Internal distribution code:

(A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [-] To Chairmen
(D) [X] No distribution

Datasheet for the decision of 4 July 2019

Case Number: T 0977/16 - 3.2.03

Application Number: 09787650.2

Publication Number: 2375938

IPC: A47C1/032

Language of the proceedings: EN

Title of invention:
DEVICE FOR SYNCHRONIZING THE TILT OF A CHAIR BACK AND SEAT

Patent Proprietor:
Donati S.p.A.

Opponent:
Leggett & Platt Incorporated

Headword:

Relevant legal provisions:
EPC Art. 83, 54(2), 56

Keyword:
Sufficiency of disclosure - (yes)
Novelty - (yes)
Inventive step - main request (no) - auxiliary request (yes)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0977/16 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 4 July 2019

Appellant: (Opponent)	Leggett & Platt Incorporated No. 1 Leggett Road Post Office Box 757 Carthage, Missouri 64836-0757 (US)
Representative:	Banzer, Hans-Jörg Kraus & Weisert Patentanwälte PartGmbB Thomas-Wimmer-Ring 15 80539 München (DE)
Respondent: (Patent Proprietor)	Donati S.p.A. Via Paderno, 19 25050 Rodengo Saiano (BS) (IT)
Representative:	Marietti, Andrea Marietti, Gislon e Trupiano S.r.l. Via Larga, 16 20122 Milano (IT)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 15 February 2016 concerning maintenance of the European Patent No. 2375938 in amended form.**

Composition of the Board:

Chairman	C. Donnelly
Members:	R. Baltanás y Jorge
	G. Weiss

Summary of Facts and Submissions

I. European patent No. 2 375 938 relates to a device for synchronizing the tilt of a chair back and seat.

II. The appeal lies from the interlocutory decision of the opposition division to maintain the European patent in amended form based on the auxiliary request submitted on 3 February 2014.

III. The appellant (opponent) filed an appeal against this decision.

In support of its case the appellant relied on the following documents:

O1: WO 00/74531 A2;
O6: DE 20 2007 001 395 U1.

IV. In its reply to the grounds, the respondent filed documents Sample A and Sample B, illustrating different designs of how the claimed invention could be implemented.

V. In a communication annexed to the summons to oral proceedings pursuant to Articles 15(1) and 17(2) of the Rules of Procedure of the Boards of Appeal (RPBA) the Board gave the parties its preliminary and non-binding opinion on the case.

VI. By letter of 4 June 2019 the respondent submitted first to fourth auxiliary requests, wherein the fourth auxiliary request corresponded to the auxiliary request filed with the reply. It also submitted the following further documents:

P1: Machines and Mechanisms: Applied Kinematic Analysis 4th Edition, David H. Myszka, Prentice Hall publ., pages 19 to 21;

P2: Print-out from online dictionary concerning the definition of the Italian word "solidale".

VII. Oral proceedings were held on 4 July 2019.

At the end of the debate, the parties confirmed the following requests:

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

The respondent requested that the appeal be dismissed or that the patent be maintained in amended form according to the auxiliary request filed with the reply to the grounds.

VIII. The following feature analysis of independent claim 1 will be referred to in this decision:

"**1** Device for synchronizing the tilt of a chair back and seat, of the type comprising

1.1 a frame of the chair back (5),

1.2 a frame of the seat (2)

1.3 and a support (1) integral with the base of said chair,

1.4 as well as at least one first crank (3),

1.4.1 integral with said frame of the chair back (5),

1.4.2 and hinged (6, 7) at the rear to said frame of the seat (2) and to said support (1),

1.5 and at least one second crank (4),

1.5.1 hinged (8, 9) at the front to said frame of the seat (2) and to said support (1),

2 said at least one first crank (3) and said at least one second crank (4), with said frame of the seat (2), determining an articulated quadrilateral,

3.1 wherein said frame of the seat (2) rotates between an initial position, corresponding to the lowest tilt of said frame of the chair back (5),

3.2 and a final position, corresponding to the highest tilt of said frame of the chair back (5)

4 and wherein said at least one first crank (3) and said at least one second crank (4) lie substantially on skew lines,

5 both the hinge point (9) of said at least one second crank (4) to the frame of the seat (2) and the hinge point (7) of said at least one first crank (3) to said frame of the seat (2) raising during rotation of the frame of the seat (2) from said initial position to said final position,

6 characterized in that said frame of the seat (2) is movable between an initial position, corresponding to the lowest tilt of said frame of the chair back (5), and a final position, corresponding to the highest tilt of said frame of the chair back (5),

7.1 the hinge point (9) of said at least one second crank (4) to the frame of seat (2) being substantially at the same elevation of the elevation of the hinge point (7) of said at least one first crank (3) to the frame of the seat (2), when said frame of the seat (2) is in its initial position,

7.2 and being at a higher elevation relatively to the elevation of the hinge point (7) of said at least one first crank (3) to the frame of the seat (2), when said frame of the seat (2) is in its final position."

IX. The appellant's arguments relevant to the decision can be summarized as follows.

Main request, Sufficiency of disclosure, Article 83 EPC

The patent does not comply with the provisions of Article 83 EPC, since the invention cannot be performed in the whole claimed range due to the fact that it is only achievable if the first and second cranks lie on a common plane, a feature which is not claimed in claim 1. The quadrilateral is necessarily blocked if the first and second cranks have a relative angle between them which is not null while not lying on a common plane.

Main request, novelty, Article 54 EPC

The subject-matter of claim 1 of the main request is not novel with regard to the embodiment of figures 5, 6, 8 and 9 of document O1.
Concerning feature 1.3 (support integral with the base), the patent does not describe the meaning of the term "integral" and it does not depict any "base" in

the figures, thus both features are open to interpretation. In such case, the broadest sense of the terms has to be considered. The definition of "integral" in the patent is only limited by the function which the support and base have to perform, i.e. acting together in order to carry the seat and back of the chair. The two-part housing 110 of document O1, composed by elements 320 and 408, performs said function.
Feature 5 (raising hinge points) should be interpreted in the context of cranks of an articulated quadrilateral which comprises a fixed link. In the case of document O1, the fixed link is formed by the reference line between hinge points 121 and 124, and the cranks 120 and 123 raise when there is rotation with regard to that reference line, as explicitly disclosed in page 8, last paragraph, and page 21, third paragraph.
Feature 7.2 (higher elevation of hinge point of second crank) just describes a state, and it is not limited to some specific means to achieve this state. Thus, it is not excluded that means other than the articulated quadrilateral could be used to reach the claimed state. Figure 9 of document O1 clearly discloses the concerned hinge point 118 at a higher elevation than hinge point 122, as does figure 6, whereas in figure 5, which corresponds to the initial position of the frame of the chair back, both hinge points are at the same level. This is confirmed by the passages in page 21, third paragraph, fourth sentence, and page 22, second paragraph.

Main request, inventive step, Article 56 EPC

Even if it should be decided that feature 7.2 is not shown in document O1, the subject-matter of claim 1

would not involve an inventive step when departing from the embodiment of figures 1 and 2 of document O1 and combining it with the common general knowledge of the skilled person or with document O6.
The technical effect of the differentiating feature is that the front of the seat is raised such that the user does not slide off the chair. The corresponding objective technical problem is how to improve the posture of the user when tilting the chair (paragraphs 33 and 34 of the contested patent).
Document O6 discloses that a higher front hinge point improves the posture of the user when tilting the frame of the chair back by avoiding slipping (paragraphs [0037] and [0038]), which corresponds to the objective technical problem. The skilled person would extract this teaching from document O6 in isolation from the actuation means involving a belt, since the means of actuation of document O6 address a different problem (actuation force dependant on tilting angle; see paragraph [0007]), and do not condition the configuration of the articulated quadrilateral, which exhibits the same kinematics as the quadrilateral of document O1. The skilled person would thus combine the teaching of document O6 with document O1 in an obvious manner, and would arrive at the claimed invention.

Auxiliary request, Article 12(4) RPBA

The auxiliary request should have been filed during the opposition phase because it is not a reaction to facts raised with the appeal. Therefore, according to Article 12(4) RPBA it should not be taken into consideration.
Furthermore the auxiliary request focuses on the different issue of the return spring. Therefore, it is non-convergent with the request maintained by the opposition division. Finally, it does not *primafacie*

overcome the objection under Article 56 EPC, since document O1 also discloses a spring for the tilting mechanism of the chair.

Auxiliary request, inventive step, Article 56 EPC

The subject-matter of claim 1 is not inventive when considering the same combinations of prior art as for the main request. Document O1 discloses a spring 125 (figure 1, page 16, second paragraph) which works in the same way as in the opposed patent (paragraph [0025] of the patent). The only further difference is that the spring 125 of document O1 is not connected to the hinge point of the first crank to the frame of the seat. No technical effect is disclosed for such feature in the contested patent, thus it is a mere alternative design. Alternative locations for the connecting point of spring 125 in document O1 are well within the reach of the skilled person without requiring any inventive skill. In conclusion, it would be obvious to implement the claimed differentiating feature.

X. The respondent's arguments relevant to the decision can be summarized as follows:

Main request, Sufficiency of disclosure, Article 83 EPC

It is not essential that cranks lie on a common plane to provide an articulated quadrilateral. As shown in Sample A and Sample B, filed with the reply to the grounds of appeal, it is relatively simple to design functioning articulated quadrilaterals with cranks in different planes.

Main request, novelty, Article 54 EPC

Feature 1.3 is well explained in the patent, since the meaning of the term "integral" is defined in the context of different features (paragraphs [0023] and [0025]), being respectively disclosed as corresponding to "fixed to" in order to form a solid body, or even to "made in one piece". The only possible interpretation of the feature "integral with" in the light of the entire patent content is "rigidly constrained to".

On the other hand, the skilled person in the field of chairs would know how to interpret the feature "base", even in the absence of a disclosure in the patent, and would conclude that it is the part of the chair which is in contact with the ground.

Since top part 320 is not rigidly constrained to the base of the chair in document O1, feature 1.3 is not disclosed in the concerned embodiment, because the first and second cranks are not hinged to the support 408 rigidly connected to the base, but to the movable part 320.

Concerning feature 5, the support of the chair has to be taken as a reference for assessing the feature "raising". The comment in the last paragraph of page 8 of document O1 corresponds to the general part of the description, and is not linked to the particular embodiment of figures 5, 6, 8 and 9, wherein the hinge point of rear hinge 122 does not raise during rotation of the frame of the seat according to figures 5 and 6 of document O1.
Finally, the last paragraph of page 8 in document O1 does not disclose feature 7.2 ("higher elevation"), since its content is vague and is not addressed to a

particular embodiment where the rest of the features of claim 1 could be found.

Figure 6 cannot be used as a disclosure, since it is a schematic drawing which comprises clear errors, such as the incoherent position of pin 124 in comparison with figure 5. Even if it were possible to consider figure 6 as a reliable disclosure, no higher elevation of pin 118 can unambiguously be observed there. Moreover, the third paragraph of page 21 does not refer to figure 6, but to the action of the additional tilt mechanism disclosed in figure 9, whose movement is independent from that of the articulated quadrilateral comprising links 120 and 123.

Thus, it is not possible to draw any conclusion from that passage about the position of pin 118 in figure 6 after rotation of the links 120, 123.

Main request, inventive step, Article 56 EPC

Document O1 mentions the problem of ensuring a convenient posture of the user when tilting the back of the chair, and solves it in a different way as explained in the penultimate paragraph of page 15, which teaches away from the invention.
However, no common general knowledge can be identified which would incite the skilled person to provide the opposite solution in document O1 by raising the front part of the seat.

Document O6 cannot be considered as disclosing common general knowledge at a given date, since it is a patent. Furthermore, it concerns a different mechanism where the integral construction of chair back frame and linkage is intentionally avoided, as disclosed in

paragraphs [0003] and [0004]. The skilled person would have not consulted O6 when addressing the problem of improving the user's posture when the frame of the chair back is tilted because of its fundamentally differing construction.

Even if the skilled person had consulted document O6, they would not have isolated the feature concerning the final position of the hinge points from the actuation mechanism comprising a belt 23 and a further link connected to the frame of the chair back 10, but would have implemented all those features in document O1, and by so doing would have obtained a different device than that claimed. The actuation mechanism of O6 has an effect on the motion of the seat, and this influences the posture of the user in combination with the construction of the quadrilateral. Isolating the construction of the quadrilateral of document O6 from its actuation mechanism when considering the problem of the user's posture is thus not possible.

Auxiliary request, Article 12(4) RPBA

The request was filed with the reply to the grounds and should be taken into account. The additional features of claim 1 are the result of the combination of claim 1 of the main request with granted claims 9 and 10. Moreover, the appellant had three years to study the auxiliary request, which was filed as a reply to the grounds of appeal.

Auxiliary request, inventive step, Article 56 EPC

No prior art discloses the claimed solution involving the spring. The advantage derived from the differentiating features is a reduced vertical

encumbrance with regard to document O1, where the spring has to be arranged in vertical position. A second advantage is the simplification of the mechanism, since an existing pin is used for providing the spring connection.

XI. Claims 2-9 of the main request relate to preferred embodiments of the device according to claim 1.

XII. Claim 1 of the auxiliary request filed with the reply to the grounds of appeal comprises the additional features:

", and in that the device comprises elastic returning means (10, 11) for said frame of the chair back (5) or said frame of the seat (2) relatively to said support (1) integral with the chair base, wherein said elastic returning means comprise at least one spring (11) hinged (10) to said support (1) and to the hinge point (7) of said first crank (3) to said frame of the seat (2)."

Claims 2-7 of the auxiliary request relate to preferred embodiments of the device according to claim 1.

Reasons for the Decision

1. Main request

1.1 Sufficiency of disclosure, Article 83 EPC

The Board considers that it is not necessary for the first and second cranks to lie on a common plane to

provide an articulated quadrilateral, as shown in Sample A and Sample B submitted by the respondent in its reply to the grounds.

The design of such articulated quadrilaterals with non-coplanar first and second cranks falls within the reach of the skilled person when using his routine skills and the general knowledge of the field of kinematics.

Therefore, there is no undue burden for the skilled person when trying to reproduce the claimed invention over the whole claimed scope of protection. Consequently, the requirements of Article 83 EPC are met.

1.2 Novelty with respect to document O1, Article 54 EPC

The respondent submits that document O1 does not disclose features 1.3, 5 and 7.2

1.2.1 Feature 1.3 (support integral with the base)

The respondent acknowledges that the patent provides no disclosure of the feature "base of said chair". According to the respondent, the skilled person in the field of chair construction would immediately understand from reading that feature that it must concern a part of the chair which contacts the ground.

However, document O1 designates the term "base" to feature 110, corresponding to the portion of the chair directly connected to the articulated quadrilateral formed by means of links 120, 123 and seat frame 119.

The respondent argues that "integral with" is understood by the skilled person in the light of the disclosure as meaning "rigidly constrained to", for instance by means of a construction in a single piece. This interpretation of "integral with" is at odds with the definition of "base" which has been suggested by the respondent, since it is well-known that the portion supporting the seat and back of a chair has some degrees of freedom (e.g. rotation and vertical displacement) with regard to the chair portion contacting the ground. If the skilled person reading the patent would understand the term "base" as the usual chair portion supporting the chair on the ground, they would certainly not consider the support 1 as being "rigidly constrained" to said "base", since they are aware of the above-mentioned degrees of freedom.

In view of the above, the Board considers that the term "base" of the chair has to be interpreted in a broad way, wherein the fundamental characteristic of it is that the concerned element constitutes a "base" for the seat and back of the chair, independently of whether it reaches the ground or not.

Since "integral with" includes constructions in a single piece, the Board considers that element 320 of O1 comprises in a single piece a "support" (since it supports the links 120 and 123) and a "base" of the chair.

The embodiment of figures 5, 6, 8 and 9 of document O1 consequently discloses feature 1.3 of claim 1.

1.2.2 Feature 5 (raising hinge points)

When comparing figures 5,9 and 6 (reproduced below) in that order, it can be observed that rotation of the links 120 and 123 necessarily results in a raising of the hinge points 118 and 122 of both links ("cranks" in the wording of claim 1) to the frame seat 119. This raising takes place both with regard to the ground (taking the intermediate position as a reference) and to the bottom link 320 by the nature of the rotation and the construction of the quadrilateral. It must be remarked that, even if only a "raising" with regard to the bottom link 320 were considered, this would suffice to comply with the wording of claim 1, given the lack of any further restriction in connection with the claimed movement.

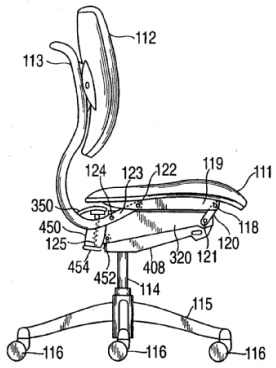

FIG. 5

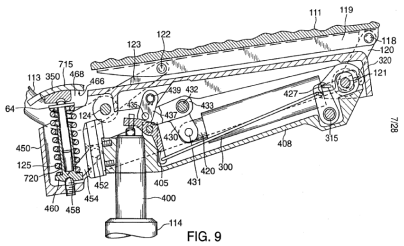

FIG. 9

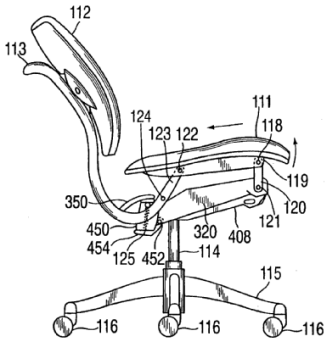

FIG. 6

Feature 5 is thus disclosed by the embodiment of figures 5, 6, 8 and 9 of document O1.

1.2.3 Feature 7.2 (hinge point at a higher elevation)

The Board agrees with the appellant that feature 7.2 only defines a position which has to be achieved by the hinge points, but does not restrict the achievement of

said position as resulting exclusively from the action of the articulated quadrilateral.

Figure 9 of document O1 corresponds to an intermediate position of the seat frame 119, where the frame of the chair back 113 has not yet reached its maximum tilt as required by feature 3.2. Thus, figure 9 cannot show feature 7.2 since it does not illustrate the final position of the seat frame.
Furthermore, it is impossible to predict on the basis of the schematic content of figure 9 whether the hinge point 118 will end up at a higher elevation than hinge point 122 once rotation of the quadrilateral is completed.

The final position as defined in feature 3.2 of claim 1 corresponds to that represented in figure 6 of document O1. However, figure 6 is a schematic representation from which it cannot be reliably ascertained whether hinge point 118 is at a higher elevation than hinge point 122 or not. The schematic nature of figure 6 is borne out by the obvious error concerning hinge point 124, which should be connected to the element 320 according to figures 5, 8 and 9, whereas figure 6 shows it as being separated therefrom.

The description of document O1 provides no further clarification. The fourth sentence of the third paragraph of page 21 merely refers to the above-mentioned intermediate position of figure 9 and not to the final position, whereas the second paragraph of page 22 only describes the effect of the additional tilt mechanism formed by elements 300, 320 and 408 on the position of the seat (not on the position of the hinge points), and it does not specify whether this

effect corresponds to the intermediate position of figure 9 or to the final position of figure 6.

Therefore feature 7.2 is not directly and unambiguously disclosed by document O1.

1.2.4 In view of this, document O1 is considered to disclose an embodiment (figures 5, 6, 8 and 9) comprising:

1 a device for synchronizing the tilt of a chair back and seat (see e.g. page 4, first and second paragraphs), of the type comprising

1.1 a frame of the chair back (113),

1.2 a frame of the seat (119)

1.3 and a support (320) integral with the base of said chair,

1.4 as well as at least one first crank (123),

1.4.1 integral with said frame of the chair back (113),

1.4.2 and hinged (122, 124) at the rear to said frame of the seat (119) and to said support (320),

1.5 and at least one second crank (120),

1.5.1 hinged (118, 121) at the front to said frame of the seat (119) and to said support (320),

2 said at least one first crank (123) and said at least one second crank (120), with said frame of the seat (119), determining an articulated quadrilateral (see figures 5 and 6),

3.1 wherein said frame of the seat (119) rotates between an initial position (see figure 5), corresponding to the lowest tilt of said frame of the chair back (113),

3.2 and a final position (see figure 6), corresponding to the highest tilt of said frame of the chair back (113),

4 and wherein said at least one first crank (123) and said at least one second crank (120) lie substantially on skew lines (see e.g. figure 8),

5 both the hinge point of said at least one second crank to the frame of the seat and the hinge point of said at least one first crank to said frame of the seat raising during rotation of the frame of the seat from said initial position to said final position,

6 wherein said frame of the seat (119) is movable between an initial position (see figure 5), corresponding to the lowest tilt of said frame of the chair back (113), and a final position (see figure 6), corresponding to the highest tilt of said frame of the chair back (113),

7.1 the hinge point (118) of said at least one second crank (120) to the frame of seat (119) being substantially at the same elevation of the elevation of the hinge point (122) of said at least one first crank (123) to the frame of the seat (119), when said frame of the seat (119) is in its initial position (see figure 5).

The subject-matter of claim 1 differs therefrom in that the hinge point of said at least one second crank to the frame of the seat is at a higher elevation relatively to the elevation of the hinge point of said at least one first crank to the frame of the seat, when said frame of the seat is in its final position.

Therefore, the subject-matter of claim 1 is new with respect to the embodiment disclosed in figures 5, 6, 8 and 9 of document O1 and meets the requirements of Article 54 EPC.

1.3 Inventive step, Article 56 EPC

Document O1 in combination with document O6

1.3.1 Document O1 discloses another similar embodiment (figures 1 and 2) consisting of a device for synchronizing the tilt of a chair back and seat (see e.g. page 4, first and second paragraphs) where basically the same elements with the same reference numbers as listed under point 1.2.4 above can be identified.

1.3.2 Therefore, the subject-matter of claim 1 also differs from the embodiment of figures 1 and 2 of O1 by feature 7.2.

1.3.3 The technical effect of feature 7.2 is to raise the front of the seat such that the user does not slide off the chair. The technical problem addressed by the invention can be defined as ensuring a correct posture of the user when tilting the chair back.

1.3.4 The skilled person departing from document O1 would consult other documents providing a synchronised

movement of seat and back of a chair in order to improve the ergonomics of the device, since this is an object of the invention of document O1 (see page 2, first and second paragraphs).

In doing so they would consult document O6, because this document shows a device producing such movement where the kinematics of the seat displacing mechanism are identical to the corresponding embodiment of document O1 in that both of them employ an articulated quadrilateral for that purpose (see document O6, figure 1 and paragraph [0028]).

When consulting document O6, the skilled person would learn about the problem of the user sliding off the seat when tilting the chair back (see paragraphs [0018] and [0038]), and be given its solution: a higher elevation of the front hinge point relative to the rear hinge point in the position of highest tilt of the frame of the chair back (see paragraph [0037], last three sentences).
The skilled person would immediately recognise that the position of the hinge points disclosed in document O6 depends exclusively on the design of the articulated quadrilateral, which is completely independent from the actuation mechanism used to effect the rotation of the quadrilateral.

Therefore, the skilled person would realise that the solution disclosed in document O6 for the problem of ensuring a correct posture of the user when tilting the back of a chair, is immediately applicable to the embodiment of figures 1 and 2 of document O1.

The implementation of the solution disclosed in document O6 in the device of document O1 would only

require minor adaptations of the dimensions of the cranks 120 and 123 which are well within the reach of the skilled person in the course of routine application of his knowledge in the field of kinematics.

1.3.5 The respondent argues that the penultimate paragraph of page 15 of document O1 teaches the skilled person away from the invention, since it discloses that the seat of the chair must be raised further at the rear than at the front.

However, this passage cannot be considered to teach away from the invention since it merely indicates "a particularly useful embodiment". As such it does not relate to an essential aspect of the invention which must be present in all embodiments. The skilled person would therefore not consider this to be an absolute prohibition which must be respected in order to obtain the advantages of the invention.

1.3.6 In conclusion, the skilled person would arrive at the invention of claim 1 in an obvious manner when departing from the embodiment of figures 1 and 2 of O1 in combination with document O6. Thus, the subject-matter of claim 1 does not meet the requirements of Article 56 EPC.

2. Auxiliary request

2.1 Consideration of auxiliary request under Article 12(4) RPBA

Since the outcome of the opposition procedure was that the patent was considered to be allowable in the form corresponding to the main request of the appeal procedure, the appellant was not obliged at that stage

to foresee any fall-back position. Any hypothesis about what the appellant could have done in case the opposition division had decided otherwise is mere speculation.

The auxiliary request was filed by the respondent at the earliest possible date with its reply to the grounds of appeal and consists of a combination of granted claims.

In view of this, the auxiliary request is considered to be a legitimate fall-back position of the respondent for the appeal procedure and will be taken into account.

2.2 Inventive step, Article 56 EPC

2.2.1 The embodiment of figures 1 and 2 of document O1 discloses a device comprising elastic returning means (125) for the frame of the chair back (113) relatively to the support (110) integral with the chair base, wherein said elastic returning means comprise at least one spring (125) hinged to said support (110).

The Board agrees with the parties that the subject-matter of claim 1 differs from the embodiment of figures 1 and 2 of document O1, in addition to the feature 7.2, in that the spring is hinged to the support and to the hinge point of the first crank to the frame of the seat, whereas in the embodiment of figures 1 and 2 of document O1 the spring is constrained in a separate housing arrangement as shown in figure 7.

2.2.2 The argument of the appellant concerning the alleged absence of a technical effect and associated problem in

connection with this second differentiating feature cannot be agreed to, since the patent discloses that an aim of the invention is to provide a structurally simple mechanism (see paragraphs [0010] and [0045]).

The differentiating feature has the inherent effect of reducing the complexity of the mechanism, since the connection between spring and crank is carried out by means of an element which is already present (i.e. the hinge point of the first crank to the frame of the seat). Therefore, it is not necessary to provide a further element for that purpose, as is the case in document O1 (connecting element 350). This effect is clear from the description of the arrangement in the patent (including granted claims 9 and 10). Moreover, figure 3 of the patent explicitly shows the claimed connection of the spring to the hinge point, confirming the simple construction of the mechanism.

Thus, the objective technical problem addressed by the second differentiating feature can be defined as simplifying the returning mechanism for the frame of the chair back.

2.2.3 The work of the spring in the arrangement of document O1, where it is compressed when the chair back is tilted (see figure 7) such that it tends to expand and push the crank 123 (see figures 1 and 2), is completely opposite to that of a spring attached between the hinge point 122 and the support, which would be extended as the chair is tilted back.

The skilled person would therefore have to change the working principle of the spring 125 of document O1 in order to arrive at the invention. This goes further than the alleged mere alternative location for the

connection point of the spring suggested by the appellant, because a new spring with different properties than those of spring 125 would have to be used.

Moreover, no prior art has been provided that discloses the claimed solution or even hints at the corresponding technical problem.

2.2.4 In conclusion, the subject-matter of claim 1 involves an inventive step with regard to document O1 in combination with document O6 and meets the requirements of Article 56 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 1 to 7 of the auxiliary request filed with the reply to the grounds;

- description, pages 2 to 5 filed at the oral proceedings before the Board;

- figures 1 to 3 of the patent specification.

The Registrar: The Chairman:

C. Spira C. Donnelly

Decision electronically authenticated