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**Datasheet for the decision
of 16 July 2013**

Case Number: T 0582/09 - 3.2.02

Application Number: 04015225.8

Publication Number: 1466556

IPC: A61B 5/053, G01G 19/50

Language of the proceedings: EN

Title of invention:
Living body measuring apparatus with built-in weight meter

Patent Proprietor:
Tanita Corporation

Opponents:
Measurement Ltd.
seca GmbH & Co. KG (intervener)

Headword:
-

Relevant legal provisions:
EPC Art. 52(2)(b), 52(3), 56, 76(1), 114(2), 123(2), 123(3)
EPC R. 43(4)

Keyword:
"Intermediate generalisation (no)"
"Extention of scope of protection (no)"
"Documents admitted (yes/no)"
"Aesthetic creation (no)"
"Inventive step (yes)"

Decisions cited:
G 0001/94, T 0331/87

Catchword:
-



Case Number: T 0582/09 - 3.2.02

D E C I S I O N
of the Technical Board of Appeal 3.2.02
of 16 July 2013

Appellant: Measurement Ltd.
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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted
12 January 2009 concerning maintenance of
European patent No. 1466556 in amended form.**

Composition of the Board:

Chairman: E. Dufrasne
Members: C. Körber
D. Ceccarelli

Summary of Facts and Submissions

- I. On 12 January 2009 the Opposition Division posted its interlocutory decision concerning maintenance of European patent 1466556 in amended form.
- II. An appeal was lodged against this decision by opponent 01 by notice received on 6 March 2009, with the appeal fee being paid on the same day. The statement setting out the grounds of appeal was received on 12 May 2009.
- III. A notice of intervention was filed on 19 October 2009.
- IV. By communication of 18 April 2013, the Board forwarded its provisional opinion to the parties and summoned them to oral proceedings.
- V. By letter dated 13 June 2013, the appellant (opponent 01) withdrew its request for oral proceedings and announced that it would not attend the oral proceedings.
- VI. Oral proceedings were held on 16 July 2013 in the absence of the appellant.

The final requests of the parties were as follows:

The appellant had requested in writing that the decision under appeal be set aside and that the patent be revoked.

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

The respondent (patent proprietor) requested that the appeal be dismissed and that the intervention be rejected or, in the alternative, that the decision under appeal be set aside and that the patent be maintained on the basis of one of the auxiliary requests 1 and 2 filed with letter dated 13 June 2013.

VII. The following documents are of importance for the present decision:

- D1: JP-A-H11-113872
- D2: English translation of D1
- D3: US-A-5 279 851
- D4: US-D-415 051
- D5: US-D-415 438
- D6: US-D-444 403 S
- D8: US-A-5 886 302
- D10: US-D-414 126
- D15: DE-A-196 39 095
- D16: US-A-5 968 416
- D19: US-A-5 415 176
- D26: WO-A-97/14111
- D27: US-A-4 008 721
- D28: DE-U1-91 08 552.7
- D29: DE-U1-88 15 157.3.

VIII. Claims 1 and 2 as upheld by the Opposition Division read as follows (with the feature denotation proposed in the statement of grounds of appeal inserted):

Claim 1:

- 1.1 "A living body measuring apparatus with a built-in weight meter, comprising

- 1.2 a measuring platform having
- 1.3 load sensor units (2) for measuring a living body weight,
- 1.4 which are mounted on an underside of said measuring platform, and
- 1.5 electrodes (5) for measuring a living body impedance,
- 1.6 which are arranged on an upside of said measuring platform, **characterized in that:**
- 1.7 said measuring platform is formed from a transparent plate, whereby
- 1.8 a paper can be affixed thereon such that it is visible through said measuring platform; and
- 1.9 said electrodes (5) are formed from an electrically conductive transparent coating."

Claim 2 (features deleted from claim 2 of the patent as granted are struck through):

"A living body measuring apparatus with a built-in weight meter according to Claim 1 in which

- 2.1 said measuring platform is constructed in two-layered configuration having
- 2.2 an inner board (3),
- 2.3 on which said load sensor units are mounted and
- 2.4 an outer board (4), formed from said transparent plate on which said electrodes (5) are arranged, and
- 2.5 ~~the area of a top surface of said inner board (3) is smaller than the area of a top surface of said outer board (4), whereby~~
- 2.6 ~~a paper can be affixed thereon such that it is visible through the outer board (4)."~~

IX. The appellant's arguments are summarised as follows:

The parent application disclosed two embodiments, a single-layered and a two-layered configuration. Claim 1 of the patent in suit had to be interpreted that both embodiments were covered by it. Both embodiments were restricted to a direct mounting of the load sensor units, either to the inner board of the two-layered configuration (parent application, page 5, line 4 from below) or, if the inner board was omitted, to the outer board (single-layered configuration, 7th line from the foot of page 9). The word "may" in the phrase "the load sensor units 2 may directly be mounted to the transparent outer board 4" (parent application, 7th and 6th line from the foot of page 9) did not relate to an optional provision of the direct mounting alone, but to the optional provision of the alternative (single-layered) embodiment as a whole, incorporating the direct mounting feature. This was clear from the grammatical construction of the whole sentence and from claim 3 of the parent application. As the load sensor units were directly mounted to the inner board in the two-layered configuration, this role was performed by the outer board in the single-layered configuration. The term "direct mounting" meant immediate attachment of the load sensor units without interruption or additional or intermediate components to the board of the measuring platform. This interpretation corresponded to the usual understanding of the term "direct" by a skilled person and was further supported by Figures 1(b) and 1(c). The remaining disclosure of the parent application did not give any support for a broader interpretation. No alternatives to direct mounting were disclosed, and direct mounting could not

be regarded as being only an example. Feature 1.4 and the remaining wording of claim 1 did not include the limitation of direct mounting of the load sensor units on the measuring platform. Thus, claim 1 improperly covered living body measuring apparatuses wherein the load sensor units were mounted in any way on an underside of the measuring platform, e.g. with an additional support plate or the like, and thus extended beyond the content of the application as filed. Following the three-step essentiality test of T 331/87 the skilled person did not directly and unambiguously recognize that the feature of direct mounting was not explained as essential and was dispensable for the function of the invention. Feature 2.3 of claim 2 was objectionable for the same reason.

Furthermore, feature 1.8 represented an inadmissible generalization. The term "thereon" in feature 1.8 referred to the measuring platform mentioned in feature 1.7, i.e. feature 1.8 explicitly defined that a paper could be affixed on the measuring platform, such that it was visible through the measuring platform. There was no restriction with regard to the side of the platform to which the paper could be affixed. However, in the parent application, affixing the paper was disclosed exclusively with regard to the lower surface of the platform (sentence bridging pages 3 and 4; page 8, line 4; and page 10, line 16). In contrast, claim 1 of the patent covered an apparatus with a measuring platform, wherein a paper could be affixed either on the lower surface, or on an upper surface such that it was visible through the measuring platform (i.e. from below).

If claim 1 was based on the single-layered embodiment only (as stated by the Opposition Division) and claim 2 defined features of the two-layered embodiment, claim 2 as upheld would not represent a particular embodiment of the subject-matter of claim 1. Thus, claim 2 as upheld did not represent a dependent claim, but rather an independent claim. In this case, the deletion of features 2.5 and 2.6 from claim 2 of the patent as granted clearly violated Article 123(3) EPC.

The problem cited in the parent application (visibility of information, i.e. readability of a paper below the platform) was an artificial problem introduced after the product design was completed to enhance the prospects of obtaining utility patent protection for an aesthetically appealing design feature. The objective problem was to improve the appearance of the weighing scale such that the electrodes did not disturb the design effect of the whole scale having a transparent platform. An improved aesthetic effect had no influence on the technical function of the weighing scale. Providing transparent electrodes resulted in maintaining the transparent appearance of the platform. The contribution to the prior art was an ornamental design, which was excluded from patentability according to Article 52(2)(b) EPC. In any case, a feature without technical character had to be disregarded in the assessment of inventive step.

Documents D26 and D27 were prima facie highly relevant for the consideration of inventive step since they disclosed transparent electrodes utilized for measuring the impedance of human bodies in a "living body measurement apparatus" as claimed. Introducing the new

material did not represent a procedural complication. Moreover, D27 was already cited in document D2. The introduction of new documents reinforcing the line of attack already made before the department of first instance had to be considered as normal behaviour on the part of the appealing party. Finally, the new documents had been introduced in response to the contested decision.

In contrast to what was stated in the impugned decision, document D4 or document D8 was the closest prior art since either one of these documents constituted the most promising starting point for an obvious development leading to the invention and since they were directed to a purpose or effect similar to that of the invention. When starting from D8, features 1.5, 1.6 and 1.9 were not disclosed in this document. Providing transparent impedance measurement electrodes on the measuring platform had two effects, namely providing the capability to measure impedance in addition to body weight and the capability to transmit light through the electrodes, corresponding to the surrounding transparent platform. The function of features 1.5/1.6 was the provision of the impedance measurement capability. On the other hand, the function of using a transparent coating according to feature 1.9 was the provision of the capability to transmit light so that a homogeneous and aesthetically pleasing appearance of the scale was obtained. Measuring the impedance did not influence transmitting light, and transmitting light did not influence measuring the impedance. Thus, the features were not functionally interdependent and represented an aggregation of features, rather than a combination thereof, such that

the features 1.5/1.6 and 1.9 were to be considered separately. The underlying partial problems were providing the impedance measurement capability and providing light transmissivity of the electrodes. These formulations did not include a pointer to the solution, as argued by the respondent. Also, the technical problem formulated by the respondent, namely the capability to measure any data, was based on an inappropriate generalization of a technical effect obtained with the electrodes. For the solution of the first partial problem, the skilled person would immediately know that electrodes were needed for measuring the body impedance (from his general knowledge and also from D1 and D2). The electrodes necessarily had to be provided on the measuring platform as this was the only position of the weighing scale where contact with a living body was possible. As a part of feature 1.9, the electrodes had to be formed from an electrically conductive material, since otherwise they could not work as electrodes. This was also supported by documents D1 and D2. The solution of the second partial problem, i.e. providing light transmissivity of the electrodes, was the necessary result of typical considerations of the skilled person, who would consider available electrode materials. From D3 (e.g. column 1, lines 12 to 23; and column 3, lines 40 to 50) the skilled person would learn that electrodes for generic purposes, for instance in touch sensors, could be made of transparent coatings on glass. The corresponding knowledge was also available from D16 which disclosed optically transparent conductive polymer electrodes on flat or curved substrates (column 1, lines 13 to 26; and column 5, lines 10 to 15). Finally, the skilled person's

knowledge of transparent electrodes was even admitted by the applicant (parent application, page 6, lines 12 to 14). Considering the provision of electrodes on the transparent platform of the weighing scale of document D8, the skilled person would immediately select transparent electrode materials as these would correspond to the transparent appearance of the whole platform, and provide a consistent appearance. Furthermore, the combined consideration of D8 with either of D26 or D27 directly resulted in the features of claim 1. Document D26 disclosed transparent impedance measurement electrodes for sensing the presence of a part of a human body (finger) on a fingerprint reader (page 3, paragraph 1 and line 20). The skilled person would even learn from D26 the advantages of using transparent electrodes made in particular of an ITO layer, which were characterized as having the required mechanical resistance (page 5, lines 27 to 29) and the advantage of not restricting the imaged area (first paragraph of page 6: the transparency allowing the full print area to be imaged). These advantages would cause the skilled person to utilize transparent electrode coatings as disclosed in D26 on the weighing scale of D8. This was also true with regard to D27, which disclosed transparent tape electrodes for application to the skin of the human body for use as transmission electrodes (see abstract, column 1, paragraph 1, and column 2, lines 50 to 64). Vinyl acrylic copolymer was generally known to be transparent. The transparency was even implicitly mentioned in column 3, lines 3 to 11: if the polymer carrier were not transparent, the metallic appearance of Ag flakes in the electrode layer of document D27 would not be visible. Thus, the skilled

person would obtain transparent electrodes simply by using the electrodes which were used in the prior art for applying an electrical signal to the skin of a person, such as for impedance measurements on bodies.

X. The intervener's arguments are summarised as follows:

The omission of the word "directly" in feature 1.4 of claim 1 as granted and upheld had no basis in the originally filed documents of the parent and the present application. In the description passage at page 5 relating to the two-layered configuration it was clearly stated that the load sensor units were directly mounted on the inner board of the measuring platform. The phrase relating to the single-layered configuration at page 9 stating that the inner board may be omitted and the load sensor units may directly be mounted on the transparent outer board did not disclose that the load sensor unit may be mounted on the inner board in any way other than direct, but rather confirmed that this direct mounting had to take place in case of the single-layered configuration as well. The wording in feature 1.4 of claim 1, apparently intended to cover both the two-layered and the single-layered configuration, was inadmissibly broadened in that it covered undisclosed embodiments with various kinds of intermediate or connecting elements.

Document D26 was prima facie relevant since it disclosed electrodes formed from an electrically conductive transparent coating for measuring bioimpedance and should thus be admitted.

Weighing scales with transparent platforms were an aesthetic design trend, as indicated by a considerable number of respective ornamental design patents such as D4 to D6.

Documents D1, D10, D15 and D19 disclosed weighing scales with bioimpedance electrodes according to the preamble of claim 1. The person skilled in the art, an engineer active in the field of designing apparatus for measuring body weight and impedance, was of course also familiar with the prior art of ordinary weighing scales. When facing the problem of letting a display be visible through the measuring platform (as mentioned in D8, column 3, lines 11 to 15) or letting a paper label be protected and readily visible through the measuring platform, only one design step had to be taken when starting from D1, D10, D15 or D19, namely to design the components over the display or the paper label (measuring platform and electrodes) so as to be transparent. Transparent measuring platforms for weighing scales were well known from documents D4, D5, D6, or D8. Transparent electrodes were also readily available, as confirmed in paragraph [0032] of the present patent application, where it was stated that "any electrically conductive transparent coating may be used for the electrodes". This already demonstrated that such transparent electrodes belonged to the general knowledge of the skilled person and was further confirmed by document D3 (column 1, lines 12 to 23, and column 3, lines 40 to 50). The fact that transparent electrodes on weighing scales in areas where visibility was important was also shown by documents D28 and D29. An alternative consideration also showed that the skilled person could immediately arrive at a measuring

apparatus with all the features of claim 1. The only step to be taken was to decide to provide the known bioimpedance and weight measuring apparatus (e.g. D1 and D10) with the aesthetic appearance of weighing scales with transparent platforms (which were already a well established class of weighing scales). This approach showed that no technical considerations were necessary to arrive at the claimed invention, but rather the design choice to provide the bioimpedance-weight measuring apparatus with a transparent aesthetic appearance, with all the means necessary therefor (transparent measuring platform and transparent electrodes) being well known to the skilled person.

It was even more appropriate to regard transparent weighing scales such as disclosed in D8 as the closest prior art in view of the similarity of the technical problem. D8 disclosed features 1.1 to 1.4, 1.7 and 1.8 of claim 1. D8 explicitly mentioned the problem of the visibility of the measurement result in column 3, lines 11 to 15, which corresponded to what was mentioned in the patent in suit, namely to give a readily visible display of the measurement result. The problem in view of D8 would then be to provide its measuring apparatus with electrodes for bioimpedance measurement, without disturbing the technical function of the transparent measuring platform, which according to document D8 provided for visibility of the display through the transparent measuring platform. Weighing scales with electrodes for bioimpedance measurement were also widely known, for instance from D15. Under such circumstances transparent electrodes, which were well known to the skilled person (even according to the patent in suit) and disclosed in many documents, for

example in D3 and D26 to D29, would be the only reasonable choice for the skilled person. In this way the skilled person would have arrived at a living body measurement apparatus with all the features of claim 1 without any inventive step.

XI. The respondent's arguments are summarised as follows:

The omission of the word "directly" in feature 1.4 was supported by the sentence in lines 21 to 23 of page 9 of the description as originally filed. Moreover, the skilled person would directly and unambiguously recognize that the kind of mounting of the load sensor units (directly or indirectly) was not explained as essential in the disclosure and was also not indispensable for the function of the invention in the light of the technical problem it served to solve. No modification of other features was needed to compensate for the change.

The omission of the limitation that the paper could be affixed to the platform at its lower surface in feature 1.8 did not represent an unallowable generalisation either in view of the wording in the other features of the claim and page 10, lines 14 to 17 of the description as originally filed.

Since claim 1 of the patent as granted covered both the single-layered and the two-layered configuration, claim 2 could not be regarded as a dependent claim, and the features omitted therefrom did thus not extend the scope of protection.

Article 52(2) (b) EPC related to subject-matter which as a whole represented aesthetic creations and did not have any technical features. However, this was not the case since claim 1 related to technical subject-matter and the features not known from the prior art indeed had a technical character. The limitation that an object is transparent had a strong technical limitation as to the materials which may be employed. Transparency could also have an aesthetic effect, but this did not exclude the subject-matter from patentability.

Document D26 was not more relevant than D3. The resistivity of the electrodes of D26 for detecting the impedance of a finger was entirely different from that for measuring a living body impedance. D27 was even more remote in that it was not clear whether the electrodes were actually transparent. In order to be considered as "prima facie relevant", the teaching of the respective document should be novelty-destroying, which was not the case with respect to D26 and D27. Accordingly, these documents should not be admitted.

D15 represented the closest prior art since it related to the same technical field, i.e. the measurement of weight and impedance, and since it included the necessary wiring etc. for both purposes. Moreover, D8 did not disclose a living body measuring apparatus as defined in feature 1.1 and thus had fewer features in common with claim 1 than D15. The objective problem to be solved by the features of the characterising portion was to reliably present additional information which would not be damaged during use of the apparatus. The problem formulated by the intervener comprised unallowable pointers to the solution. Faced with the

objective problem, the skilled person had a plurality of possible ways to solve it and would not necessarily consider D8. Even if D15 were nevertheless combined with D8, one would obtain a living body measuring apparatus having a transparent platform. Since the problem was solved, there was no incentive to further modify the resulting apparatus. In particular, the skilled person would obtain no indication to furthermore provide electrodes which are formed from a transparent coating.

When starting from D8, the objective technical problem to be solved by the distinguishing features of claim 1 was to provide the weighing scale with a capability to measure additional living body data. Again, the problems formulated by the appellant and the intervener contained pointers to the solution and were thus not acceptable. The provision of electrodes according to distinguishing feature 1.5 was a prerequisite for forming them from an electrically conductive coating as defined in feature 1.9. Accordingly, these features were interrelated and not a mere aggregation. For solving the objective technical problem, there were numerous possibilities, for instance measuring the height or circumference of body parts. Even if the skilled person **could** provide electrodes for measuring a living body impedance it was questionable whether he **would** do so. When desiring to measure a living body impedance it did not suffice to provide electrodes, but the entire apparatus needed to be modified. Accordingly, the skilled person would not necessarily consider D15. Even if D8 were combined with D15, the problem would be solved and there would be no incentive to further modify the resulting apparatus. Again, the

skilled person would obtain no indication to furthermore form the electrodes from a transparent coating. The fact that D8 taught that the display was viewable through the transparent platform did not constitute a requirement to necessarily keep the entire platform transparent. When placing non-transparent plate electrodes such as those of D15 on the platform of D8, the display would still remain visible. Accordingly, the teaching of D8 did not incite the skilled person to provide transparent electrodes, let alone form them from a coating.

Reasons for the Decision

1. The appeal and the intervention are admissible.
2. Amendments
 - 2.1 Feature 1.4 of claim 1 as upheld by the Opposition Division (and feature 2.3 of claim 2) is based on page 5, lines 24 to 26 ("two-layered configuration") and page 9, lines 21 to 23 ("single-layered configuration") in combination with Figures 1(b) and (c) of the parent application as originally filed. The fact that the latter passage states that "the load sensor units 2 **may** directly be mounted to the transparent outer board 4" [emphasis added] indicates that direct mounting is optional and that the word "directly" may thus be omitted without introducing added subject-matter. The Board does not share the appellant's and the intervener's grammatical interpretation of the sentence in lines 21 to 23 of page 9 as being that the word "may" relates to the omission of the inner board

in the single-layered configuration, rather than to the mounting of the load sensor units. It is further clear to the skilled reader that, if direct mounting is optional for the single-layered configuration, this is also the case for the two-layered configuration (both configurations being covered by claim 1). Moreover, in any case it is clear to the skilled person that the issue of whether the load sensor units are mounted directly or indirectly on the platform is of no relevance with regard to their function in the context of the invention. What is technically important in this respect is that they are mounted on the underside of the platform, as clearly defined in feature 1.4. Since the description of the parent application corresponds to that of the divisional application as originally filed, the omission of the word "directly" is in breach of neither Article 76(1) EPC nor Article 123(2) EPC. With regard to the latter objection, it is further noted that the word "directly" is not comprised in claim 1 of the divisional application as originally filed.

- 2.2 Feature 1.8 of claim 1 is based on the sentence bridging pages 3 and 4, page 8, lines 2 to 4, and page 10, lines 14 to 17 of the parent application as originally filed. The omission of the feature that the paper can be affixed **to the lower surface** of the platform does not constitute an unallowable generalisation. The claim clearly defines that the platform has an upside and an underside (features 1.4 and 1.6) and that the paper is visible through the platform (1.8). Since the user, when looking at the instructions on the paper, stands on the upside of the platform, this implies that the paper must be located

underneath the platform. Accordingly, an explicit limitation of the paper being affixable to the lower surface of the platform is not necessary. The theoretical possibility that the claim could cover embodiments in which the paper could be affixed to the upside of the platform is neither realistic nor technically meaningful. The omission of this limitation is thus not in breach of Article 76(1) EPC or Article 123(2) EPC.

- 2.3 Independent claim 1 covers the single-layered configuration of the measuring platform as well as its two-layered configuration (claim 2). This does not imply that claim 1 is limited to the single-layered configuration. The Board does not accept that claim 2 is to be construed as an independent claim. Feature 1.2 of claim 1 broadly introduces a "measuring platform", with further structural details thereof being defined in features 2.1, 2.2 and 2.4 of claim 2, which refers back to independent claim 1. Accordingly, claim 2 comprises all the features of claim 1. It is therefore a dependent claim (Rule 43(4) EPC) and cannot be construed as an independent claim. It follows that the omission of features 2.5 and 2.6 from claim 2 of the patent as granted does not extend the scope of protection as defined by claim 1 of the patent as granted (which is identical to claim 1 as upheld by the Opposition Division). Accordingly, the requirement of Article 123(3) EPC is met.

3. Technicality

Article 52(2)(b) EPC relates to subject-matter which as a whole relates to aesthetic creations and does not

have any technical features. This becomes clear from Article 52(3) EPC, which states that paragraph 2 of Article 52 EPC excludes the patentability of the subject-matter or activities referred to therein only to the extent to which a European patent application or European patent relates to such subject-matter or activities **as such**. The present invention relates to a living body measuring apparatus which indeed has technical features, i.e. features 1.1 to 1.8 (which has not been contested). Accordingly, in view of Article 52(3) EPC, the present invention does not represent an aesthetic creation as mentioned in Article 52(2)(b) EPC. Moreover, the transparency of an object such as the electrodes (feature 1.9) also constitutes a technical limitation, for instance as to the materials which may be employed, with a technical effect, as will be explained below in point 5 with regard to inventive step.

4. Documents D26 to D29

4.1 Document D26 discloses electrodes (3) formed from an electrically conductive transparent coating (feature 1.9 of claim 1). It is explicitly stated in lines 15 to 20 of page 3 that electrical impedance is measured with these electrodes (feature 1.5). For this reason D26 is closer than D3 (previously cited with respect to feature 1.9), which also discloses electrodes formed from an electrically conductive transparent coating (e.g. for displays and touch sensors) but is silent with regard to their suitability for measuring electrical impedance. Accordingly, D26 is prima facie relevant for the assessment of inventive step, irrespective of the fact that it merely deals with the

impedance of a fingertip rather than a living body as mentioned in feature 1.9. Contrary to the view of the respondent, a document does not have to be novelty-destroying in order to fulfil the criterion of prima facie relevance. According to the established jurisprudence ("Case Law of the Boards of Appeal of the EPO", 6th edition 2010, VII.C.1.2.1 and 2) it is sufficient that it discloses matter which could change the outcome of the decision, which is considered to be the case here. D26 was cited in the statement of grounds of appeal in response to the impugned decision. Accordingly, it is not appropriate for the Board to disregard this document under Article 114(2) EPC.

4.2 Document D27, on the other hand, is not considered to be prima facie relevant since it merely discloses a "tape form electrode" (which is different from a coating as claimed) and since it is not directly and unambiguously clear that this electrode is transparent. Accordingly the Board exercises its discretion to disregard this document under Article 114(2) EPC.

4.3 Documents D28 and D29 were filed with the notice of intervention. In view of the fact that the intervener is even entitled to introduce new grounds of opposition (G 1/94, point 13 of the Reasons), the introduction of new prior art documents with respect to the already raised ground of opposition of lack of inventive step cannot be regarded as late-filed. D28 and D29 thus form part of the present appeal proceedings.

5. Inventiveness

5.1 Weighing scales with bioimpedance electrodes as starting point

Among the group of documents relating to weighing scales with bioimpedance electrodes, viz. D1, D2, D10, D15 and D19, document D15 (cited in paragraph [0012] of the patent in suit) is the most pertinent since it clearly and explicitly discloses (reference numerals 3 13, 4 and 5 in Figures 1 and 2) all the features of the preamble of claim 1. This has not been disputed among the parties. It belongs to the same technical field as the patent in suit, i.e. weighing scales with electrodes for measuring bioimpedance, and the apparatus disclosed therein includes all the structural components and circuitry for performing these two functions. The overall objective, namely measuring body fat or other information useful for health care in addition to body weight (column 1, lines 5 to 22), is the same as in the patent in suit (paragraphs [0001] and [0042]). No other cited prior art document discloses more features in common with claim 1. Accordingly, D15 represents the closest prior art. D15 is silent with regard to the optical properties (transparency) of the platform and the electrodes.

The technical effects of the distinguishing technical features, i.e. essentially transparency of both the platform and the electrodes as defined in the characterising portion of claim 1, are as follows. Firstly, a paper, bearing important information such as the caution notice or the description of the operation, being placed underneath the transparent platform,

remains visible for the user, but is protected against damage, e.g. becoming peeled off in a wet environment such as a bathroom (paragraph [0006] of the patent specification). Secondly, due to the electrodes being transparent as well, the area available for displaying the information on the paper is not reduced (paragraphs [0020] and [0034]).

The objective technical problem to be solved by the distinguishing features is to effectively (i.e. without obstruction of view) and reliably (i.e. without damage during use of the apparatus) present additional written information to the user, as stated in paragraphs [0011] and [0043] of the patent specification. The problem formulated by the intervener (visibility through the platform) is not accepted by the Board since it contains a pointer to the solution (transparency), and is thus based on hindsight ("Case Law of the Boards of Appeal of the EPO", 6th edition 2010, I.D.4.3.1).

D15 itself as well as documents D1, D2, D10 and D19 give no hint in the direction of the above-mentioned objective problem or the solution as defined in features 1.7 and 1.9.

Documents D3, D16, and D26 disclose (abstracts) electrodes formed from electrically transparent conductive coatings as defined in feature 1.9, without, however, giving any hint in the direction of the above-mentioned objective problem. D28 and D29 are more remote in that they only disclose electrically conductive transparent coatings for Faraday shielding of the electronics inside scientific weigh scales (D28, page 3, 3rd paragraph; D29, page 4, 2nd paragraph).

Among the documents disclosing transparent platforms, D4 to D6 and D8, the last of these is the most pertinent since it explicitly discloses that its platform 18 is transparent (column 3, lines 18 to 21 of D8), not merely for aesthetic reasons as in D4 to D6, but so that the weight display 22 at its bottom is visible therethrough (column 3, lines 11 to 15). However, this does not represent a hint towards the above-mentioned objective problem.

In any case, none of the cited documents discloses both features 1.7 and 1.9 together. Accordingly, when starting from D15, the teachings of two further documents, e.g. D26 and D8, would be needed to arrive at the claimed subject-matter. According to the established jurisprudence ("Case Law of the Boards of Appeal of the EPO", 6th edition 2010, I.D.8.2.2) this is only possible for an aggregation of features, which is not the case here since the features are functionally interdependent and solve a common technical problem, as explained above. The fact that transparent electrodes were generally known, as also admitted in paragraph [0038] of the patent in suit, does not change this finding.

It follows that the subject-matter of claim 1 is not obvious when starting from document D15 and the cited prior art.

5.2 Weighing scales with transparent platforms as starting point

Among the documents disclosing weighing scales with transparent platforms, D8 is the most pertinent, as already explained above (D4 to D6 merely disclose drawings of ornamental designs for scales). The electrical weighing scale disclosed therein is a "living body measuring apparatus with a built-in weight meter" as defined in feature 1.1 of claim 1. In contrast to the respondent's viewpoint, this definition does not imply that a parameter additional to body weight is to be measured. It further discloses features 1.2 (18), 1.3 (50) 1.4 (Figure 4A) and 1.7 (column 3, lines 18 to 21). Feature 1.8 is disclosed implicitly. Accordingly, claim 1 is distinguished over D8 by features 1.5, 1.6 and 1.9.

The technical effect of the provision of electrodes (features 1.5 and 1.6) is that further parameters in addition to body weight can be measured, as mentioned in paragraph [00042] of the patent in suit, and the effect of the electrodes being transparent (feature 1.9) is that the area available for displaying the information on the paper is not reduced, as mentioned above. Since the provision of electrodes is a necessary prerequisite for them being formed from a transparent coating, these features and their advantages are interrelated with each other and do not form a mere aggregation.

Starting from D8, the objective technical problem to be solved by the distinguishing features of claim 1 is to provide the weighing scale with a capability to measure additional living body data, without reducing the area available for displaying the information on a paper affixable underneath the platform. The problems

formulated by the appellant and the intervener (providing impedance measurement capability and light transmissivity of the electrodes) contain pointers to the solution as defined in features 1.5 and 1.9 and are therefore not accepted by the Board.

When aiming at solving the above-mentioned objective problem, the skilled person would have a plurality of possible ways of providing a capability to measure additional living body data, for instance body height (reference numeral 4 in D19) or temperature (6 in D15). He could also be inclined to measure impedance and thus provide electrodes such as those disclosed in D15 (4 and 5) for this purpose. However, the electrode plates of D15 are neither disclosed as being transparent nor as being formed from a coating, as required by feature 1.9. Accordingly, further considerations would be needed in order to arrive at the claimed subject-matter. Without using hindsight, there is no incentive for the skilled person to additionally incorporate these features into a device resulting from the combination of documents D8 and D15. The fact that D8 teaches that the display 22 is viewable through the transparent platform 18 as indicated in the second paragraph of column 3 does not constitute a requirement to necessarily keep the entire platform transparent. When placing non-transparent plate electrodes such as those of D15 on the platform 18 of D8, the display 22 would still remain visible. Accordingly, the teaching of D8 does not give the skilled person any incentive to provide transparent electrodes, let alone form them from a coating.

Hence, the combination of documents D8 and D15 does not lead the skilled person to the subject-matter of claim 1, which is therefore not obvious when starting from D8.

- 5.3 It follows that the subject-matter of claim 1 of the patent as upheld by the Opposition Division is based on an inventive step within the meaning of Article 56 EPC in view of the cited prior art.

Order

For these reasons it is decided that:

1. The appeal is dismissed.
2. The intervention is rejected.

The Registrar:

The Chairman:

D. Hampe

E. Dufrasne