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D E C I S I O N
of 21 January 2001

Case Number: T 0855/00 - 3.2.7

Application Number: 92311394.8

Publication Number: 0547857

IPC: B65H 9/06

Language of the proceedings: EN

Title of invention:
Document registration apparatus

Patentee:
PITNEY BOWES INC.

Opponent:
NEOPOST LTD

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-



Case Number: T 0855/00 - 3.2.7

D E C I S I O N
of the Technical Board of Appeal 3.2.7
of 21 January 2002

Appellant: NEOPOST LTD
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 20 July 2000
rejecting the opposition filed against European
patent No. 0 547 857 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: A. Burkhart
Members: P. A. O'Reilly
J. H. P. Willems

Summary of Facts and Submissions

- I. The Appellant (Opponent) lodged an appeal against the decision of the Opposition Division rejecting the opposition against the patent No. 0 547 857.
- II. Opposition was filed against the patent in its entirety and based on Article 100(a) EPC (lack of inventive step).
- III. Claim 1 of the patent in suit reads as follows:

"A document registration apparatus in combination with a conveying means (11) for transporting a document (12) along a path (13) to a document registration position (16), said document registration apparatus comprising:

a document registration unit (20) positioned adjacent to the document registration position and having an upstream end, a downstream end, a pivoting axis (31) positioned in between the upstream end and the downstream end, and a plurality of laterally-spaced registration stops (21 to 24) at the downstream end of the unit (20) positioned substantially perpendicularly to the document path (13), for stopping a document at the document registration position when the downstream end of the unit (20) is pivoted adjacent to the document path (13),

characterised by:

the conveying means (11) being arranged to support the document from below and to impart drive to the document along a region of said path;

the document registration unit (20) being positioned above the document path (13);

the registration stops (21 to 24) being arranged for arresting and aligning the document on the conveying means relative to the document path as the document is driven by the conveying means into the registration stops;

at least one non-driven urge roller (25) being provided at the upstream end of the unit for urging a stopped document against the underlying conveying means when the upstream end of the unit is pivoted adjacent to the document path to move the document from the document registration position (16) in the downstream direction; and

a pivoting means (27) for pivoting the unit about its pivoting axis (31) for selectively moving one of the upstream end and the downstream end into a position adjacent to the document path."

IV. The Opposition Division held that the ground for opposition mentioned in Article 100(a) EPC did not prejudice the maintenance of the patent unamended having regard to the following documents:

D1: US-A-4 078 790

D2: GB-A-2 126 997

D3: EP-A-0 055 550

D4: US-A-4 750 853

With regards to document D1 the Opposition Division essentially argued that the distinguishing features between subject-matter of claim 1 and the disclosure of document D1 were that:

- (a) the pivoting axis of the registration unit is positioned between its upstream end and its downstream end, whereas in the apparatus of document D1 the pivoting axis is positioned at its upstream end;
- (b) the non-driven urge rollers are positioned at the upstream end of the registration unit, whereas in the apparatus of document D1 they are positioned near the downstream end; and
- (c) the registration stops are positioned above the document path, whereas in the apparatus of document D1 they are positioned below the document path.

The Opposition Division considered that none of the documents suggested providing these features in combination and that they provided an entirely different manner of operation.

V. The Appellant requested that the decision of the Opposition Division be set aside and the patent be revoked in its entirety. The Appellant did not request oral proceedings.

VI. In his statement setting out the grounds of appeal the Appellant argued essentially as follows:

The views of the Opposition Division regarding the

distinguishing features of claim 1 over document D1 are accepted. However, it is not accepted as that these features are not obvious.

With respect to distinguishing feature (a) it is obvious to position a pivoting axis in the middle when it is desired that the features at the two extremities should be alternatively activated. Documents D2 and D3 are examples of such an arrangement. With regard to distinguishing feature (b) this feature is not significant in the absence of an indication of the minimum length of the documents. This position is counter-productive and other positions disclosed in the prior art are preferable. The position was chosen merely because of the presence of the rocking lever and the inventor of document D1 had not been aware of better solutions in documents D2 and D3. With regard to distinguishing feature (c) there are only two possibilities: above the document path as in document D4, or below the document path as in document D1. The skilled person can choose either solution.

Moreover, the distinguishing features (a) - (c) do not together contribute to solving a common problem.

With regards to document D2 the two levers 112 and 113 form a registration unit in the sense of the patent in suit. The so-formed unit includes an urge roller at the upstream end, a registration stop at the downstream end and a pivotal axis in between them. Thus, the only difference between the subject-matter of claim 1 and the disclosure of document D2 is that the registration unit is provided beneath the document path in the apparatus of document D2. The positions of the registration unit above or below the document path

constitute functional equivalents.

With regards to document D3 the registration gate 106, arm 88 and roll 116 linked together by yoke 115 form a unit. Thus, the only difference between the subject-matter of claim 1 and the disclosure of document D3 is that the registration unit is provided above the document path, which is a functional equivalent to below the document path.

With regards to document D4 the registration stop and urge roller are above the document path. It is admitted that the apparatus is more complicated than the other apparatus, but this apparatus has additional functions to effect at the same time. If the idea of placing the registration unit above the conveyor is not obvious from documents D2 or D3 then it can be derived from document D4. A combination of document D4 with one of the other documents anticipates the subject-matter of claim 1.

VII. The Respondent (Patent Proprietor) requested rejection of the appeal and maintenance of the patent unamended. As an auxiliary request the Respondent requested oral proceedings.

VIII. The Respondent essentially argued as follows:

There is no indication to the skilled person to provide a pivoted lever arrangement with an urge roller at one end and registration stops at the other end. Therefore, the argument of the Appellant regarding the positioning of the pivot presupposes that the skilled person would want to provide such an arrangement. There is no basis to presuppose such a desire.

With regards to documents D2 and D3 these documents disclose the urge roller and the registration stops arranged on separately operable arms pivoting about different axes.

For the position of the urge roller at the upstream end the exact position will always be arranged with some minimum document length in mind. Once the minimum document length is established the position of the urge roller will be designed for this and it is not disadvantageous. In any case, the position of the roller could not be taken in isolation but is part of a combination of features including the provision of the stops at the downstream end.

With respect to document D2 the arms 112 and 113 do not move together as a unit, but pivot relative to each other in opposite senses. The arm 112 acts on the arm 113 in such a way as to produce a mechanical advantage which was presumably the reason why the arrangement was chosen. The change in position of the registration unit from below the document path to above is not trivial. In the apparatus of document D2 there was an opening provided in the support to allow the urge roller to move into contact with the sheets to press them against the driven roller 73. The solution proposed in the patent in suit is not therefore an equivalent of the prior art, but has advantages.

With respect to document D3 the apparatus does not show the documents being supported from below by the apparatus but rather by other documents which were not considered part of the apparatus. A separate paddle wheel 27 corresponds to the conveying means mentioned in claim 1, the paddle wheel being arranged above the

sheet being conveyed. The apparatus comprises more than one axis so that the registration gate 106 is withdrawn by pivoting the gate assembly about arm 91 whereas the yoke 115 carrying the pinch roll 116 pivots about rocker shaft 114. In view of the arguments set out above with respect to the form and position of the conveying means a provision of the drive and pivoting unit above the document path is not a functional equivalent to below the path.

With regards to document D4 this document discloses a complicated apparatus, referring to a submission made in the opposition proceedings. In that submission the Respondent had pointed out that the abutment strip and pressure roller were carried by different operating elements which needed to be individually movable, which required a complicated linkage. He argued that the solution set out in the claim implied a simpler apparatus.

IX. In a further submission the Appellant argued as follows:

Each of documents D2, D3 and D4 discloses distinguishing feature (a). For distinguishing feature (b) this is a disadvantageous position for the urge roller and to be advised against. The arguments of the Respondent concerning minimum document lengths are based on criteria which were not disclosed in the patent in suit. For distinguishing feature (c) there are disadvantages in having a conveying means beneath the document path.

For document D2 it is admitted that the levers 112 and 113 do not move as a unit, but they form a

functional equivalent to a rocking lever.

For document D3 the reason why the apparatus disclosed therein is more complicated is because it assures a supplementary function. It also controls an entry barrier. The positioning shown in Figures 5B and 5C shows comparable functions to the patent in suit. Without the entry barrier the mechanism would reduce to the lever 115 and a single control means for causing it to rock.

Reasons for the Decision

1. *Closest prior art*

The closest prior art is represented by document D1, which discloses (cf. Figures 4 and 5) a document registration apparatus in combination with a conveying means for transporting a document along a path to a document registration position, said document registration apparatus comprising:

a document registration unit 75, 77 positioned adjacent to the document registration position and having an upstream end, a downstream end, a pivoting axis 73, and a plurality of laterally-spaced registration stops 69 at the downstream end of the unit positioned substantially perpendicularly to the document path, for stopping a document at the document registration position when the downstream end of the unit is pivoted adjacent to the document path,

wherein:

the conveying means 55 is arranged to support the document from below and to impart drive to the document along a region of said path;

the registration stops 69 are arranged for arresting and aligning the document on the conveying means relative to the document path as the document is driven by the conveying means into the registration stops;

at least one non-driven urge roller 71 is provided for urging a stopped document against the underlying conveying means when the unit is pivoted adjacent to the document path to move the document from the document registration position in the downstream direction; and

a pivoting means is provided for pivoting the unit about its pivoting axis 73 for selectively moving either the urger roller 71 or the registration stops 69 into a position adjacent to the document path.

In the document registration unit disclosed in document D1 the registration stops 69 are provided beneath the document path at the end of stop bars 75. The urge roller is carried by levers 77 and provided above the document path close to the registration stops. The stop bars 75 for the registration stops and the levers 77 for the urge rollers have a common pivoting axis 73 upstream of each of them. The pivot point may be below or above the document path. Such an arrangement of the document registration unit is considered to be relatively complicated.

2. *Problem underlying the invention*

The problem underlying the invention of the patent in suit is to provide a document registration apparatus which keeps the number of mechanical parts to a minimum, allows easy adjustment of the alignment of the apparatus and provides easy access for removal of jammed documents (see column 2, lines 15 to 28 of the patent in suit).

3. *Solution*

In accordance with claim 1 of the patent in suit the above problem is solved in that the apparatus disclosed in document D1 is modified by the following features:

- (a) the pivoting axis of the registration unit is positioned between its upstream end and its downstream end;
- (b) the non-driven urge rollers are positioned at the upstream end of the registration unit; and
- (c) the registration stops are positioned above the document path.

4.1 This solution is not rendered obvious by the documents under consideration for the following reasons:

With regards to distinguishing feature (a), the Appellant has argued regarding the placement of the pivot axis on the assumption that the skilled person would want to place the urge roller at the upstream end and the registration stops at the downstream end. However, there is nothing to indicate that the skilled person would want to do this. In fact, the Appellant himself argued that the skilled person would not

willingly choose the upstream end for the urge roller. This suggests a prejudice against such a position. With respect to documents D2 and D3 the Respondent has correctly pointed out that the registration stops and urge rollers are carried by separate arms (112, 113 for D2, and 88/99/100, 115 for D3) which pivot about separate pivot axes. In each document therefore only one of the two pivot axes is positioned between the registration stops and the urge roller.

With respect to D3, the Appellant argues that a pivot axis for both the registration stops and the urge roller is provided by the rocker shaft 114 which is in between these. It is correct that a pivotal movement about this shaft occurs. However, the shaft does not provide the pivot axis for the registration stops 106. The pivot axis for those stops is shaft 91 which actuates the pivoting motion. Shaft 91 is upstream of both the urge roller 116 and the registration stops 106. The rocker shaft 114 serves to convert the pivotal movement of the registration stops about shaft 91 into a movement of the urge roller 116 and has to move along a ramp 122 to do this. Thus, although document D3 does show some constructional similarities to feature (a) its manner of functioning and hence the teaching of the document is different. Even if, as suggested by the Appellant, the extra function in document D3 of moving the separation gate 105 were omitted there is no reason why the pivot axis of registration stops 106 should be changed since this is also the actuating pivot.

Also, in document D4 the roller 16 forms the pivot axis for urge roller 15 when arm 17 is raised, whereas stop 41 pivots about a separate pivot axis.

The Appellant has given no reason why the skilled person would alter the construction of document D1 in the manner set out in feature (a) other than to argue that this feature is known from the other documents.

With respect to feature (b) the Appellant has argued that the position of the urge roller at the upstream end is not significant and may even be disadvantageous. However, the Respondent has argued that this feature must be seen in the context of the registration unit having registration stops at a downstream and the urge roller at the upstream end. There is no doubt that the positioning of an urge roller at the upstream end is at least known from document D4 wherein urge roller 15 is positioned upstream. In the view of the Board however the Respondent is correct when he points out that this feature must not be considered alone as regards to being obvious. Rather, it must be considered whether the sum of features (a) to (c) is obvious in combination. In particular, whether the skilled person would consider using a disadvantageous position and combine it with other features.

For feature (c) the Appellant has argued that there are only two possibilities: above or below the document path. However, the need to support the documents and the direction of gravity ensure that the two possibilities are not completely equivalent. The change in position of the urge roller and hence of the conveying mechanism means that the conveying mechanism is in continuous contact with the documents. This is not the case when the urge roller is below the document path. In the case of documents D1 to D3 the registration stops are below the document path whereas in the case of document D4 the single stop is above the

stop. The fact that document D4 discloses a single stop as opposed to a plurality of stops as set out in claim 1 is not in the opinion of the Board significant. The Board considers however that even if the skilled person wished to position the registration stops above the document path it is not necessarily evident how this may be done. In the case of document D1, from which the Appellant starts, the simple placing of the registration stops above the document path would mean that the pivot mechanism as disclosed in that document would not work since the alternating actioning of the registration stop and urge roller would no longer be present. The Appellant, having indicated that the registration stops could be placed above the document path, has not indicated how the skilled person would do this.

Starting from document D1 therefore in the opinion of the Board the Appellant has not shown that the skilled person would provide the features (a) to (c) in combination. As pointed out by the Respondent these features are to be seen in combination and not singly. The combination of features solves the above mentioned problems and allows the registration unit to comprise a single part, ie a single lever, allows simplification of the alignment as there is only one axis and improves the access as the whole unit is on the upper side. The Appellant whilst discussing the features individually has not shown that the skilled person would provide these features in combination. The argument offered by the Appellant that each feature is the result of a small number of possibilities and does not contribute to solving a common problem is not convincing. In each case the required change in the apparatus of document D1 is not trivial but requires the entire mechanism to

be redesigned. It is then not apparent how all three changes could be effected simultaneously on the apparatus of document D1.

4.2 The Appellant has also argued starting from document D2. The arguments of the Appellant that the levers 112 and 113 form a functional equivalent to the registration unit being a rocking lever cannot be accepted by the Board. As the Respondent has pointed out the presence of two levers allows a mechanical advantage to be obtained for moving the urge roller 74. Considering the levers 112 and 113 to form a registration unit the urge roller in document D2 is not then placed at the upstream end of the unit as required by claim 1, but rather in the middle. This brings the urge roller nearer to the registration stops. A placement of the urge roller at the upstream end means that it would be further away from the registration stops, so such a change has consequences on the functioning of the apparatus. Indeed the Appellant has argued that these would be negative changes and thus represent a prejudice. The differences between the arrangement in document D2 and that of claim 1 are not trivial and as shown above would result in the loss of some apparent advantages. The Appellant has given no arguments as to why the skilled person would make these changes.

4.3 The arguments of the Appellant that the subject-matter of claim 1 is obvious starting from document D3 are also not convincing. The Appellant's arguments regarding the differences between the disclosure of document D3 and the subject-matter of claim 1 are not correct. The attempt by the Appellant to argue that the only difference is to exchange the sides of the

conveying means and registration movement does not succeed. The Respondent showed that there are further differences regarding separate pivoting axes for the registration stops and urge roller. As indicated above in section 4.1 above the Appellant has not shown why the skilled person would effect the required constructional changes to the registration unit and exchange the positions of the registration unit and urge roller in the apparatus known from document D3.

- 4.4 The arguments of the Appellant that the subject-matter of claim 1 is obvious starting from document D4 are also not convincing. The Appellant has admitted that this document teaches a more complicated apparatus than that set out in claim 1 arguing however that this was due to additional functions. However, the Board agrees with the Respondent that the abutment strip and pressure roller are carried by different elements which need to be individually movable. This requires a complicated linkage. Therefore, the teaching of the document cannot suggest the simple construction of the registration unit of claim 1.
5. Therefore, the subject-matter of claim 1 of the patent in suit involves an inventive step in the sense of Article 56 EPC.

Dependent claims 2 to 15 are directed to embodiments of the subject-matter of claim 1 and similarly involve an inventive step.

Order

For these reasons it is decided that:

The Appeal is dismissed.

The Registrar:

The Chairman

L. Martinuzzi

A. Burkhart