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**D E C I S I O N**  
**of 14 November 2000**

**Case Number:** T 0197/98 - 3.4.2

**Application Number:** 91119255.7

**Publication Number:** 0485944

**IPC:** G01G 19/00, G07B 17/02

**Language of the proceedings:** EN

**Title of invention:**  
Mail piece weight monitoring system and method

**Patentee:**  
PITNEY BOWES INC.

**Opponent:**  
Société Secap  
NEOPOST LTD.

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 56, 84

**Keyword:**  
"Clarity (main request: no)"  
"Inventive step (auxiliary request: yes, after amendments)"

**Decisions cited:**  
-

**Catchword:**  
-



Case Number: T 0197/98 - 3.4.2

**D E C I S I O N**  
**of the Technical Board of Appeal 3.4.2**  
**of 14 November 2000**

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**Decision under appeal:** Interlocutory decision of the Opposition Division  
of the European Patent Office posted 16 December  
1997 concerning maintenance of European patent  
No. 0 485 944 in amended form.

**Composition of the Board:**

**Chairman:** E. Turrini

**Members:** R. Zottmann

B. J. Schachenmann

## Summary of Facts and Submissions

I. The appellant (opponent 01) lodged an appeal against the decision of the Opposition Division to maintain the patent No. 0 485 944 (application No. 91 119 255.7) in amended form.

II. The following prior art documents were cited during the appeal proceedings by the parties with respect to the subject-matters of the independent claims:

D1: GB-A-2 139 147;

D2: REVUE PRATIQUE DE CONTROLE INDUSTRIEL - QUALITE, vol. 26, no. 143 (Febr. 1987), pages 50 to 52, 54, 56; and

D3: GB-A-2 208 021.

III. Oral proceedings were held on 14 November 2000 at the end of which the decision was announced.

IV. The appellant and the party to the proceedings as of right (opponent 02; hereinafter called "other party") requested that the decision under appeal be set aside and the patent be revoked.

The respondent (patentee) requested that the patent be maintained in the version maintained by the Opposition Division (main request) or with claims 1 to 16 and the adapted description filed during the oral proceedings as auxiliary request.

V. The independent claims of the main request read as follows:

"1. A mail piece weight monitoring system for indicating a variance from a predetermined number of inserts in a mail piece, comprising:  
a scale (20) for receiving and weighing mail pieces individually,  
a processor (22) in communication with said scale (20) for receiving measured weights from said scale; and  
means (28,30) in communication with said processor (22) for graphically displaying the measured weights of a plurality of individual said mail pieces in a two-coordinate system in which each weighed mail piece is represented by a different value of one of the coordinates and the corresponding measured weight is represented by a respective displayed value of the other coordinate, which has the value zero at the origin of the two-coordinate system."

"11. A method of monitoring the accuracy of mail piece weights, the steps comprising:

weighing a plurality of mail pieces individually to obtain the measured weights thereof, and

graphically displaying the measured weights in a two-coordinate system in which each weighed mail piece is represented by a different value of one of the coordinates and the corresponding measured weight is represented by a respective displayed value of the other coordinate, which has the value zero at the origin of the two-coordinate system, thereby providing an indication of a variance from a predetermined number

of inserts in a mail piece."

The remaining claims 2 to 10 and 12 to 16 are dependent on claim 1 and, respectively, claim 11.

The claims of the auxiliary request differ from the claims of the main request only in that "variance" has been replaced by "variation" (once in each of the independent claims).

VI. The arguments of the appellant put forward during the oral proceedings are summarized as follows:

The expression "variance from a predetermined number" of claims 1 and 11 of the main request means that a mean value is calculated from a plurality of data. This is, however, not supported by the description.

If a mailpiece contained a large predetermined number of inserts, say 100 sheets of paper, one extra sheet would hardly be perceptible on the display provided by the invention as defined by claim 1 or 11 and thus the result cannot be considered as being susceptible of industrial application. It is therefore doubtful whether said claims comply with Article 57 and, possibly, Article 83 EPC.

The nearest prior art is disclosed in D1. But D3 could also be used as starting point; from lines 15 to 20 on page 1 of D3 follows that the weight must be indicated. The problem to provide solutions to the mail processing by using certification techniques that would assure the Post Office that mail received from the mailer has adequate postage (mentioned in the paragraph bridging columns 1 and 2 of the patent specification) draws the

skilled person's attention to D2. This follows from the fact that D2 deals with quality control which corresponds to the above-mentioned certification technique. Moreover, on page 1 of D1 from line 45 on the certification of a few items is requested. In any case, the skilled person would search in all technical domains, above all in the more general ones to which D2 belongs. It is only by way of example that D2 deals with the application of the quality control to manufacturing processes.

Though the origin of the ordinate in the graphic of Figure 2 of D1 is not zero, this is of no importance since only the single and very specific example uses such an origin.

VII. The arguments of the other party put forward during the oral proceedings are summarized as follows:

Neither D1 nor D3 disclose a certification technique requested by the post office. Therefore, the skilled person invested in such technique must take into account documents of a more general character to which D2 belongs. Thus, D2 is the nearest prior art. The only difference between the teachings of D2 and the subject-matters of claim 1 and 11 is the use of known display means for mail pieces. As to the last feature of claim 1 (the weight coordinate has the value zero at the origin of the two-coordinate system) and the corresponding feature of claim 11, the skilled person is well aware that D2 does not teach away from such a feature. Therefore, said claimed subject-matters are not inventive with respect to D2.

VIII. The arguments of the respondent put forward during the

oral proceedings are summarized as follows:

The situation of a mailpiece containing 100 inserts as described by the appellant to attack the patent on the basis of Articles 57 and 83 EPC is an extreme case; only up to ca. 15 sheets are inserted into an envelope.

The feature concerning the value zero at the origin of the coordinate system is important since it portrays the actual weight and provides the "whole picture".

The former practice in wait processing relied on counting individually the inserts and calculating the weight, as indicated in the patent specification, column 1 lines 37 to 51. D1 discloses the nearest prior art with respect to the apparatus parts but belongs to a different technical field since it concerns a weighing process. Since it provides for an individual printout of the relevant data of all mail pieces there is no need for a certification. Prior art document D2 deals with statistical quality control in manufacturing processes and thus also belongs to a different field such that the skilled person would not take into consideration this document. A post office type equipment cannot be compared with a manufacturing process in industry. In the example disclosed in D2 only small variations occur which do not correspond to the quantum differences caused by an additional sheet inserted in an envelope. It is not disclosed in D3 that in the manifest printed out for the mail service provider the weight is mentioned but rather the number of inserts.

## **Reasons for the Decision**



1. *Main request*

The expression "Variance" as used in the independent claims may be understood as designating a deviation from a certain mean value (e.g. the mean value of data as described in D2 chapters 2.2 and 2.3) as well as any deviation from a preceding or subsequent value or a predetermined value. Therefore, said expression is ambiguous and thus unclear. Moreover, there is no support for the first of the above-mentioned meanings of the expression in the application as originally filed.

Claims 1 and 11 are, therefore, not acceptable under Article 84 EPC. Respondent's main request cannot be allowed, accordingly.

2. *Auxiliary request*

2.1 Requirements of Articles 57 and 83 EPC

The example mentioned by the appellant with respect to these requirements (insertion of a large number of sheets, say 100 sheets; see section VI. first paragraph, into the mail piece) is an unusual and exceptional case. Moreover, a discontinuity of the display amounting to only ca. 1% resulting from a variation of one sheet from the predetermined number of sheets is most probably identifiable by the user since it is clearly distinguished from the variations due to measuring errors of the scale or to the differences of the weights of individual sheets etc. and since he is well aware that, if the total weight is high, he has to check the display more carefully or that the system cannot be used for mail pieces with a very large number

of inserts.

Thus industrial application and sufficiency of disclosure cannot be called into question.

## 2.2 Formal requirements

The Board of Appeal is satisfied that the claims do not contain subject-matter extending beyond the content of the application as originally filed (requirements of Article 123(2) EPC) and that the patent has not been amended during opposition proceedings in such a way as to extend the protection conferred (requirements of Article 123(3) EPC). The clarity objection under Article 84 EPC was removed by replacing the expression "variance" in claims 1 and 11 by "variation". The details of the features added to the claims as granted (these are the features of claims 1 and 11 concerning the indication of a variation from a predetermined number of inserts and the two-coordinate system) can be taken from Figure 2A and the corresponding description on page 10 of the application as originally filed. The description is brought into conformity with the amended claims. Since these requirements have not been in dispute during the proceedings, it is not necessary to give further details.

## 2.3 Novelty of the subject-matter of claim 1

2.3.1 Document D1 describes a postage metering apparatus with a scale determining the weight to be mailed, a processor in communication with said scale for receiving measured weights for said scale and a display suitable for "Postal Window Systems", that is for individual mailers bringing one or a few items to be

mailed to the post office (see page 1 lines 42 to 66 and 105 to 112). D1 starts from mass systems for large corporations where only the total or dollar value of components of the aggregate postage value are given (see page 1 lines 57 to 66). Errors of such systems are avoided in D1 by displaying components of a determined postage value and additional information comprising measured weight of a single item to be mailed, class, destination and fees (see claim 1 and Figures 4 to 9). The components are displayed in alphanumeric form for each mail piece individually. Figures 4 to 9 show successive stages of the display for a single mail item. Before the next mail item is weighed, the screen returns to a blank format (see page 3 at the top and Figure 4). There is no disclosure or suggestion to include several weights of a run of mail pieces in the same display.

Thus D1 does not disclose a coordinate system display or other graphical display for the weights of each of a plurality of mail pieces in which each weighed mail piece is represented by a different value, and not even a list containing measured values of a plurality of mail pieces.

2.3.2 The article "Les appareils de mesure à affichage digital ouvrent la voie au traitement informatique des mesures" ("The measuring apparatuses with a digital display clear the way for a treatment of the measurements by electronic data-processing") of D2 discloses statistical quality control in order to detect and avoid errors occurring in manufacturing processes. Geometrical dimensions such as diameters, angles, deviations of a certain predetermined form and distances are determined. In a single example the

distance of two boreholes, which are to lie within a predetermined small range (between 12.10 and 12.40 mm), is measured and the data are collected in a numerical list (see 2.1a and Figure 1), displayed in a two-dimensional graphical listing (see 2.1b and Figure 2) or a histogram (see 2.1.c and Figure 3). Figure 2 shows a two-coordinate system where each measuring value is represented by a short line parallel to the ordinate axis.

It is stated that the display in a numerical list is qualified as a "cimetière de chiffres" ("cemetery of numbers"; see the last sentence of chapter 2.1b), that the graphical representation permits a quick optical interpretation of the values, that an immediate realisation of the tendency of the deviating values is possible, but that the re-establishment of numerical values for a final treatment is inconvenient (see the last paragraphs of chapter 2.1b). Different mean values and data distributions are calculated (chapters 2.2 and 2.3).

No weight measuring means, mail piece monitoring means or the like is mentioned or shown.

2.3.3 Moving now on to document D3, the apparatus described there is an inserter based mail manifesting apparatus. In Figure 1 an inserter (12) is drawn with a display (26), a manifest printer (18) and a scale (20). The provision of the scale is only an option. The manifest is produced automatically in contrast to known manually prepared manifests and contains documentary facts that enable the postal service to verify that the appropriate postage is properly accounted for and paid. No details of the contents of said manifest or of the

display and no hint at a graphical display of the informations are disclosed.

Therefore, there is no coordinate system display or other graphical display, let alone such a display for the weights of each of a plurality of mail pieces in which each weighed mail piece is represented by a different value, and not even a list containing measured values of a plurality of mail pieces.

2.3.4 The remaining prior art documents on file are less relevant than the cited prior art documents.

2.3.5 Therefore, the subject-matter of claim 1 is novel in the sense of Article 54 EPC, which, moreover, has not been called in question by the respondent and the other party.

2.4 Inventive step of the subject-matter of claim 1

2.4.1 Though in D3 a manifest is presented to the post office (see page 1 lines 10-20) and the apparatus has an inserter (with a display), no details of the contents of the manifest and of the display are described there. In particular, it is not disclosed there that the manifest contains the weight but rather the number of inserts (see e. g. page 6 lines 18 to 22). Document D2 contains no reference to weighing of a run of mail pieces or of comparable items with a predetermined number of parts with equal weight but refers to statistical quality control of production processes. In contrast to that D1 describes a postage metering apparatus with a scale determining and displaying the weight to be mailed and a processor in communication with said scale for receiving measured weights from

said scale (see section 2.3.2 above). The prior art described in column 1 of the patent specification lines 37 to 51 refers to a mail processing technique where the inserts are counted and the weight is calculated.

Thus the nearest prior art is represented by D1.

2.4.2 The system according to claim 1 of the attacked patent differs in substance from that of the nearest prior art in that the system, in order to indicate a variation from a predetermined number of inserts in a mail piece, comprises means for graphically displaying the measured weights of a plurality of individual said mail pieces in a two-coordinate system in which each weighed mail piece is represented by a different value of one of the coordinates and the corresponding measured weight is represented by a respective displayed value of the other coordinate, which has the value zero at the origin of the two-coordinate system.

These measures have the effect that the mailer can quickly certify the mail run, in particular when consisting of a huge number of pieces, to the Post Office and can immediately identify any mail pieces in the mail run that contain the wrong number of inserts. The solution is simple and relatively cheap and can be accurately used also by relatively unskilled persons.

Therefore, the problem underlying the invention when starting from the nearest prior art of D1 is to further develop the system such that a simple, cheap and effective system is obtained which is suitable for mail certification of large numbers of mail pieces.

2.4.3 The skilled person, on the basis of the nearest prior art D1 alone, would not arrive at the claimed solution since there is no suggestion to leave the general principle of this known system, namely to display an itemised breakdown of the determined postage value and to do this by arranging in the display the components necessary to determine the calculated postage for each mail piece individually (see also section 2.3.1 above).

Moreover, there are several alternatives to the claimed solution. For example, a certain deviation from a mean value could be highlighted on the individual display by a marker, for instance by using a different colour for a value outside a predetermined tolerance range. Or the total weight of a mail run could be determined and compared with the weight calculated from the number of inserts and envelopes; if there is a certain predetermined difference, this could be displayed and a re-measurement could be envisaged.

Document D2 contains no reference to application in any particular field resembling that of checking the weight and postage of mail pieces, let alone of a run of mail pieces with a predetermined - possibly wrong - number of inserts resulting in a discontinuous and considerable departure from the expected value. This applies not only to the single example in D2 (measuring of the distance of two boreholes in manufacturing process where relatively small variations from a mean value are to be measured) but also to the general objectives according to which geometrical dimensions are determined to detect and avoid errors occurring in manufacturing processes (see in D2 chapter 1.). Necessarily, this means identifying variations in a

measured value lying outside an acceptable small range and this requires statistical data-processing of the measured values. D2 is thus concerned with quality control in a quite particular sense different from the certification technique according to D1. Therefore, the skilled person faced with the above-mentioned problem would not consult document D2.

- 2.4.4 The other party argued that D2 contained the nearest prior art. The Board does not share this view, see section 2.4.1. But even if the skilled person started from D2, he would not take into consideration applying the quality checking - used for statistical purposes in a production process of a machine with a relatively low variation of measuring values - for a quite different purpose and technical field, namely the certification of a run of mail pieces each having a predetermined number of inserts where relatively high discontinuous variations of the measuring values are to be detected. The skilled person, therefore, would not arrive at a system with all features of claim 1.

If the skilled person started from D3, he would not combine the teachings with those of D2 for the same reasons as put forward for the case where D1 is chosen as starting point, since the technical field of D1 and D3 is the same and differs considerably from that of D2.

- 2.4.5 Therefore, the Board of Appeal concludes that the subject-matter of claim 1 is considered as involving an inventive step as defined in Article 56 EPC.
- 2.5 In the result, the Board of Appeal takes the view that claim 1 complies with the requirements of the EPC.



Since the features of method claim 11 correspond to those of claim 1, this applies also to claim 11. This applies furthermore to the other documents of the patent.

Accordingly, the Board of Appeal in the present circumstances deems it appropriate to allow the respondent's auxiliary request.

## Order

### For these reasons 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 maintain the patent as amended in the following version:

**Description:** column 1, column 2 with insertion pages 3 and 3a and columns 5 and 6, all filed during the oral proceedings as auxiliary request; columns 3 and 4 as granted;

**Claims:** 1 to 16 filed during the oral proceedings as auxiliary request;

**Drawings:** Figures 1, 2A and 2B as granted.

The Registrar:

The Chairman:

P. Martorana

E. Turrini