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Datasheet for the decision of 8 October 2019

Case Number: T 1239/15 - 3.4.02

Application Number: 08020623.8

Publication Number: 2065686

IPC: G01G19/00

Language of the proceedings: EN

Title of invention:
Parallel path weight measurement system for sheet handling devices

Patent Proprietor:
Pitney Bowes, Inc.

Opponent:
WIPOTEC GmbH

Headword:

Relevant legal provisions:
EPC Art. 56, 123

Keyword:
Inventive step - after amendment (yes)

Decisions cited:
T 0881/09

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

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Case Number: T 1239/15 - 3.4.02

D E C I S I O N
of Technical Board of Appeal 3.4.02
of 8 October 2019

Appellant: (Opponent)	WIPOTEC GmbH Adam-Hoffmann-Straße 26 67657 Kaiserslautern (DE)
Representative:	Eder, Thomas Eder Schieschke & Partner mbB Patentanwälte Elisabethstrasse 34/II 80796 München (DE)
Respondent: (Patent Proprietor)	Pitney Bowes, Inc. One Elmcroft Road Stamford, CT 06926-0700 (US)
Representative:	Hoffmann Eitle Patent- und Rechtsanwälte PartmbB Arabellastraße 30 81925 München (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 20 April 2015 rejecting the opposition filed against European patent No. 2065686 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	R. Bekkering
Members:	C. Kallinger
	T. Karamanli

Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal against the decision of the opposition division to reject the opposition and requested that the decision be set aside and that the patent be revoked in its entirety.

II. In its reply to the appellant's statement of grounds of appeal, the respondent (patent proprietor) requested that the appeal be dismissed and that the patent be maintained as granted or, as an auxiliary measure, that the decision under appeal be set aside and that the patent be maintained as amended on the basis of the claims according to one of the first to fourth auxiliary requests as filed by letter dated 14 December 2015.

III. The board issued a summons to oral proceedings and informed the parties about its preliminary opinion on inventive step of all requests on file.

IV. In its reply to the summons to oral proceedings, the respondent filed amended claims according to further auxiliary requests.

V. Oral proceedings before the board were held on 8 October 2019. The respondent withdrew its main request then on file (dismissal of the appeal).

The parties' final requests were as follows:

The appellant (opponent) requested that the decision under appeal be set aside and that the European patent be revoked.

The respondent (patent proprietor) requested, as its main request, that the decision under appeal be set aside and that the patent be maintained as amended in the following version:

- Claims: Nos. 1 to 9 of the main request, filed as first auxiliary request by letter dated 14 December 2015;
- Description: Pages 2, 2a, 3 to 7 as filed at the oral proceedings of 8 October 2019;
- Drawings: Figures 1a, 1b, 2, 3, 4a, 4b, 5, 6a and 6b as filed at the oral proceedings of 8 October 2019.

As an auxiliary measure, the respondent requested that the decision under appeal be set aside and that the patent be maintained as amended on the basis of the claims of one of the following auxiliary requests:

- **first** auxiliary request, which had been filed as second auxiliary request by letter dated 4 September 2019;
- **second** auxiliary request filed by letter dated 14 December 2015;
- **third** auxiliary request, which had been filed as fourth auxiliary request by letter dated 4 September 2019;
- **fourth** auxiliary request, which had been filed as third auxiliary request by letter dated 14 December 2015; and
- **fifth** auxiliary request, which had been filed as fourth auxiliary request by letter dated 14 December 2015.

VI. The following documents will be referred to in this decision:

D1 US 6,107,579;
D5 EP 0 953 828 A1.

IX. Claim 1 of the main request (including the feature numbering used in the statement of grounds of appeal) reads as follows:

"A weighing system (10) to measure the weight of articles, comprising:

(a) a first weight measurement device (30a) including a first platform (32) adapted to accept an article (20) traveling along an upstream processing path (FPU) and defining a first weight acquisition path (WPI);

(b) a second weight measurement device (30b) including a second platform (32D) adapted to accept an article (20) traveling along the upstream processing path (FPU) and defining a second weight acquisition path (WP2);

(c) the first and second weight acquisition paths being arranged in parallel with respect to each other;

(d) each of the first and second weight measurement devices (30a, 30b), furthermore, adapted to convey the articles across the first and second platforms (32D) and

(e) including a means (46, 48) for sensing weight as an article (20) traverses the respective weight acquisition path; and

(f) a diverter mechanism (52) operative to divert articles (20) from the upstream processing path (FPU) to one of the first or second weight acquisition paths (WP1, WP2);

(g) wherein at least one (30a) of the weight measurement devices is segmented into a primary (32a-1) and second (32a-2) scale segment,
(h) the primary scale segment operative to measure the weight of an article of a first dimension,
(i) and the primary and secondary scale segments operative to cooperatively measure the weight of an article of a second dimension,
(j) the second dimension being larger than the first dimension,
(k) the weighing system further including a system processor (26) for controlling the diverter mechanism (52) such that articles are directed to one of the first and second weight measurement devices (30a, 30b) depending upon a readiness queue to receive another article for measurement."

Reasons for the Decision

1. The appeal is admissible.

2. Main request - Amendments (Article 123(2) and (3) EPC)

Compared to independent claim 1 of the patent as granted, independent claim 1 of the main request comprises the following additional feature (k):

"... the weighing system further including a system processor (26) for controlling the diverter mechanism (52) such that articles are directed to one of the first and second weight measurement devices (30a, 30b) depending upon a readiness queue to receive another article for measurement."

The respondent argued that the amendment was based on dependent claim 3 as originally filed and granted. Neither the appellant contested this. Nor has the board any objection against the amendment.
The board therefore considers the requirements of Article 123(2) and (3) EPC to be met.

3. Main request - Inventive step (Article 56 EPC)

3.1 Closest prior art - Document D1

According to the opposition division's decision, document D1 represented the closest prior art and disclosed (see Figures 1, 3 and columns 1 to 3) a weighing system according to features (a) to (f) of claim 1, i.e. a weighing system in which a diverter mechanism diverts articles to be weighed from an upstream processing path to one of two parallel weigh acquisition paths, of which each is provided with a weight measuring device. Neither the appellant nor the respondent contested this and also the board agrees.

3.2 Differences

3.2.1 Features (g) to (j)

According to the opposition division's decision, document D1 did not disclose features (g) to (j) relating to the serially segmented weighing device. This view was shared by the appellant and the respondent and also the board agrees.

3.2.2 Feature (k)

The respondent argued that D1 was the only document disclosing a diverter mechanism to divert the articles

to be weighed to one of the first and second weight measurement devices. However, D1 failed to disclose a system processor for controlling the diverter mechanism depending upon a readiness queue to receive another article for measurement.

The appellant argued that D1 (see Figure 1) disclosed a system processor (control unit CU) for controlling the diverter mechanism (distributing device 3). The control unit CU would necessarily control the diverter mechanism depending upon the "readiness" to receive another article for measurement and that therefore feature (k) was known from D1.

The appellant argued further that D1 (see column 3, lines 20 to 30) disclosed an input sensor IS which determined the length and position of the objects to be weighed and that this information was relayed to the control unit CU. Based on this information, the control unit would control the diverter such that objects were always sent to a weighing device which was ready to receive an object to be weighed. Therefore feature (k) was disclosed in D1.

The board is not convinced by the appellant's argument. D1 discloses a system processor and a diverter mechanism which separates the incoming stream of articles into the parallel paths (see column 2, lines 24 to 29; column 3, lines 30 to 32) but is silent about the control of the diverter. If at all, the most straight forward, and thus possibly implicitly disclosed, control of the diverter seems to be to simply alternate between the different parallel paths. This is however different from a control depending upon a readiness queue to receive another article for measurement.

Furthermore, although D1 discloses the use of sensors (input sensor IS and speed sensor SS) to track the positions of the items to be weighed, there is no disclosure in D1 that this information is used to control the diverter to direct an article to one of the weight measuring devices depending upon the information if the weight measuring device is ready to receive another article for measurement.

The board therefore comes to the conclusion that D1 does neither directly nor implicitly disclose a system processor for controlling the diverter according to a readiness queue as defined by feature (k).

3.3 Objective technical problem

The objective technical problem to be solved is to increase the throughput of the weighing system, i.e. the number of weighed articles per unit of time. This view was shared by the appellant and the respondent.

3.4 Combination of D1 with D5

3.4.1 According to the opposition division's decision, document D5 (see Figures 4 to 6 and corresponding description paragraphs [0024] to [0038]) disclosed a weighing system according to features (g) to (j) of claim 1, i.e. a weighing system in which the weighing device is serially segmented into a primary and a secondary scale element, each operative to measure the weight of an article of a first and a second dimension respectively, the second dimension being larger than the first dimension. Neither the appellant nor the respondent contested this.

3.4.2 The respondent argued that the skilled person would not combine the teachings of documents D1 and D5 because each document provided a complete and self-contained solution for the objective technical problem. Furthermore, the teachings of documents D1 and D5 were incompatible and the use of the segmented weighing devices known from D5 in the parallel weighing paths known from D1 would require major modifications to the weighing system disclosed in D1.

The respondent argued further that the claimed control of the diverter mechanism according to feature (k) improved the throughput because objects to be measured were fed to the parallel weighing paths based upon the status of the individual weight measurement devices as explained for example in the patent as granted at column 5, lines 38 to 46, and column 6, lines 23 to 28.

The respondent argued further that in the weighing system of D1 it was completely unnecessary to determine readiness of the weighing devices in the different parallel paths as these were equal. If at all, Dl taught the skilled person to divert the articles to be weighed in turn to the different parallel paths as e.g. shown by the drawing provided by the appellant in its grounds of appeal. Thus, D1 neither disclosed nor hinted towards a control of the diverter depending upon a readiness queue to receive another article for measurement according to feature (k).

The respondent argued that therefore the subject-matter of claim 1 involved an inventive step.

3.4.3 The appellant argued that the skilled person, searching for a way to increase the throughput, would start from the parallel weighing devices known from D1 and use a serially segmented weighing device as disclosed in D5 in one or more of the parallel weighing paths and would thereby arrive without the involvement of an inventive step at the subject-matter according to features (a) to (j) of claim 1.

With respect to feature (k) the appellant argued that, once the teachings of D1 and D5 were combined, it was straight forward, if not inevitable, for the skilled person to provide a diverter control as claimed, because it was within the skilled person's knowledge to divert the next article to be measured to the next available weighing device.

Furthermore, in order to increase the throughput of the weighing system, there were only two possibilities to decide whether an object to be weighed could be sent to the weighing device: (i) either by checking downstream of the diverter whether the weighing device was ready to receive another object or (ii) by monitoring the length and positioning of the objects upstream of the diverter. The choice of one of these two options could, however, not justify the presence of an inventive step.

3.4.4 With respect to features (g) to (j) the board agrees with the appellant's line of argument insofar as the skilled person would combine the teachings of documents D1 and D5 which are in the same field and disclose alternative solutions (parallel weighing paths and serially segmented weighing devices respectively) for the same objective technical problem.
The respondent's argument that an earlier solution to a given technical problem does preclude later attempts of

the skilled person to solve the same problem is not convincing. The decision T881/09 referred to by the respondent is not relevant as it concerns the case of replacing a known solution by an alternative solution whereas in the present case two alternative solutions, each increasing the throughput of a weighing system, known from D1 and D5 are combined to even further increase the throughput of the weighing system.

Therefore, starting from D1, the skilled person would, apart from increasing the number of parallel paths, also consider using the serially segmented weighing device of D5, because D5 clearly teaches that throughput can be increased by replacing a single weighing device (see Figures 1 and 2) by a serial arrangement of two weighing devices of differing length (see Figures 4 and 5).
The board is therefore of the opinion that the skilled person, in search for possibilities to (further) increase the throughput of a weighing system, would consider applying the teaching of D5 to D1 and thus arrive at a weighing system according to features (a) to (i) of claim 1 without the involvement of an inventive step.

The board also agrees with the appellant's argument that the systems of D1 and D5 are compatible, because the segmented weighing devices of D5 (see Figures 4 to 6) can be used in the parallel weighing paths of D1 (see Figure 3) without major modifications which would go beyond the skilled person's routine measures.

3.4.5 The board is however not convinced by the appellant's arguments with respect to feature (k) relating to controlling the diverter mechanism depending upon a

readiness queue to receive another article for measurement.

According to the patent, the articles are directed to one of the first and second weight measurement devices depending upon a readiness queue, i.e. a status to receive another article for weight measurement. Such a control is different from the mere alternate feeding of objects to parallel paths which is also described in the patent (see column 6, lines 17 to 28).

As discussed above (see point 3.2.1), D1 does neither explicitly nor implicitly disclose the claimed control of the diverter mechanism. Furthermore, as D1 is silent about the diverter being controlled, there is also no hint towards the claimed control. As the two weighing paths in D1 are identical, the most straight forward way to control the diverter is to simply alternate between the parallel paths. Therefore, the appellant's argument that the claimed control of the diverter mechanism depending upon a readiness queue was straight-forward or even inevitable is not convincing. Finally, the appellant's argument that the claimed solution was obvious, once the teachings of documents D1 and D5 were combined, as only two possibilities were available, is not persuasive either, as none of the two documents discloses or hints towards controlling the diverter mechanism such that articles are directed to one of the first and second weight measurement devices depending upon a readiness queue to receive another article for measurement.

The board is therefore of the opinion that the subject-matter of claim 1 and also of dependent claims 2 to 9 referring back to independent claim 1 of the main request involves an inventive step within the meaning

of Article 56 EPC over the combination of document D1 with document D5.

In addition, the description has been adapted to the amended claims.

3.5 The appellant presented no further arguments or objections against the allowability of the patent as amended according to the present main request. Nor has the board any further objection.

3.6 In conclusion, the board is of the opinion that, taking into consideration the amendments made by the respondent of the European patent during the appeal proceedings, the patent and the invention to which it relates meet the requirements of the EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance with the order to maintain the patent as amended in the following version:

Claims: Nos. 1 to 9 of the main request, filed as first auxiliary request by letter dated 14 December 2015;

Description: Pages 2, 2a, 3 to 7 as filed at the oral proceedings of 8 October 2019;

Drawings: Figures 1a, 1b, 2, 3, 4a, 4b, 5, 6a and 6b as filed at the oral proceedings of 8 October 2019.

The Registrar: The Chairman:

M. Kiehl R. Bekkering

Decision electronically authenticated