Case Number: T 1060/04 - 3.4.02
Application Number: 91917840.0
Publication Number: 0507957
IPC: G01G 11/00
Language of the proceedings: EN
Title of invention: Check weighers considering length
Patentee: ISHIDA Co., Ltd.
Opponents: OPTIMA-Maschinenfabrik
Mettler-Toledo Garvens GmbH
Headword: -
Relevant legal provisions:
EPC Art.
Relevant legal provisions (EPC 1973):
EPC Art. 56
RPBA Art. 10b(1), 10b(3)
Keyword:
"Inventive step over undisputed aspects of an alleged prior
use (no)"
"Amended claims submitted during oral proceedings -
admissibility (no)"
Decisions cited:
G 0009/91, T 0764/03, T 0494/04
Catchword: -
Case Number: T 1060/04 - 3.4.02

DECISION
of the Technical Board of Appeal 3.4.02
of 29 November 2007

Appellant: ISHIDA CO., Ltd.
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Decision under appeal: Decision of the Opposition Division of the European Patent Office posted 16 June 2004 revoking European Patent No. 0507957 pursuant to Article 102(1) EPC.

Composition of the Board:

Chairman: A. G. Klein
Members: F. Narganes-Quijano
B. Müller
M. Stock
C. Rennie-Smith
Summary of Facts and Submissions

I. The appellant (patent proprietor) lodged an appeal against the decision of the opposition division revoking European patent No. 0507957 (based on European patent application No. 91917840.0).

The oppositions filed by respondent I (opponent I) and respondent II (opponent II) against the patent as a whole were based, inter alia, on the grounds for opposition of lack of novelty and lack of inventive step (Article 100(a) EPC). Respondent II referred, in particular, to the prior use of a weighing apparatus VM allegedly sold by the respondent itself to Hoechst AG in the period 1989/90.

In the decision under appeal the opposition division referred, inter alia, to the documentary evidence submitted in support of the alleged prior use of the weighing apparatus VM and to the minutes of the hearing of the witness Rolf Kreimeyer and held that the subject-matter of claim 1 amended according to each of the main and the auxiliary requests was new but did not involve an inventive step (Article 56 EPC) over the alleged prior use of the weighing apparatus VM.

II. During the written appeal proceedings the appellant contested the view of the opposition division on the issue of inventive step of the claimed invention.

Respondent II disputed the opposition division's view on novelty and the appellant's view on inventive step of the claimed invention and, in addition, filed documentary evidence in support of a new instance of
prior use of a weighing apparatus VM allegedly
delivered to Langnese-Iglo GmbH in 1989 and offered the
hearing of two witnesses in connection with all the
issues related to the new allegation of prior use.

III. Oral proceedings were held before the Board on
29.11.2007 in the presence of all the parties'
representatives.

The appellant requested setting aside of the decision
under appeal and the maintenance of the patent on the
basis of the claims as granted in which claim 1 is
amended by the insertion of the term "filtering" before
the term "conditions" in column 16, line 15 of the
patent specification as a main request, or on the basis
of the amended claim 1 filed with its letter dated
09.01.2004 further amended by the incorporation of the
expression "filtering" as indicated above as a first
auxiliary request, or on the basis of one of the three
sets of claims amended according to the second to
fourth auxiliary requests filed during the oral
proceedings.

Respondent I and respondent II both requested the
dismissal of the appeal.

At the end of the oral proceedings the Board gave its
decision.

IV. Claim 1 amended according to the main request of the
appellant reads as follows:

"A weighing machine comprising:
a weighing conveyor (1) having weight detecting means (5) for detecting weight and a belt (4) for transporting an object to be weighed, said belt (4) being supported by said weight detecting means (5),

data inputting means (26) for inputting a belt speed value of said belt and a length value of said object in the direction of transportation thereof by said belt,

belt control means (71) for controlling the speed of said belt (4) according to a belt speed value inputted by said data inputting means (26),

condition setting means (70) for calculating optimum filtering conditions from said belt speed value and said length value of said object in the direction of transportation thereof, and

digital filter means (10A) for receiving control signal from said condition setting means (70) to thereby digitally filter weight signals from said weight detecting means (5)."

Claim 1 amended according to the first auxiliary request differs from claim 1 of the main request in the inclusion of the following paragraph between the paragraph ending with the expression "... by said weight detecting means (5)," and the paragraph starting with the expression "data inputting means (26) ...":

"a memory device for preliminary storing different length values for each kind of objects to be weighed,"

Claim 1 amended according to the second auxiliary request differs from claim 1 of the main request in the omission of the term "filtering" before the term "conditions" and in that the claim further reads:
"wherein said condition setting means (70) includes thinning factor calculating means (74) for calculating a thinning factor by which said weight signals are thinned by said digital filter means (10A), and

wherein said thinning factor calculating means (74) calculates said thinning factor from the difference between detection inhibiting time and object transportation time and a required number of weight data outputted from said weight detecting means (5), said detection inhibiting time being the time required for said object to be transported completely onto said weighing conveyor (1) from a feed-in conveyor (6), said object transportation time being the time during which said object is transported on said weighing conveyor (1)."

Claim 1 amended according to the third auxiliary request differs from claim 1 of the main request in the omission of the term "filtering" before the term "conditions" and in that the claim further reads:

"further comprising detection inhibiting time calculating means (72) for determining a detection inhibiting time by calculating the transportation time from a length value inputted by said data inputting means (20) and a specific speed of said belt, and
detection inhibiting means (32) for causing detection signals from said object detecting means (7) to be ignored until said detection inhibiting time elapses when said object detecting means (7) detects the front end of an object to be weighed."
Claim 1 amended according to the fourth auxiliary request differs from claim 1 of the third auxiliary request in that the claim further reads:

"and zero-point adjustment inhibiting time calculating means (78) for calculating the zero-point adjustment inhibiting time from the length of said weighing conveyor (1), the speed of said belt, the length of said object in the direction of transportation thereof and said filtering conditions."

Each of the requests contains a further independent claim and dependent claims the wording of which is not relevant to the present decision.

V. The arguments of the appellant in support of its requests can be summarised as follows:

According to the minutes of the witness hearing, the object length input possibilities were inhibited in the apparatus delivered to Hoechst AG and the object length was automatically determined. The claimed invention requires inputting the value of the object length, for instance by means of a keyboard (patent specification, column 7, lines 24 to 28 and column 10, lines 28 to 31) and therefore the claimed subject-matter is novel.

The exchange of information with Hoechst AG is assumed to have been restricted to the actual features of the delivered weigher. The difficulties in detection of the end of the object and the possibility of inputting the object length mentioned by the witness obviously relate to his own perception. There is no hint in the minutes of the hearing that any information related to this
perception was communicated to the customer Hoechst AG, either during the official acceptance of the weigher or during the later training given to the customer. Therefore, the opposition division's assumption that the customer Hoechst AG or equally the skilled person was aware that an automatic measurement of the object length for certain objects is not accurate enough represents a groundless speculation.

In addition, even if a perception of the problem of improving the precision of the object length determination could be expected from the skilled person, there is still no hint for him to provide data inputting means for inputting a value of the object length. On the contrary, the fact that the weigher delivered to Hoechst AG was supposed to inhibit input possibilities as stated by the witness shows that the skilled person would rather look to improve the automatic measurement concept. This means for example an adjustment of the light detector of the automatic object length determination means so that a correct signal is generated or, as asserted by the witness himself, an input of the object length only to find whether a faulty signal was generated by the optical detector.

Thus, it has not been proved that either the weigher delivered to Hoechst AG or the accompanying information and explanation of the weigher included any suggestion to adjust the filter condition on the basis of the value of the object length inputted through, for example, the keyboard. The claimed subject-matter is therefore not only novel but it also involves an inventive step.
The memory device according to claim 1 of the first auxiliary request allows for a much simpler input operation of the object length values and improves the operation of the weigher. This feature was not present in the weigher apparatus VM delivered to Hoechst AG.

The proceedings focused on the input of the object length and the second to fourth auxiliary requests directed to features of the dependent claims as granted have been submitted in response to a possible adverse decision by the Board. In addition, the opponents should be prepared to discuss the features of the dependent claims as granted. There is no problem in proceeding with a comparison of these additional features with the state of the art, and there is always the possibility of remitting the case to the opposition division for further prosecution.

VI. The arguments of respondent I in support of its request are the following:

According to the evidence on file, the weighing apparatus VM delivered to Hoechst AG included the manual input of the length of the object to be weighed. The fact that the corresponding means were inhibited in the delivered apparatus only to take account of calibration requirements does not invalidate the conclusion that the possibility of manually inputting the object length was there. In addition, according to the witness the means were also disclosed by oral disclosure and therefore form part of the prior art. Therefore, claim 1 of the main request is not novel.
VII. The arguments of respondent II in support of its request can be summarized as follows:

According to some of the embodiments of the claimed invention disclosed in the patent specification, the object length is automatically measured (column 4, line 42 to column 5, line 4, and column 10, lines 40 to 47), i.e. the embodiments do not require inputting data relating to the object length by means of a keyboard. It follows that, contrary to the opposition division's view that the claimed object length data inputting means requires the manual input of the data, these means also encompass the automatic determination of the object length value and the use of the value in the calculation of the optimum filtering conditions. Therefore, claim 1 of the main request does not define novel subject-matter.

Alternatively, the object length data inputting means defined in claim 1 of the main request do not involve an inventive step. The skilled person is aware of the fact that a precise automatic determination of the object length by the delivered weighing apparatus VM is not possible in cases in which the object is irregularly shaped or presents an irregular reflectivity, and he would then consider the simple possibility of manually inputting the object length instead of using the automatic object length determination. Furthermore, once the correct value of the object length is known by the control system of the weigher, it is technically irrelevant whether the value has been automatically determined or manually input. In the weighing apparatus VM delivered to Hoechst AG the manual input of the object length was inhibited only to
meet calibration requirements of the Physikalisch-Technische Bundesanstalt, and the patent specification fails to disclose any technical effect associated with the manual input of the object length.

In addition, a further weighing apparatus VM was delivered to Langnese-Iglo GmbH in 1989. This apparatus required the manual input of the length of the object to be weighed and therefore anticipated all the features of the apparatus defined in claim 1 of the main request.

As shown in the minutes of the witness hearing, the weigher delivered to Hoechst AG also included memory means as defined in claim 1 of the first auxiliary request.

**Reasons for the Decision**

1. The appeal is admissible.

2. **Main request - Inventive step**

   2.1 Apart from some minor deviations in the wording of the claims ("detecting means" instead of "detection means" and "conditons" [sic] for "conditions"), claim 1 amended according to the present main request defines the same subject-matter as claim 1 of the main request on which the decision under appeal was based. The claim is directed to a weighing machine comprising, *inter alia*, means for digitally filtering weight signals from a weight detecting means according to a control signal from condition setting means which calculate optimum filtering conditions from, *inter alia*, the length value.
of the object to be weighed. According to claim 1, the weighing machine further comprises data inputting means for inputting a value of the object length in the direction of transportation of the object.

2.2 In the decision under appeal the opposition division, relying on a series of documents on file and on the minutes of the hearing of the witness Rolf Kreimeyer, concluded that the prior use of the weighing apparatus VM allegedly delivered by respondent II to Hoechst AG in the period 1989/90 constitutes prior art within the meaning of Article 54(2) EPC. Relying on this evidence, the opposition division also concluded that the weighing apparatus VM included all the features of the weighing machine defined in claim 1 of the main request, with the only exception of the data inputting means for inputting a length value of the object being weighed. According to the opposition division, the weighing apparatus VM incorporated means arranged to automatically determine the length of the object but not object length data inputting means as claimed, so that the claimed weighing machine was new over the weighing apparatus VM; in the opposition division's view, however, the provision of object length data inputting means as claimed was obvious.

During the appeal proceedings the appellant has submitted that the provision of object length data inputting means as claimed is novel over the delivered weighing apparatus VM and that, contrary to the opposition division's conclusion, these means involve an inventive step, and both respondent I and respondent II have submitted that the provision of these means is also anticipated, and in any case rendered obvious by
the weighing apparatus VM. Apart from these submissions, none of the parties have disputed during the present appeal proceedings the remaining findings and conclusions of the opposition division relating to the alleged delivery of the weighing apparatus VM to Hoechst AG in the period 1989/1990 and to the alleged features of the delivered apparatus VM anticipating, with the only possible exception of the object length data inputting means, the features of the claimed weighing machine.

2.3 In view of the above considerations and in particular of the actual issues raised and disputed by the parties during the present appeal proceedings, the case brought by the parties and to be decided by the Board as regards claim 1 of the main request boils down to the question of whether the weighing apparatus VM allegedly delivered to Hoechst AG and allegedly comprising means arranged to automatically determine the length of the object anticipates, or at least renders obvious, the provision of object length data inputting means as claimed (Article 100(a) together with Article 52(1) EPC).

2.4 According to respondent II, the object length data inputting means as claimed also encompasses the automatic determination of the object length as supported by some of the passages of the description of the patent, and these means are therefore anticipated by the means incorporated in the weighing apparatus VM and arranged to determine automatically the length of the object being weighed. According to respondent I, the weighing apparatus VM also incorporated means for manually inputting the object length and the fact that
these means were inhibited in the apparatus delivered to Hoechst AG is not detrimental to the actual disclosure of these means which consequently also anticipate the claimed object length data inputting means.

There is, however, no need for the present Board to decide the issues on novelty raised by respondent I and respondent II because, even assuming that the claimed object length data inputting means does not encompass means for the automatic determination of the object length as undisputedly provided in the weighing apparatus VM, in the Board's view the provision of the latter means renders obvious the provision of the claimed means. The Board agrees in this respect with the view expressed by the opposition division in its decision according to which, when the skilled person realizes that an automatic measurement of the object length for certain objects is not accurate enough, he will fall back to the most simple solution and will use corresponding data inputting means or a manual input of the object length.

According to a first line of argument of the appellant, no information relating to the lack of accuracy in the automatic measurement of the object length in the weighing apparatus delivered to Hoechst AG became actually available to the public. However, irrespective of whether or not this was the case, in the Board's view any problem associated with the correct automatic determination of the object length in the delivered apparatus would have been readily detected by the operator in charge of the apparatus, and also by the notional skilled person to be considered in the
assessment of inventive step. In addition, no other technical advantage or improvement has been identified by the appellant as being associated with the provision of object length data inputting means as claimed instead of the automatic determination means of the weighing apparatus VM than the mere fact of feeding the control system with the correct control data when the latter is incorrectly determined by the automatic determination of the same.

According to a second line of argument of the appellant, the prior art on file does not disclose or suggest the replacement of the automatic determination of the object length by the manual input of the object length as claimed. However, in the Board's view at the priority date of the patent in suit it was a trend in the field of automatization and in particular in the art of automatic control processing to also determine automatically, whenever possible, the input control data and, depending on the circumstances, to leave open the possibility of inputting the control data manually when the automatic determination of the same was unsatisfactory, unsuitable or problematic. This view was advanced by the Board during the oral proceedings and the appellant did not submit any counterargument in response to it.

2.5 Having regard to the above considerations, the Board cannot acknowledge an inventive step in the fact of replacing - or supplementing - the means for automatically determining the length of the object present in the weighing apparatus VM by data inputting means for inputting the object length as claimed (Articles 52(1) and 56 EPC).
In view of the above conclusions, there is no need to consider the documentary evidence and the offer of hearing witnesses submitted by respondent II during the appeal proceedings and relating to a new instance of prior use of a weighing apparatus VM allegedly delivered to Langnese-Iglo GmbH in 1989.

3. **First auxiliary request - Inventive step**

Claim 1 of the first auxiliary request corresponds to claim 1 of the first auxiliary request on which the decision was based. The claim differs from claim 1 of the main request considered in point 2 above in that the weighing apparatus further comprises a memory device for preliminarily storing different length values for each kind of object to be weighed. In its decision the opposition division held that the weighing apparatus VM delivered to Hoechst AG also included memory means as claimed.

During the proceedings the appellant has disputed that the weighing apparatus VM delivered to Hoechst AG included memory means for storing information relating to the objects being weighed as reported by the witness and that these means were arranged to store the length values of objects as claimed. Irrespective of whether the delivered apparatus included such memory means, however, the provision of memory means as claimed does not involve an inventive step, the reason being that, in the context of the manual input of the object length values discussed in point 2 above with regard to claim 1 of the main request, it was a straightforward measure at the priority date of the patent in suit to
improve the speed and the ergonomics of the weighing operation by storing in a memory the length value of objects to be frequently weighed on a regular basis in order to retrieve them when weighing the objects.

Accordingly, the subject-matter of claim 1 amended according to the first auxiliary request does not involve an inventive step (Articles 52(1) and 56 EPC).

4. Second to fourth auxiliary requests - Admissibility

4.1 Claim 1 amended according to the second, third and fourth auxiliary requests results from the combination of claim 1 as granted with the features of dependent claims 2 and 3, dependent claim 4, and dependent claims 4 and 6 as granted, respectively. These requests were submitted by the appellant during the oral proceedings held before the Board and represent an amendment to the appellant's case. Its admissibility is therefore at the Board's discretion (Article 10b(1) of the Rules of Procedure of the Boards of Appeal, first sentence) and depends on the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy (Article 10b(1) RPBA, second sentence).

4.2 During the written appeal proceedings, the appellant based its case on a main and an auxiliary request essentially the same as those to which the decision under appeal relates. In addition, in its communication accompanying the summons to oral proceedings the Board raised no substantive issue and noted that if new submissions were to be filed, this should be done promptly, so as to be received by the Board at least
one month before the date set for oral proceedings. In these circumstances, the Board considers that the appellant has had sufficient opportunity to file in due time amended sets of claims in reply to the decision under appeal and in response to the submissions of the respondents (see in this respect T 764/03, not published in OJ EPO, point 6.2 of the reasons). In any case, the appellant has failed to identify any particular reason or change of circumstance that would have justified as a legitimate reaction the filing of the second to fourth auxiliary requests during the oral proceedings held before the Board (T 494/04, not published in OJ EPO, points 3.2 and 3.4 of the reasons, and T 764/03, supra, points 6.2 and 6.4).

In its communication accompanying the summons the Board also noted that late submissions, especially if so complex as to delay unduly or prevent resolution of the case at oral proceedings, would run the risk of not being taken into consideration by the Board. This is precisely the case with the amendments proposed by the appellant in the three auxiliary requests submitted during the oral proceedings, amendments which would extend the scope of the appeal proceedings beyond that determined by the decision under appeal and the parties' written cases. Claim 1 of each of the requests involve technical features (see point IV above) which – contrary to the appellant's contention – would require a complex assessment of their technical significance and would also require in the assessment of patentability a comparison with the complex evidence on file relating to the alleged prior use of the weighing apparatus VM. The Board, however, would not have been in a position to carry out these assessments without
adjournment of the oral proceedings (T 764/03, supra, point 6 of the reasons, in particular points 6.6 to 6.9, and T 494/04, supra, points 3.3 and 3.5 of the reasons; see also Article 10b(3) RPBA). In addition, the corresponding evidence and more particularly the hearing of the witness carried out by the opposition division focused on the technical aspects defined in claim 1 of each of the main and first auxiliary requests, so that the assessment of patentability of the new requests would even have required hearing the witness again to elucidate the pertinent aspects of the alleged prior use in relation to the additional technical features included in the claims amended according to the late-filed requests. A rehearing of the witness and the subsequent technical assessment of the case, however, would have required the adjournment of the oral proceedings and possibly also the remittal of the case. The appellant's submissions regarding its reliance on the possibility of remittal of the case for the assessment of the late-filed requests is also at variance with the observation in the communication accompanying the summons to oral proceedings that the Board would be reluctant to consider the remittal of the case in view of the filing date of the patent in suit (21.10.1991) and the length of the proceedings.

As regards the line of argument of the appellant that the opponents/respondents should be prepared to discuss the patentability of the features of the dependent claims, the Board notes that the fact that an opposition directed to the subject-matter of an independent claim also covers implicitly subject-matter defined in claims which depend on the independent claim (see G 9/91 OJ EPO 1993, 408, point 11 of the reasons)
does not necessarily imply that the parties and also the Board should be prepared at any time of the proceedings to assess the allowability and patentability of amended independent claims including subject-matter defined in dependent claims as granted. As noted above, in the circumstances of the present case the present Board was not prepared at such a late stage of the proceedings to assess the features of the dependent claims incorporated in claim 1 amended according to the new auxiliary requests.

4.3 In view of the above considerations, the Board decided during the oral proceedings not to admit into the proceedings the sets of claims amended according to the second to fourth auxiliary requests submitted by the appellant during the oral proceedings.

5. In view of the above conclusions, none of the amendments according to the different requests of the appellant results in an admissible request or in an amended version of the patent that would have satisfied the conditions set forth in Article 102(3) EPC. Accordingly, the Board decided during the oral proceedings that the appeal was to be dismissed.
Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

M. Kiehl A. G. Klein