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D E C I S I O N
of 19 January 2001

Case Number: T 0273/95 - 3.4.1

Application Number: 83304557.8

Publication Number: 0101276

IPC: G07D 5/00

Language of the proceedings: EN

Title of invention:
Method of and apparatus for discriminating coins or bank notes

Patentee:
KABUSHIKI KAISHA UNIVERSAL

Opponent:
Landis & Gyr Betriebs AG
GAO Gesellschaft für Automation und Organisation mbH

Headword:
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Relevant legal provisions:
EPC Art. 52(1), 56, 104(1)
EPC R. 63(1)

Keyword:
"Inventive step - no"
"Apportionment of costs - no"

Decisions cited:
T 0514/89

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0273/95 - 3.4.1

D E C I S I O N
of the Technical Board of Appeal 3.4.1
of 19 January 2001

Appellant: (Opponent 02)
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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted 19 January 1995 rejecting the opposition filed against European patent No. 0 101 276 pursuant to Article 102(2) EPC.**

Composition of the Board:

Chairman: U. G. O. Himmler
Members: H. K. Wolfrum
S. C. Perryman

Summary of Facts and Submissions

I. This is an appeal against the decision of the Opposition Division posted 19 January 1995 rejecting two oppositions filed against European patent No. 0 101 276.

II. The patent was granted with two independent claims reading:

"1. A method of judging the authenticity of value representative tokens by measuring characteristics thereof, comprising the steps of:

measuring the characteristics of a number of sample tokens with sensor means;

calculating minimum and maximum reference values for discriminating authentic tokens from the measured values of the characteristics of said number of tokens;

storing the calculated minimum and maximum reference values;

measuring the characteristics of a token to be discriminated with said sensor means;

checking whether the measured characteristic value of the inspected token is within the minimum and maximum reference values to judge the token to be authentic if the checked value is within the two reference values and counterfeit if the checked value is outside the range between two values,

characterized by the steps of:

setting, on switch means, a predetermined number corresponding to a required sample size to be tested for calculating the reference values;

and comparing the number of tokens which have had their characteristics measured with said predetermined sample size

and in that the steps of calculating and storing reference values are not carried out until said number of sample tokens which have had their characteristics measured equals the predetermined sample size as set by use of the switch means.

7. An apparatus for judging the authenticity of value representative tokens by measuring the characteristics thereof, comprising:

sensor means (3,10,17) disposed on a path of transport of the tokens, for measuring the characteristics thereof;

processing control means (23, 24, 25, 26, 28) capable of providing a reference value setting mode and a discrimination mode, said processing control means being operable in said reference value setting mode to collect characteristic values of a number of tokens to calculate minimum and maximum reference values for discriminating authentic tokens from the collected characteristic values, and processing control means being operable in said discrimination mode to check whether a measured characteristic value of a token to be discriminated is between said minimum and maximum reference values; and

means for storing (28) said minimum and maximum reference values,

characterised in that it includes switch means (25) effective in use of the apparatus for setting a predetermined sample number corresponding to a required number of tokens to be tested for calculating said

minimum and maximum reference values, and in that the processing control means (23, 24, 25, 26, 28) is operative, in said reference value setting mode, to compare the number of tokens tested with said predetermined sample number and not to calculate said reference values unless the number of tokens tested equal said predetermined sample number."

III. The decision of the Opposition Division stated inter alia that:

- Novelty was not in dispute.

- The closest prior art was document D1 DE-A-31 03 371 which showed the precharacterizing features of Claims 1 and 7.

- Claim 1 was distinguished from the disclosure of D1 by the following features:

  - setting, on switch means, a predetermined number corresponding to a required sample size to be tested for calculating the reference values;

  - and comparing the number of tokens which have had their characteristics measured with said predetermined sample size and in that the steps of calculating and storing reference values are not carried out until said number of sample tokens which have had their characteristics measured equals the predetermined sample size as set by use of the switch means.

- The technical problem to be solved was therefore

to allow fully automatic initiation of the reference values calculation when a given number of sample tokens had been measured and permit selective setting of this number in accordance, for instance, with the natural dispersion of the measured parameters of a specific token to be discriminated.

- Document D1 did not suggest the setting, on switch means, of the number of coins which were to be used in calculating reference values. The switch mentioned in document D1 was only for switching between two modes (read-in, read-out) and the number of coins was not preset but could be supposed to be determined at the arbitrary moment when the operator switches to the read-out mode. Document D1 thus determined the sample size post sampling whilst the opposed patent suggested the determination of the sample size pre sampling.

IV. The appellant (opponent 02) lodged a notice of appeal on 24 March 1995, at the same time paying the appeal fee. It filed grounds of appeal on 26 May 1995, referring for the first time to DE-OS 26 41 495 (document E5) and DE-PS 23 36 614 (document E6) as evidence that in this area of technology it was well known that a required sample size should be entered by switch means into a machine, and this then checked the samples inserted until the set sample size had been reached.

V. The appellant requested that the decision under appeal be set aside and that the patent be revoked, and also made an auxiliary request for oral proceedings.

VI. The respondent (patentee) requested that the appeal be dismissed, and further requested that the late filed documents E5 and E6 not be admitted into the proceedings as they were insufficiently relevant, and that in any case the Board order an apportionment of costs in accordance with Article 104 EPC and Rule 63(1) EPC. The Respondent initially also made an auxiliary request for oral proceedings, which was then withdrawn by letter of 20 April 2000, which letter also indicated that the Respondent would not attend the oral proceedings appointed.

VII. The party as of right (opponent 01) made no submissions or requests during the appeal proceedings.

VIII. The appellant made essentially the following submissions:

- It was beyond dispute that document D1 showed the precharacterizing features of the independent claims, and was to be regarded as closest prior art.

- Document D1 already showed a fully automatic initializing of the reference values, and thus already solved the problem as posed in the decision of the Opposition Division. The latter had adopted the wrong approach to this question.

- Considering the differences to document D1, the objective problem could possibly be formulated as follows: to provide a process in which the number of samples fed in corresponds to a preset sample size.

- Given this objective, it would be obvious to the skilled person that it would be necessary to count the number of samples fed in, and that some provision would have to be made for setting the number of samples to be fed in so that the number of samples counted could be compared to this preset number. The use of some kind of switch means for setting the number necessarily followed.

- Counting devices were known in this field, as evidenced by documents E5 and E6, and the person skilled in the art would take these into consideration when seeking to solve the problem.

- Provision of the characterizing features of claims 1 and 7 would thus be derived in an obvious manner from the prior art, when solving the problem.

- According to the description, there was no automatic switch over from reference value setting mode to the discrimination mode; this occurred only after setting the discriminating mode with the switch section 25.

- According to the patent in suit the number of samples to be read in for setting the reference values was set to a value sufficient to objectively judge the fluctuations of the detection data (cf column 5, lines 20 ff). The result of the discrimination according to the patent in suit was dependent in the same manner on the arbitrary choice, or subjective opinions, of the operator as for D1. The method of the patent permitted the switch to be set at an arbitrarily

small number of samples, in case the operator had no greater number of samples, was subjectively mistaken as to the range of variation of a particular characteristic to be determined, or simply and solely wished to shorten the time for the reference value setting mode.

- The acts of the appellant in the procedure, including the introduction of documents E4 and E5 on appeal, amounted to the perfectly ordinary exercise of the rights of the appellant. There were no grounds for an apportionment of costs.

IX. The respondent (patentee) made essentially the following submissions:

- The closest prior art was document D1. This did not show the postcharacterizing features of claims 1 and 7, as had been acknowledged in the decisions of both the earlier Technical Board of Appeal, which had ordered grant of the patent, and of the Opposition Division.

- The technical problem to be solved by the present invention was to permit almost fully automatic initiation of reference value calculations and the storage of reference values, and to ensure that a suitable number of sample tokens were measured, so that, for instance, the natural dispersion of the measured parameters of a specific kind of token to be discriminated could be taken into account.

- This problem, which was not mentioned in document D1, was solved by the features of the characterising part of claim 1 which were not

present in D1 nor did D1 give any hint to incorporate such features.

- Document D1 did not disclose a predetermined number of coins to be tested before a change of operation of modes was induced by means of a switch.

- Further, in document D1 there was no predetermined sample size which the number of sample tokens must equal in order to obtain calculation and storing of reference values. According to the invention it would not be possible for a person setting up the machine to put an insufficient number of tokens through. The invention ensured that a suitable number of samples was measured, thus allowing if so decided at the time that the number was predetermined on the switch, for the natural dispersion of the measured parameters to be taken into account.

- The two newly cited documents E5 and E6 were not sufficiently relevant to be introduced into the proceedings. Whether or not they were relevant, their late introduction had caused the respondent to incur additional costs, and these costs and the extra costs that would be incurred by the respondent if oral proceedings were necessary just to discuss these documents, justified an apportionment of costs pursuant to Article 104 EPC and Rule 63 EPC.

X. The Board issued a summons to oral proceedings and in an accompanying communication stated the following provisional view:

- It was superfluous for documents E5 and E6 to be admitted into the proceedings, as these merely illustrated the general knowledge of the person skilled in the art at the priority date.

- The subject-matter of the patent in suit did not involve an inventive step having regard to the closest state of the art, document D1 in combination with the normal capability of the person skilled in the art.

- That as neither any claim nor the description provided a teaching for determining a predetermined **precise** sample size, the reasoning by which the earlier Board of Appeal (cf. decision T 514/89) had found in favour of inventive step over document D1 and ordered the grant of the present patent on appeal from the Examining Division could not be followed.

- No procedural abuse by the appellant justifying an apportionment of costs could be seen.

XI. In view of the fact that, in reaction to the summons, the respondent had withdrawn its request for oral proceedings, these were cancelled by notification of 11 May 2000 by the Board.

Reasons for the Decision

1. *Admissibility*

1.1 The appeal complies with the requirements of Articles 106 to 108 and Rule 64 EPC and is, therefore,

admissible.

2. *Inventive step*

2.1 Closest prior art and distinguishing features in the patent claims

2.1.1 The Opposition Division as well as both parties agreed that document D1 was the closest prior art document and that all the features of the preambles of present claims 1 and 7 are known from this document. The Board shares this view.

2.1.2 The characterizing clauses of both method claim 1 and apparatus claim 7 of the patent refer to "switch means". As this is an apparatus feature it seems appropriate to consider first what differences there are between the apparatus claimed and that of document D1. The characterizing clause of Claim 7 requires:

"switch means (25) effective in use of the apparatus for setting a predetermined sample number corresponding to a required number of tokens to be tested for calculating said minimum and maximum reference values, and in that the processing control means (23, 24, 25, 26, 28) is operative, in said reference value setting mode, to compare the number of tokens tested with said predetermined sample number and not to calculate said reference values unless the number of tokens tested equal said predetermined sample number."

According to the patent description (column 4, line 57 to column 5, line 51) in operation "....first the reference value setting mode and a given sample number are set with the control switch section 25. Then each

sample coin is inserted into the apparatus...a program of setting reference value data is executed .....the number of sample coins is set to a value sufficient to objectively judge the fluctuations of the detection data due to the extent of wear of coins of the same kind, contamination thereof, attachment of dust thereto, etc. Usually, 100 coins are sufficient. Of course if there are fluctuations in the measurement they can be taken into consideration to correctly judge the authenticity. It is possible to repeatedly insert the same coin as sample if it is an ideal coin perfectly free from wear and contamination....When the reference values are determined with respect to the given number of sample coins, they are stored .... In the above way, the setting of reference values is completed..... After the reference values are set, the apparatus is ready to be used for discriminating coins by setting the discriminating mode with the switch section 25."

This makes clear that the claim covers apparatus which differs from that of document D1 only in that the operator has to preset a number on a switch, and is then prevented from setting the discriminating mode until the preset number of tokens has been counted. With the prior art apparatus, the operator was free to switch to the discriminating mode at any time when he considered that an appropriate number of tokens had been entered. With the apparatus of the invention, the operator has to consider first what is an appropriate number and then set it on the switch. But the apparatus of the invention has no feature which allows the operator to determine the number to be preset in any better way than in the prior art. In both cases the number preset or respectively the number after which

the operator switches over will depend on what the operator believes or knows to be appropriate for the particular token.

2.2 Problem to be solved

2.2.1 When the application resulting in the patent in suit was filed, it contained no reference to document D1; this was introduced only during the examining procedure. As a result there is no discussion in the description of the advantages of apparatus with the switch for presetting the number of tokens to be counted, compared to apparatus, such as that of document D1, which has all the precharacterizing features but no such preset switch. The advantages referred to in the description (cf. column 2, line 65 to column 3, line 25 of the patent specification) can be obtained and are known from the state of the art as described in D1. The problem to be solved for the purposes of assessing inventive step by the problem/solution approach can thus only be assessed in relation to the effect(s) achievable by the new feature that the operator has to preset a number on the switch, and is then prevented from setting the discriminating mode until the preset number of tokens has been counted.

2.2.2 The problem as stated by the Opposition Division (see section II above) is not appropriate. Nothing done in the prior art is automated, the user still has to feed in the tokens. The prior art already took into account the natural dispersion of the measured parameters of a specific kind of token.

2.2.3 The respondent argued both for much the same statement

of problem as the Opposition Division, and also that according to the invention it would not be possible for a person setting up the machine to put an insufficient number of tokens through. The invention ensured that a suitable number of samples was measured, thus allowing if so decided at the time that the number was predetermined on the switch, for the natural dispersion of the measured parameters to be taken into account. The appellant countered this with an argument that if the operator chose deliberately or by a mistaken notion of what was appropriate to set too low a number on the switch then the claimed apparatus had no advantage over the prior art. To a certain extent the Board agrees with this latter view, but there remains the fact that the claimed apparatus ensures that an operator once he has set a number he regards as appropriate will not be able unintentionally to switch prematurely to the discriminating mode even if interrupted or otherwise distracted, so that he loses count of the number of samples already fed in. Of the problems argued for by the respondent, the apparatus can thus be regarded as solving solely the problem of an operator unintentionally feeding in less than the number of tokens he regards as appropriate.

2.2.4 The appellant argued that the problem should be formulated as ensuring that the number of samples fed in corresponded to a desired sample size. This seems too specific to the solution adopted, so the Board prefers, as a statement of the problem, ensuring that an operator does not unintentionally feed in less than the number of tokens he regards as appropriate. As indicated in the above paragraph, this problem can be regarded as solved.

2.3 Is the subject-matter obvious?

2.3.1 The problem as such is not considered inventive because it arises from the daily experience of an operator, and it is a usual incentive for the skilled person to improve the reliability of operating apparatus.

2.3.2 Starting from document D1, the skilled person faced with constructing a machine which ensures that an operator does not unintentionally feed in less than the number of tokens he regards as appropriate, will immediately realize that he must provide in the reference value setting mode known from document D1 some means by which the operator can indicate to the machine the intended number to be sampled, ie switch means for setting the sample number, and a counting device which checks whether this number has been fed in before allowing the machine to be switched to the discrimination mode. As the processing control means is already provided in the machine, this will be assigned the tasks of counting and comparison. Machines which count up to a preset number of fed-in tokens are common general knowledge and the problem posed will be solved in a routine manner by the person skilled in the art so as to arrive at apparatus falling within claim 7.

2.4 For the above reasons, the subject-matter of claim 7 does not involve an inventive step.

2.5 Method claim 1 is essentially directed to the normal way of using the apparatus of claim 7, and is thus obvious for the same considerations.

3. *Request for apportionment of costs*

3.1 It is not quite clear whether the respondent's request for an apportionment of costs related only to the situation of there being further oral proceedings, or whether he was asking for an apportionment in any case for extra work in relation to the introduction at the appeal stage of documents E5 and E6. There have been no further oral proceedings so there can be no costs of such oral proceedings to apportion.

3.2 The general rule, as stated in Article 104(1) EPC is that each party pays its own costs. There have to be reasons of equity for any different order. The introduction of additional documents with the grounds of appeal to bolster an appellant's argument against the decision under appeal, is regarded as a normal exercise of the appellant's rights. In these proceedings the respondent has only had to consider these documents at the appeal stage, and the Board cannot see why he should thereby have incurred more costs than if they had already been introduced in the nine-month period for opposition. The Board thus sees no reasons of equity for any apportionment of costs in favour of the respondent, and the corresponding request must be refused.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

3. The request of the respondent for an apportionment of

costs is refused.

The Registrar: The Chairman:

R. Schumacher U. Himmler