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D E C I S I O N
of 12 October 2001

Case Number: T 0698/98 - 3.5.2

Application Number: 89312277.0

Publication Number: 0376481

IPC: G07B 17/02

Language of the proceedings: EN

Title of invention:
High-throughput mailing machine timing

Patentee:
PITNEY BOWES, INC.

Opponent:
(O1) NEOPOST LTD
(O2) Francotyp-Postalia Aktiengesellschaft & Co.

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

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Case Number: T 0698/98 - 3.5.2

D E C I S I O N
of the Technical Board of Appeal 3.5.2
of 12 October 2001

Appellant: (Opponent O1)
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Decision under appeal: **Interlocutory decision of the Opposition Division of the European Patent Office posted 2 June 1998 concerning maintenance of European patent No. 0 376 481 in amended form.**

Composition of the Board:

Chairman: W. J. L. Wheeler
Members: M. Ruggiu
P. Mühlens

Summary of Facts and Submissions

I. Opponent O1 appealed the decision of the opposition division concerning maintenance of European patent No. 0 376 481 in amended form.

II. The independent claims 1 and 17 approved by the opposition division read as follows:

"1. A mail handling machine for processing mail pieces of varying size and thickness along a flow path and comprising:
(a) a mail piece singulator station (17) positioned to receive mail pieces and including:
(i) means for singulating the mail pieces to produce a single mail piece; and
(ii) drive means (83) for advancing the single mail piece in a downstream direction;
(b) a sealer station (21) for moistening and sealing open glued or gummed flaps on the mail piece and positioned downstream to receive the single mail piece from the singulator station and including drive means (19) for advancing the sealed mail piece in a downstream direction;
(c) a postage printer station (27) located downstream of the sealer and positioned to receive the sealed mail piece and imprint postage value indicia thereon and including drive means (M6) for advancing the sealed mail piece to the printer and for removing the imprinted sealed envelope;
characterized by:
(d) means (13) for controlling the drive means in at least one of the stations whereby downstream drive means are activated for processing an arriving mail piece while it is still being processed at an upstream

station; and
(e) means for controlling the velocity of the drive means in at least one of the stations in accordance with the size or thickness of the mail piece."

"17. A process of high speed handling of mail in a mailing machine capable of processing mixed mail of varying thickness and size at a sequence of stations along a flow path, each station having drive means, said process including at least the steps of transporting each mail piece to a weighing station and weighing each mail piece and then printing indicia on the weighed mail piece, characterized by dynamically varying the transport velocity of each mail piece by controlling the drive means in at least one of the stations in accordance with its thickness or size while the mail piece is undergoing upstream processing in the machine."

Claims 2 to 16 are dependent on claim 1. Claims 18 to 22 are dependent on claim 17.

III. Oral proceedings were held before the board on 12 October 2001, during which the following prior art documents were considered:

FD1: US-A-3 877 531;

ND2: EP-A-0 227 998; and

FD5: EP-A-0 225 288.

IV. The appellant requested that the decision under appeal be set aside and the patent revoked.

V. The respondent requested that the appeal be dismissed and the patent be maintained in the form approved by the opposition division.

Furthermore the respondent presented an auxiliary request based on claims filed with a letter dated 4 July 2001.

VI. The appellant essentially argued as follows:

FD1 disclosed a mailing machine comprising features (a) to (c) of claim 1. Furthermore Figure 1 of FD1 showed each station of the machine as having drive means at its beginning and its end and it would be apparent to a skilled person that the drive means of two adjacent stations had to be synchronised so that feature (d) of claim 1 was also disclosed in FD1. Furthermore feature (d) would constitute a necessity in a machine comprising several modules in series such as described in FD1. In such modular machines each module would have its own drive and the modules would be coordinated by a microprocessor. Thus only feature (e) of claim 1 was not disclosed in FD1. Feature (e) would not work if applied to individual mail pieces because, unless the distances between successive mail pieces were kept large (which would be disadvantageous), a mail piece moving fast in the machine could overtake a preceding mail piece driven at a slower velocity. Thus, it appeared that feature (e) did not relate to the control of the velocity of an individual mail piece but rather to the control of the velocity of the whole machine. Furthermore feature (e) did not provide a combination effect with features (a) to (d).

ND2 showed a mail handling machine with a singulator

station in which parameters of mail pieces, in particular their thicknesses or sizes, were used to control the distance between the mail pieces to increase the throughput of the machine. Thus ND2 showed that throughput was a concern in mail handling machines. Furthermore the last paragraph on page 18 of ND2 indicated that the machine should be operated at maximum speed, which would be done under manual control in ND2. The control of the speed of the machine would of course be automated in the case of mixed mail. Thus it would be obvious to the skilled person to control the speed of a mail handling machine in accordance with a measured parameter of the mail pieces to achieve maximum throughput. This was confirmed by FD5 which, in general terms, provided an invitation to control various functions of a mail handling machine in accordance with the thicknesses of the individual mail pieces.

VII. Opponent O2 submitted written observations regarding disclosure in FD1 relating to feature (d) of claim 1, but did not attend the oral proceedings.

VIII. The arguments of the respondent can be summarised as follows:

In the patent, the velocities of the various drive means were independently controlled so as to increase the throughput of the machine. According to claim 1, the velocity of drive means was controlled in accordance with the thickness or size of a mail piece, which constituted a rough estimate of the weight of the mail piece. To ensure this velocity control, the drive means were activated while the mail piece was still being processed at an upstream station. Thus, features

(d) and (e) of claim 1 interacted and thereby formed a combination.

The preamble of claim 1 was based on the disclosure of FD1. The rollers of the drive means of FD1 were continuously rotating and thus not activated for processing an arriving mail piece. FD1 indicated that the ejection of thinner envelopes from a weighing station would be delayed compared to the ejection of fatter envelopes. However the rotational velocity of the rollers used for the ejection always remained the same, so that feature (d) of claim 1 was not disclosed in FD1.

In ND2 the distance between two mail pieces was controlled in dependance on the thickness or size of the leading mail piece. The last paragraph on page 18 of ND2 was irrelevant to the present case as ND2 did not disclose any adjustment of the speed of the machine. Furthermore, in the machine of ND2, the mail piece that was measured was not the one controlled. In FD5 the thicknesses of the mail pieces were measured to decide on the content of the mail piece and there was no control of velocity in FD5. As none of the cited prior art documents disclosed controlling the speed of a mail handling machine in accordance with the thickness or size of a mail piece, it was apparent that the appellant relied on *ex post* analysis.

It was true that, in the machine according to the present patent, the velocity of the drive means had to be controlled so as to avoid a faster mail piece overtaking a slower one. The penultimate paragraph of the description of the patent explained how to avoid jamming due to such an extreme situation; however the

velocity of individual drive means of the machine was controlled in accordance with the thickness or size of an individual mail piece.

Reasons for the Decision

1. The appeal is admissible.

2. Document FD1 discloses a mail handling machine according to the precharacterising part of claim 1 of the patent in suit. It is not disputed that at least feature (e) of claim 1 is not disclosed in FD1.

3. Document ND2 discloses a mail handling machine in which throughput is increased by controlling the feeding of successive mail pieces to the machine from a singulator. According to ND2 the thickness or size of a mail piece is measured and the release of the next mail piece from the singulator is controlled in dependance on the measured thickness or size. The mail pieces are all driven at the same, constant transport velocity in the machine of ND2, and there is no disclosure of the velocity being controlled in dependence on the thickness or size of a mail piece. The last paragraph on page 18 of ND2 indicates that there are limits to the possibility of increasing throughput by increasing the transport velocity and that improvement in the throughput can be achieved by the invention described in that document, i.e. by controlling the distance between successive mail pieces. Thus, document ND2 teaches a different solution than the present patent to increase the throughput of a mail handling machine.

4. Document FD5 discloses a mail handling machine in which

the thicknesses of the handled mail pieces are detected. In particular the mail pieces are sorted in accordance with their thicknesses by controlling various machine functions. However FD5 does not disclose controlling the velocity of means driving the mail pieces, nor does FD5 suggest feature (e).

5. Thus feature (e) of claim 1 of the patent in suit is not disclosed in any of the documents cited by the appellant. In the judgement of the board, feature (e) is not inherently obvious to the notional person skilled in the art.

6. The board therefore concludes that the subject-matter of claim 1 is to be regarded as novel and involving an inventive step within the meaning of Article 56 EPC. This remains true, whether or not feature (d) of claim 1 can be found in FD1.

7. Similarly the subject-matter of independent claim 17 is considered as novel and involving an inventive step, because claim 17 also includes the feature of controlling the velocity of means driving a mail piece in accordance with the thickness or size of the mail piece.

8. The same applies to the subject-matter of the dependent claims.

9. Since the grounds for opposition invoked by the appellant do not prejudice the maintenance of the patent in the amended form approved by the opposition division, there is no need to consider the proprietor's auxiliary request.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

M. Hörnell W. J. L. Wheeler