

Commissioner's Decision #1397

Décision du commissaire #1397

TOPICS: O00 Obviousness

H00 Aggregation

B00 Ambiguity

G00 Utility

SUJETS: O00 Évidence

H00 Agrégation

B00 Caractère ambigu

G00 Utilité

Application No: 2,453,221

Demande no: 2 453 221

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2,453,221 having been rejected under subsection 30(3) of the *Patent Rules* (SOR/96-423), has consequently been reviewed in accordance with Paragraph 30(6)(c) of the *Patent Rules*. The recommendation of the Board and the decision of the Commissioner is to refuse the application.

Agent for the Applicant

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INTRODUCTION

- [1] This recommendation deals with a review of the rejection under subsection 30(3) of the *Patent Rules* of CA Patent Application Number 2,453,221 entitled “LEVER ARM WITH TACTILE CONTOUR” filed in Canada on December 16, 2003. The Applicant is ERGO-INDUSTRIAL SEATING SYSTEMS INC.
- [2] The present application relates to control levers to be used in association with a resting device, such as an office chair or bed and methods of using them. Such levers are typically used to adjust the position of various portions of office chairs, such as the back and seat portions. When such levers are used with office chairs, they are typically located beneath the seat portion and arranged so that a person can reach beneath the edge of the seat to effect movement of the levers and therefore adjustment of the corresponding portion of the chair.
- [3] The present application is focussed on improving the ability of a user to correctly associate a particular control lever with an associated adjustment of a portion of a resting device such as an office chair. Figure 2 of the application (shown below) illustrates how the invention proposes to do this. In Figure 2 the free ends of the control levers 53, 55, and 57 are formed of distinct geometric shapes so that a user may more easily distinguish between them. The chair is also provided with a guide, which sets out the chair adjustment associated with a particular lever. The guide may provide such information visually through printed material (67), visually by an electronic display (65) or in an audible manner through, for example, a switch (33) and speaker (70).
- [4] The user, referring to the guide, may more easily associate a desired chair adjustment with a particular lever. For example, if the guide indicates that the back is tilted by activating the control lever with a square-shaped end, the user can with his or her hand reach beneath the chair, and without looking, find the square-shaped lever end because the shape is sufficiently distinct from the others to allow for quick tactile recognition.

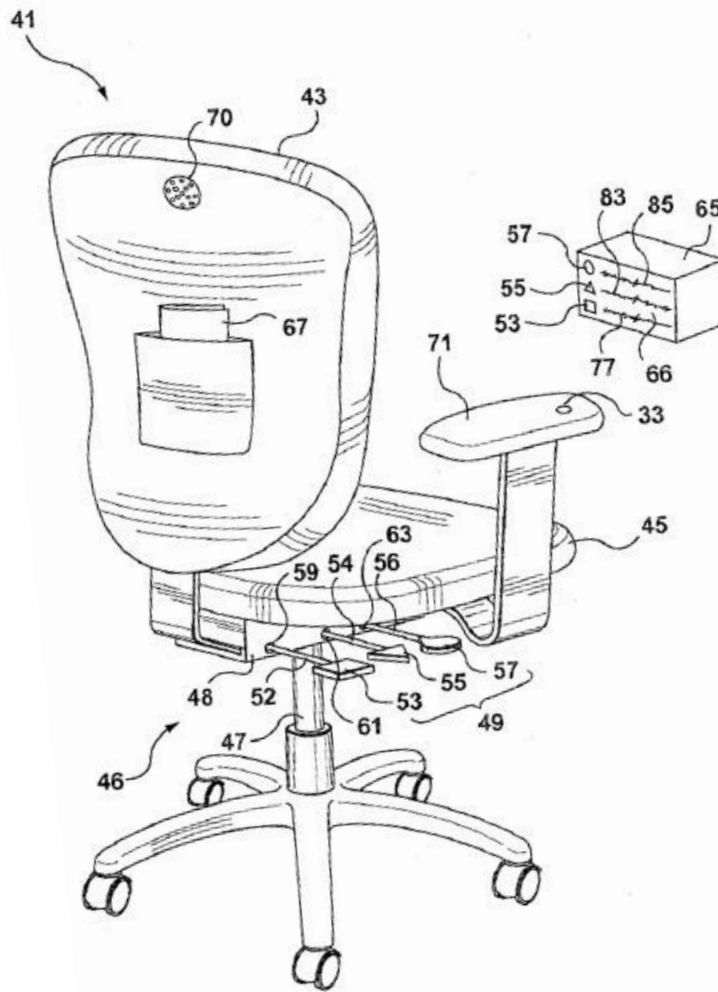


FIG. 2

PROCEDURAL HISTORY

- [5] This application was rejected by the Examiner in a Final Action dated November 21, 2013 on the grounds that the claims defined subject matter that would have been obvious, contrary to the requirements of section 28.3 of the *Patent Act*, RSC 1985, c P-4 (“*Patent Act*”) and that the claims are directed to an unpatentable aggregation which fails to cooperate so as to form a true combination. The Final Action also set out several defects in relation to the claim language under subsection 27(4) of the *Patent Act*.

- [6] In response to the Final Action, the Applicant submitted amended claims 1-32 on file (“claims on file”) and arguments in favor of the patentability of these claims.
- [7] The application was forwarded to the Patent Appeal Board on October 21, 2014 with a Summary of Reasons (“SOR”) setting out why the Examiner considered the claims on file to be defective.
- [8] The present panel was formed to review the application under paragraph 30(6)(c) of the *Patent Rules*. We forwarded the SOR to the Applicant on October 31, 2014.
- [9] In our subsequent letter dated September 11, 2015, we proposed a date for an oral hearing and set out our preliminary analysis of the issues relevant to the claims on file, namely, utility, obviousness, aggregation and ambiguity of the language of certain claims. We also invited the Applicant to make any written submissions in advance of the hearing.
- [10] On November 10, 2015 the Applicant provided written submissions, which included proposed amended claims 1-32 (“proposed claims”).
- [11] The Applicant made oral submissions at a hearing held via videoconference on November 17, 2015.
- [12] In our view, the claims are obvious and do not comply with section 28.3 of the Act and we recommend that the application be refused.

ISSUES

- [13] The primary issue in this case is whether claims 1 – 32 would have been obvious to the skilled person.

LEGAL PRINCIPLES

Claim Construction

[14] In accordance with *Free World Trust v Électro Santé Inc*, 2000 SCC 66 [*Free World Trust*] essential elements are identified through a purposive construction of the claims done by considering the whole of the disclosure, including the specification and drawings (see also *Whirlpool Corp v Camco Inc*, 2000 SCC 67 at paras 49(f) and (g) and 52). In accordance with the *Manual of Patent Office Practice* [MOPOP], Chapter 13.05 (June 2015), available at the CIPO website, the first step of purposive claim construction is to identify the person skilled in the art and their relevant common general knowledge (“CGK”). The next step is to identify the problem addressed by the inventors and the solution put forth in the application. Essential elements can then be identified as those required to achieve the disclosed solution as claimed.

Obviousness

[15] The *Patent Act* requires that the subject matter of a claim not be obvious. Section 28.3 of the *Patent Act* provides as follows:

28.3 The subject-matter defined by a claim in an application for a patent in Canada must be subject-matter that would not have been obvious on the claim date to a person skilled in the art or science to which it pertains, having regard to

(a) information disclosed more than one year before the filing date by the applicant, or by a person who obtained knowledge, directly or indirectly, from the applicant in such a manner that the information became available to the public in Canada or elsewhere; and

(b) information disclosed before the claim date by a person not mentioned in paragraph (a) in such a manner that the information became available to the public in Canada or elsewhere.

[16] In *Apotex Inc v Sanofi-Synthelabo Inc*, 2008 SCC 61 at para [67] [*Sanofi*], the Supreme Court of Canada stated that it is useful in an obviousness inquiry to follow the following four-step approach:

- (1) (a) Identify the notional "person skilled in the art";
(b) Identify the relevant common general knowledge of that person;
- (2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;
- (3) Identify what, if any, differences exist between the matter cited as forming part of the "state of the art" and the inventive concept of the claim or the claim as construed;
- (4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

ANALYSIS

Claim Construction

[17] The Applicant did not dispute the panel's characterization of the skilled person, the relevant common general knowledge, the problem to be solved, the solution provided by the application, or the essential elements in respect of claim 1, which we set out below.

The person skilled in the art

[18] The person skilled in the art is "a group of resting device designers, manufacturers and technicians familiar with control mechanisms and corresponding operational guides."

The relevant common general knowledge

[19] The relevant common general knowledge includes:

- knowledge of resting devices along with their uses and functionality and control means associated with different adjustments to the device, and more specifically to the design of various actuating lever types and the

use of operational guides accessible from the device for giving instructions visually or audibly on the proper use of the device

- Knowledge of the provision of adjusting mechanisms in resting devices such as chairs or beds
- Knowledge that office chairs typically have adjustable back and seat portions separately adjustable by means of lever control arms
- Knowledge that the lever control arms are generally located below the chair seat or below a bed (if the lever control arms are located on a bed)
- Knowledge of the problems associated with such systems in that the lever control arms are not readily visible and the controls are generally only understood after some trial and error, sometimes leading to sudden movement of chair portions
- Knowledge that prior attempts to resolve the above problems have included mounting a pictorial operational guide to a chair, providing a serrated edge along one side of the end of a lever control arm and providing Braille on the top surface of the lever control arm
- Knowledge that the operation of the lever control arms is understood by means of an instructional manual or card showing a summary of instructions, which may pivot outwardly from the arm of a chair
- Knowledge that prior art lever control arms can be identically shaped
- Knowledge that generally prior art lever control arms have substantially flat circular paddles at the end of the lever arms and that they generally lie in a substantially planar side-by-side relationship in close proximity to each other

The problem to be solved and the solution provided by the invention

[20] The problem to be solved is “that the movements associated with the lever control arms that control the movements of resting devices, such as chairs, are not easily understood by the user.”

[21] The solution to this problem provided by the application is:

the provision of lever control arms on a resting device with ends having distinctive shapes, as well as an associated user guide, whereby the user may, by the distinctive tactile contour of the shape of each end of the lever control arm and the illustrated movements associated with the lever control arms provided by the user guide, more easily recognize the lever control arm and the associated movement.

The essential elements of the claims

[22] The essential elements of representative claim 1, which is directed to a control system for a resting device are:

- a. Control arms having ends with distinctive tactile contours comprising distinctive geometric shapes;
- b. The tactile contours are symmetrically disposed about the axis of the control arm;
- c. The tactile contours lie in substantially the same plane; and
- d. An associated guide for the control system displaying the distinctive shapes and associated resting device movements.

[23] Other features that we accepted as essential features added by the other claims of the application to the basic list of claim 1, and which were not disputed by the Applicant, are as follows:

- e. The information provided by the guide comprises a visual representation of the shapes corresponding to the same order as the at least two control levers.
- f. The guide displays the different shapes in the same sequence as the levers (this seem to be very similar to point a).
- g. The guide comprises a liquid crystal display which displays the shapes and includes information concerning the function of the control levers.
- h. The guide is situated on the top surface of an arm of the chair.
- i. The guide comprises buttons corresponding to the geometric shapes, wherein the buttons can be activated to provide information corresponding to the functions of the lever control arms.

Disputed points of claim construction

[24] The only point of disagreement with respect to the essential elements of the claims, as expressed in the written submissions and reiterated at the hearing, is that the Applicant contends that another essential feature was added by claim 2, which specifies that the “peripheral edge” of the lever(s) of claim 1 is disposed in a plane. The Applicant contends that this limitation means that the distinctive geometric shapes of claim 1 are

limited to those that are essentially a planar shape with a thin peripheral edge, such as those depicted in Figure 2 of the application.

- [25] In support of this position the Applicant has referred to certain passages from page 9 of the application, which refer to planar shapes as being “easily distinguished by touch or feel.” However, we also note that page 9 contains a passage at lines 6-9, which states that any shape is suitable so long as the user can tactilely distinguish the shapes, namely:

The invention should not be limited to the shapes belonging to this group, as the group has been included as an example only. Any tactile contour shape can be selected so long as it is easily and readily distinguished by a person’s tactile feel by the fingers or the like.

- [26] We further note that in claim 1 on file, the group of shapes listed that are suitable for use in association with the invention includes both planar shapes (e.g., circular) and three-dimensional shapes (e.g., spherical).

- [27] In light of the above, we do not agree that the fact that the shape may be planar is essential to the claims.

- [28] With respect to the interpretation of claim language, in written and oral submissions, the Applicant raised a point regarding the meaning to be given to “lever” as used in the claims. The interpretation of this term is relevant to our later obviousness analysis since the Applicant contended that in comparison with prior art devices such as that of prior art document D1 (where the movement of similar control arms or levers was, in some cases, in a rotary motion about the axis of the arm), the levers of the claims on file function in a more up and down motion at the free end, the levers rotating about an axis perpendicular to themselves and essentially parallel to the plane of the seat.

- [29] Having reviewed the application, we can find no basis for any limitation on the particular movements of the control lever ends when they are activated by a user, and therefore we do not attach any special meaning to the term “lever” as used in the claims other than that they are control arms for activating an adjustment of a portion of the chair.

Would claims 1-32 on file have been obvious to the skilled person?

(1)(a) Identify the notional “person skilled in the art”

[30] The person skilled in the art was set out at paragraph [18].

(1)(b) Identify the relevant common general knowledge of that person

[31] The relevant common general knowledge was set out at paragraph [19].

(2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it

[32] As stated in our letter of September 11, 2015, and not disputed by the Applicant, we see no reason in this case to take the inventive concept of the claims to be something other than the group of essential elements which define them.

(3) Identify what, if any, differences exist between the matter cited as forming part of the "state of the art" and the inventive concept of the claim or the claim as construed

[33] The following prior art was referenced in our letter of September 11, 2015:

D1:	US Patent Number	5,630,647	Heidmann et al.
D2:	US Patent Number	5,700,051	Newhouse
D3:	US Patent Application Number	2002/0065470	Cassaday

[34] In our letter we indicated that our assessment would begin with representative claim 1 and then proceed to other essential features added by the other claims. This approach was not disputed by the Applicant.

[35] We expressed our view that the only difference between the prior art document D1 and claim 1 is that D1 does not disclose the use of a guide included with a chair, which in this case illustrates the shape of the ends of the control levers and the associated adjustment of the corresponding chair portion. In the written and oral submissions the Applicant asserted the presence of three additional differences between the prior art document D1 and claim 1, namely:

- (1) The tactile contours (selected from the group of geometric shapes) lie in substantially the same plane;
- (2) The geometric shapes are disposed in two-dimensional space with a depth defining said peripheral edge [this difference relates to the planar shape limitation discussed earlier with respect to claim 2]; and
- (3) Said tactile contour of each said lever is different from each other.

[36] Point (2), will be addressed at step 4 of the *Sanofi* approach.

[37] With respect to point (1), while the control arms in D1 may not be in exactly the same plane, as shown in, for example, Figures 8 and 11 of that document, the claims require only that the control levers be “in substantially the same plane.” As we noted in our letter, Figures 1, 93, 95, 98 and 101 of D1 all show embodiments of a chair where the control levers appear to be very much “in substantially the same plane.” We therefore do not consider this to be a difference between the prior art document D1 and claim 1.

[38] With respect to point (3), as we also noted in our letter, the ends of the control levers in D1 are distinctive and present different tactile contours, which aid in distinguishing the control levers and their associated functions. Therefore, like point (1), we do not consider this to be a difference between the prior art document D1 and claim 1.

[39] In summary, the skilled person would consider the only difference between the prior art document D1 and claim 1 to be that D1 does not include a guide (which in this case depicts the geometric shapes of the control lever ends and the associated adjustments of the resting device).

[40] With respect to the essential features of the other claims, as indicated in our letter, we take these features to also be differences over the prior art as they relate to embodiments of the guide.

(4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

D1 does not include a guide (which in this case depicts the geometric shapes of the control lever ends and the associated adjustments of the resting device)

[41] In our letter of September 11, 2015 we set out our reasoning as to why, in our view, the skilled person would have viewed the inclusion of such a guide with a chair such as that of D1 as obvious. Our views in this regard were not challenged by the Applicant in oral or written submissions. We reproduce the relevant passages of our letter below:

As noted above under claim construction, it was part of the skilled person's common general knowledge that instruction manuals and pictorial operational guides have been used in association with resting devices such as chairs comprising movable back and seat portions controlled by lever control arms. It was also part of the common general knowledge that such guides may pivot outwardly from the arm of a chair. D2, cited in the Final Action, is an example of such a guide.

A pictorial guide would illustrate the levers and their associated movements, as was the case in D2. As the incorporation of such a guide in chairs comprising movable back and seat portions was part of the common general knowledge, the inclusion of such a guide with a chair such as that of D1 would have been obvious to the person skilled in the art.

Even though we have not identified the features of the control lever ends being symmetrical about the lever axis and the ends being disposed in substantially the same plane as differences, even assuming they were differences with respect to the state of the art, we would still consider them to have been obvious in light of the common general knowledge which includes levers having flat circular paddles at the end of lever arms that generally lie in a substantially planar side-by-side relationship. We

see no reason why such flat circular paddles on the end of the lever arms would not have been symmetrically disposed about the lever axis.

The presence of two or more “levers” in prior art document D1

[42] The Applicant, based on their interpretation of “lever”, in both written and oral submissions, contended that an additional difference between prior art document D1 and the claims is that D1 does not disclose a chair having more than one lever. Although we do not agree that this is a difference, based on our construction of this term above, if it were, we are of the view that it would have been obvious to the skilled person.

[43] The present application, at pages 6-7, describes in relation to Figure 1, a “typical” example of a prior art office chair with the control arms used to control the chair adjustments described as levers, which levers are depicted in the same manner as those of the alleged invention illustrated by Figure 2 of the application (except of course for the shape of the lever ends). This “typical” prior art example was considered to be part of the common general knowledge of the skilled person. It would have been obvious to the skilled person to use a group of “levers”, whose movement corresponds with the Applicant’s understanding, in a chair such as that of prior art document D1. This is because the skilled person based on their common general knowledge would have been well aware of the option of having the group of levers operate in the manner understood by the Applicant. Also, given that the skilled person was aware from their common general knowledge that there was the difficulty in differentiating between the levers (and therefore the corresponding chair adjustment) of a “typical” chair, the distinctive tactile shapes of D1 would have provided the answer.

The “planar” embodiment with a thin peripheral edge, as set forth in e.g., claim 2

[44] The Applicant also submitted that claim 2 imposed a limitation that the geometric shapes of claim 1 were planar shapes having a thin peripheral edge. Although we do not agree with the Applicant (because we have determined that such a feature is non-essential

above), if it did, we are of the view that the use of such shapes would have been obvious to the skilled person.

[45] The common general knowledge of the skilled person includes the typical office chair described in the application, which itself uses flat planar paddles. Considering prior art document D1 in light of the common general knowledge, it would have been evident to the skilled person that various distinctive shapes and arrangements of such shapes (substantially planar shapes or more three-dimensional shapes such as a sphere) would have provided for a distinctive tactile feel. In our view, the skilled person would not see any advantages in choosing one type of shape over the other, so long as the shapes are sufficiently distinctive to allow the user to easily differentiate between them.

The additional differences with respect to the other claims on file

[46] In our letter of September 11, 2015 we set out our preliminary analysis as to why we consider that the additional essential features of the other claims are also obvious. The Applicant did not dispute this analysis.

Proposed claims 1-32

[47] Proposed claims 1-32 do not overcome the obviousness defect, and therefore cannot be considered to be “necessary” under subsection 30(6.3). Although the proposed claims would have addressed our concerns in relation to the clarity and utility of the claims, they otherwise differ in respect of the claims on file only in as much as they more clearly set forth a limitation relating to the “planar” embodiment of the control levers, which includes a thin peripheral edge (see e.g., proposed claims 2, 10 and 16 submitted with the pre-hearing submissions). As shown above, we are of the view that even with this limitation, the claims would have been obvious.

[48] At the oral hearing the Applicant noted that proposed claim 16 limits the location of the control levers to “in the same plane” as opposed to “in substantially the same plane”

(which is the case with the claims on file and the other proposed claims). In our view, this would not overcome the obviousness defect, since the “typical” chair discussed earlier, which is part of the skilled person’s common general knowledge, is shown in the application as having the control levers in the same plane. This configuration for control levers of a chair was well known. Moreover, we see no advantage in placing the control levers in exactly the same plane as opposed to “in substantially the same plane” and the Applicant has not identified any such advantage in the specification or in their submissions, the focus of the invention being instead on the use of distinct geometric shapes to tactilely differentiate between the control levers.

[49] Having considered the record, the common general knowledge of the skilled person and the Applicant’s submissions, we conclude that claims 1-32 on file would have been obvious and therefore do not comply with section 28.3 of the *Patent Act*.

Aggregation

[50] In our letter of September 11, 2015 at pages 12-13, we set out our preliminary view that the claims on file are directed to an unpatentable aggregation. In our view, the resting device with its control lever system is not functionally related to the guide, and when assessed separately, they are not individually patentable since they would have lacked novelty or inventive ingenuity. In their written submissions, the Applicant addressed this by proposing an amendment to claim 1 to specify that the guide was “connected to the resting device”. In light of the view in our letter that all of the claims were directed to an unpatentable aggregation, even in respect of those claims where the guide was attached to the arm of the chair, this proposed amendment would not overcome the aggregation defect.

[51] If we had concluded that the claims, considered as a combination including the resting device with its control lever system and the associated guide, were non-obvious, they would be directed to an unpatentable aggregation, since considered individually, the

resting device with its control lever system and the guide lack novelty or inventive ingenuity.

RECOMMENDATION OF THE BOARD

[52] The panel recommends that the application be refused because:

- Claims 1-32 on file would have been obvious and are therefore non-compliant with section 28.3 of the *Patent Act*.

[53] Proposed claims 1-32 do not overcome the obviousness defect and therefore are not considered “necessary” under subsection 30(6.3) of the *Patent Rules*.

Stephen MacNeil
Member

Mark Couture
Member

Christian Opris
Member

DECISION

[54] I concur with the conclusions and recommendation of the Patent Appeal Board that the application be refused because:

- Claims 1-32 on file would have been obvious and are therefore non-compliant with section 28.3 of the *Patent Act*.

[55] Therefore, in accordance with section 40 of the *Patent Act*, I refuse to grant a patent on this application. Under section 41 of the *Patent Act*, the Applicant has six months within which to appeal my decision to the Federal Court of Canada.

Johanne Bélisle

Commissioner of Patents

Dated at Gatineau, Quebec,

this 29th day of April, 2016