their length" in Claim 1 of the patent in suit should be interpreted to mean only that the bodies of different length have different transport routes, because according to an embodiment in the patent in suit (see column 5, lines 12 to 15), pellets are not grouped according to their size after any measurement but their classification by size is already determined by their manufacturing process. According to document D2 also the main pellets are fed from the distributor 12 (Figure 1), while the additional bodies are fed from four parallel lanes (page 9, third paragraph). Moreover, document D1, which also concerns automatic stacking of nuclear fuel pellets, discloses that the length of a stack is detected and that a pellet of shorter length may be substituted for one of

the pellets in the stack in order to arrive at the predetermined length (page 2, lines 104 to 107). Therefore, the claimed subject-matter does not appear to be novel in view of document D2 alone, or at least not inventive in view of the cited prior art documents.

V. The Respondent (Patent Proprietor) requests that the appeal be rejected.

The Respondent's arguments in support of its request are essentially as follows:

(a) Remittal of the case to the Opposition Division

The Opponent's alleged evidence known from everyday life (housewives, bricklayers, etc.) is not supported by any documentary evidence. In decision T 21/83, the Board held that common general knowledge unsupported by any documentary material or evidence of disclosure cannot of itself destroy the novelty of a claim. For these reasons, the case should not be remitted to the Opposition Division for further prosecution.

(b) Inventive step

The procedural steps used in stacking bodies (e.g. bricks, biscuits etc.) which are acknowledged by the Respondent as forming part of the common general knowledge are similar to those employed in the method according to document D1 or D2. However, the procedural steps of the prior art methods do not form the subject-matter of Claim 1 or Claim 10 of the patent in suit. An essential difference between the prior art known from, for example, document D2 and Claim 1 of the

patent in suit is that in the latter the length of a partly formed stack is measured and then a selection is made from groups of bodies to arrive at a predetermined length of a partly formed stack. The invention according to Claim 1 or Claim 10 is thus novel and inventive over the state of the art.

VI. In a communication dated 14 December 1994 pursuant to Article 110(2) EPC, the Board expressed its provisional view that the remittal of the case to the Opposition Division as requested by the Appellant was not justified but that the subject-matter claimed in the patent did not appear to meet the requirement of inventive step with regard to the prior art disclosed in documents D1 and D2. Observations in reply were invited within a period of two months.

Neither party made any submissions in response to the communication of the Board within the time limit set for reply or at all.

Reasons for the Decision

1. (a) Remittal of the case to the Opposition Division

In paragraph 13 of the contested decision the Opposition Division has summarised the Opponent's arguments concerning the alleged common general knowledge or every day practice followed in stacking bodies. In paragraph 10 of the decision discussing the disclosure of document D1, it is stated "If (in the method of document D1), on the other hand, the length of the column exceeds an upper tolerance limit .... a

body of shorter length has to be substituted for one of the column". Also, in paragraph 11 of the decision, it is acknowledged that it is known from document D2 to adjust the length of a column by addition of shims. Thus, in the Board's view the basic facts underlying the alleged common practice of stacking bodies is in fact acknowledged by the Opposition Division as belonging to the state of the art according to Article 54(2) EPC, as disclosed in the cited documents. The subject-matter of Claim 1 was held to be not obvious by the Opposition Division having regard to documents D1 and D2 (see paragraph 18), so that in the Board's view it is implicit in the decision that the common practice of stacking bodies taken on its own or in combination with the prior art documents was considered as not rendering the claimed subject-matter obvious.

In the Board's judgement, therefore, the Opposition Division did take into consideration the argument of the opponent based on the every day practice of stacking bodies, and a remittal of the case is, therefore, not justified.

2. *Inventive step*

2.1 Interpretation of Claim 1

The method according Claim 1 includes a step "of mechanically segregating the bodies according to length into a plurality of groups". The Appellant has submitted that this process step has to be interpreted in the light of the embodiment of Figure 6 described in column 5, lines 12 to 15 of the patent in suit (see

item IV (b) above). The Board however cannot share this view and notes that in the above mentioned embodiment, in addition to the short and long pellets supplied by the off-loading mechanisms 70, 72, there is a main off-loading mechanism 12 supplying pellets of different sizes to a common guide lane 14, a measurement station 16 in which the lengths of the pellets are measured and a control unit 18 distributing the pellets according to size between the lanes 24, 26 and 28 as in the embodiment of Figures 1 to 3 (see column 2, lines 14 to 23 and 34 to 39 in combination with column 5, lines 15 to 24). Thus it is evident that in all the embodiments of the invention, the bodies are separated apart from a single group into groups according to size, as specified in the wording of Claim 1 under consideration.

The method step of "initially drawing on said groups to build-up the stack" is to be interpreted having regard to the description of the method in column 2, lines 41 to 45, so that according to the claimed method, **primarily** bodies from one group (e.g. the intermediate size pellets) **may be** used to form the stack towards part of the way, and the bodies from the other groups **may be** used for adjusting the length **only**.

In the claim it is stated that the length is measured when the stack is built-up **part-way** towards its overall length, and that any deviation is compensated for **in continuing to build up the stack**. Also from the embodiments disclosed in the description it is clear that the length is measured when a **substantial portion** of the stack is still to be formed (the first length measurement stop is positioned, for example, halfway of

the completed stack; see column 3, line 33). The Board therefore agrees with the Respondent's submission that in the claimed method the length is measured when a substantial portion of the completed stack has yet to be formed, so that **after compensating for any deviation in length** (from a predetermined value of a partly formed length) **a partly formed stack** is obtained.

2.2 In the Board's view document D2 represents the closest prior art. This document discloses an apparatus and a method for automatically stacking nuclear pellets in end-to-end relation to form a stack of predetermined length (see page 3). The nuclear pellets are fed from a distributor 12 (Figure 1) and when a stack having weight within a certain tolerance limit is formed in a channel (1), the length of the stack may be measured. If the measured length deviates from the pre-determined length of the stack, but still lies within a tolerance limit, the deviation is compensated by adding a selected number of additional bodies ("Beilagscheiben") of two different sizes (see pages 7 to 9). A distributor 46 (Figure 9) is provided with four parallel channels to supply the additional bodies of different lengths. The additional bodies are thus held separated from the main nuclear pellets and held in groups according to their length (see page 9, third paragraph).

According to document D2, the comparison of the length of a stack is made with the final or overall length of the stack to be achieved, so that after compensating for any deviation in length, the stack is completed.

2.3 The method of Claim 1 of the patent in suit is thus distinguished over the prior art in that:

(a) the bodies are actually **segregated** from a common group according to length; and, as discussed in item 2.1 above,

(b) the length of a partly formed stack is measured and compared with a predetermined value of the partly formed stack, so that a compensation for any deviation results in the formation of a partly formed stack.

2.4 In the method disclosed in document D2, since any deviation in length of the stack is compensated only when the stack is close to its completion, it is likely that such a compensation may not be possible so that the entire stack may have to be rejected (see page 7, lines 3 to 6 from the bottom; page 9, first two paragraphs). In contrast to this,the process step as set out in 2.3 (b) above provides a better control of the overall length by controlling the length of a partly formed stack and thereby avoids the risk of rejection of the stack.

Moreover, in the method according to document D2, the additional compensating bodies which are used only when the stack is almost completed are of a material different from that of the nuclear fuel pellets. The additional bodies are therefore necessarily pre-segregated when supplied by the manufacturers. In contrast to this, since in the stacking method of the present invention any deviation in length is compensated when the stack is only partly formed, so

that nuclear fuel pellets may be used for this purpose, a segregation step according to 2.3(a) is required.

In the Board's view, to a skilled person confronted with the problem of rejection of stacks of nuclear pellets in the method according to document D2, it would be evident that a better control of the overall length of the stack would be achieved if the length of the stack is measured, and any deviation in length compensated for, as it is being built up rather than measuring the length only near the completion of the stack. The process step as set out in 2.3 (b) above would therefore be regarded by him as an obvious modification of the method of Document D2. Having decided to compensate for any deviation in the length of a partly formed stack, it would be obvious to the skilled person that nuclear pellets (and not bodies of non-nuclear materials as in document D2) having different lengths may also be used to compensate for any deviation in the length, since he knows from document D1 that nuclear fuel pellets of a different length can be used to compensate for any deviation in the length of a stack of nuclear fuel pellets (see page 2, lines 104 to 107). In a fully automated stacking process, segregation of nuclear pellets as set out in 2.3 (a) above would therefore be regarded by him as an obvious alternative to the pre-separation of nuclear pellets and the additional bodies ("Beilagscheiben") as in the method of document D2.

2.6 For the foregoing reasons, in the Board's judgement, the subject-matter of Claim 1 does not fulfil the requirement of inventive step within the meaning of Article 56 EPC, and the European patent is therefore to

be revoked. It is accordingly not necessary to consider whether independent Claim 10 meets the requirement of inventive step.

Order

For these reasons it is decided that:

1. The decision of the Opposition Division is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

M. Beer G. D. Paterson