BESCHWERDEKAMMERN DES EUROPÄISCHEN PATENTAMTS

BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE

CHAMBRES DE RECOURS DE L'OFFICE EUROPEEN DES BREVETS

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

D E C I S I O N
of 3 March 2006

Case Number: T 0138/04 - 3.2.01

Application Number: 96115656.9

Publication Number: 0784030

IPC: B66B 11/00, B66B 11/04, B66B 11/08

Language of the proceedings: EN

Title of invention:
Traction sheave elevator

Patentee:
Kone Corporation

Opponents:
Ziehl- Abegg GmbH & Co. KG
Alpha Getriebebau GmbH
LM Liftmaterial GmbH
Pickerings Europe Ltd Global Elevator Works

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56, 123(2), 100(c)
RPBA Art. 16

Keyword:
"Novelty (yes)"
"Inventive step (yes)"
"Late-filed ground of opposition - no discretion in appeal"

Decisions cited:
G 0010/91

Catchword:
-

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0138/04 - 3.2.01

D E C I S I O N
of the Technical Board of Appeal 3.2.01
of 3 March 2006

Appellant: (Opponent)
Alpha Getriebebau GmbH
Walter-Wittenstein-Strasse 1
D-97999 Igersheim (DE)

Representative:
Patentanwalts-Partnerschaft
Rotermund + Pfusch + Bernhard
Waiblinger Strasse 11
D-70372 Stuttgart (DE)

Appellant: (Opponent)
LM Liftmaterial GmbH
Gewerbestrasse 1 / Landsham
D-85652 Pliening (DE)

Representative:
Körfer, Thomas
Mitscherlich & Partner
Patent- und Rechtsanwälte
Sonnenstrasse 33
D-80331 München (DE)

Respondent: (Proprietor of the patent)
Kone Corporation
Munkkiniemen Puistotie 25
FI-00330 Helsinki (FI)

Representative:
Zipse + Habersack
Wotanstrasse 64
D-80639 München (DE)

Party as of right (Opponent)
Ziehl- Abegg GmbH & Co. KG
Zeppelinstrasse 28
D-74653 Künzelsau (DE)

Representative:
Maucher, Wolfgang
Maucher, Börjes & Kollegen
Patent- und Rechtsanwälte
Dreikönigstrasse 13
D-79102 Freiburg (DE)

Party as of right (Opponent)	Pickerings Europe Ltd Global Elevator Works P.O. Box 19 Stockton on Tees TS20 2 AD (GB)
Representative:	Groeneveld, Yme Geert Nederlandsch Octrooibureau P.O. Box 29720 NL-2502 LS Den Haag (NL)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted 28 November 2003 rejecting the opposition filed against European patent No. 0784030 pursuant to Article 102(2) EPC.**

Composition of the Board:

Chairman: S. Crane
Members: J. Osborne
C. Heath

Summary of Facts and Submissions

I. The appeals by opponents II and III are directed against the decision posted 28 November 2003 to reject the oppositions against European patent No. 0 784 030. The patent originates from a divisional application, has a filing date of 27.06.1994 and claims priority dates of 28.06.1993 and 14.04.1994.

II. Six oppositions had been filed, naming the grounds according to Articles 100(a) (novelty and inventive step) and 100(b) EPC. An additional ground for opposition according to Article 100(c) EPC was introduced outside of the time limit according to Article 99(1) EPC and was disregarded by the opposition division.

III. The following documents introduced during the opposition procedure also played a role during appeal:

D1: JP-Y-4/50297 with a translation into English

D4: DE-A-38 02 386

D7: US-A-5 018 603

D9: DE-T-7395

D15: EP-A-0 676 357, filed 31.03.95 and claiming priority of 07.04.95

D16: WO-A-95/00432, filed 23.06.94 and claiming priorities covering the period 28.06.93 to 07.04.94.

The following additional documents also played a role:

D22: Technische Regeln für Aufzüge, TRA 1300, "Vereinfachte Personenaufzüge", 25.03.94

D24: Minutes of the 66th meeting of the Deutscher Aufzugsausschuss 12/13.09.1991

D25: DIN EN 81 Part 1 "Safety rules for the construction and installation of lifts and service lifts; Part 1: Electric lifts", October 1986

D26: "Proposal for a Council Directive on the approximation of the laws of the Member States relating to lifts", Commission of the European Communities, COM(92) 36 final - SYN 394, Brussels, 14 February 1992

IV. Oppositions IV and V were withdrawn. The parties as of right (opponents I and VI) took no part in the appeal procedure.

V. During oral proceedings held 3 March 2006 the appellants requested that the decision be set aside and the patent revoked. The respondent initially requested maintenance of the patent on the basis of *inter alia* a main request filed during the written procedure. The respondent's final request was that the decision be set aside and the patent maintained on the basis of claims 1 to 13 and amended description as filed in the oral proceedings and drawings as granted.

VI. Claim 1 according to the respondent's single request reads as follows:

"Traction sheave elevator comprising an elevator car (1) moving along elevator guide rails (10), a counterweight (2) moving along counterweight guide rails (11), a set of hoisting ropes (3) on which the elevator car and the counterweight are suspended, and a drive machine unit (6) comprising a traction sheave (7) driven by the drive machine and engaging the hoisting ropes (3), wherein the drive machine unit (6) of the elevator is placed in the top part of the elevator shaft (15) in the space between the shaft space needed by the elevator car on its path and/or the overhead extension of the shaft space needed by the elevator car and a wall of the elevator shaft (15), wherein the machine unit (6) is of a flat construction type compared to its width and the rotation plane of the traction sheave (7,318) is substantially parallel to the adjacent car wall and/or shaft wall and/or the plane between the counterweight guide rails (2), the space requirement for the elevator in the building being substantially limited to the space required by the elevator car and counterweight on their paths including the safety distances and the space needed for the hoisting ropes."

Claims 2 to 13 define additional features of the subject-matter of claim 1.

VII. The appellants' submissions in respect of the respondent's final request may be summarised as:

The opposition division disregarded the ground for opposition according to Article 100(c) EPC. Although

the opposition division has a certain discretion in considering late-filed grounds it is immediately clear that there is no basis in the parent application for the claimed features "parallel to the adjacent car wall" and "parallel to the shaft wall". The opinion G 10/91 (OJ EPO 1993, 420) stated that a new ground for opposition may be introduced during the appeal procedure only with the consent of the patent proprietor but this is not binding on the boards in subsequent cases. The present objection is sufficiently relevant that the board should exercise its discretion to examine this ground even without the consent of the respondent.

The original disclosure was that the advantages achieved by the invention resulted from the use of a discoidal rotor. However, this is not in present claim 1, in contravention of the provision of Article 123(2) EPC.

The subject-matter of claim 1 is not new with respect to the disclosures of each of D9, D15 and D16. The priorities claimed by the present patent are not valid and D15 and D16 therefore form prior art within the meaning of Article 54(3) EPC. D9 discloses a room which is termed "machine room" but which is in fact empty and serves only as a service room. When the optional dividing wall between the shaft and the machine room is absent the latter becomes a niche in the shaft. The machine unit is above the path of the counterweight, which is the essential teaching of the present patent, and so is essentially within the shaft. It follows that the space requirement is only that presently claimed.

Moreover, it can be seen from the figures that the machine unit is flat in comparison with its width.

Even if the subject-matter of claim 1 were novel with respect to D9 it would not involve an inventive step when this prior art is considered in combination with any of D22, D24 and D26 relating to technical regulations. D22 and D24 relate to traction sheave lifts and explicitly state that a machine room is not necessary. D26 contains no mention of a machine room, thereby implicitly disclosing to the skilled person that it is not a necessary feature.

The subject-matter of claim 1 also is rendered obvious by the combination of teachings according to D1, D4 and D7. D1 forms the closest prior art and solves the same problem as the patent. Although D1 relates to a relatively small lift, present claim 1 is not restricted to lifts of any particular size. The only novel features relate to the flat construction and the parallel arrangement. The teaching of D1 is to dispense with a machine room and that the shaft be as small as possible. This teaching leads the skilled person down a one-way street to the subject-matter of present claim 1. He would be aware from D4 that the traction sheave could be mounted parallel to the shaft wall and could be used also with the 1:1 gearing arrangement provided in D1 whilst D7 is an obviously suitable machine unit.

VIII. The respondent rebutted the appellants' arguments essentially as follows:

The respondent does not give its consent to consideration of the opposition ground according to

Article 100(c) EPC. This would involve considerable delay due to remittal of the case to the department of first instance and anyway is not valid.

The original disclosure was generally of the concept of limiting the space requirement in the building. The teaching did not restrict itself to achieving this when using a discoidal rotor so the present request does not result in addition of subject-matter.

The appellants have provided no reasoning in support of their objections that present claim 1 does not validly claim the priorities and that its subject-matter would lack novelty with respect to D15 and D16.

The subject-matter of present claim 1 differs from the disclosure of D9 by the features of the space requirement for the lift, the relatively flat machine unit and the positioning of the machine unit in the shaft. D9 discloses a machine room which extends into the shaft and includes both one anchorage of the roping and the machine unit. Not only D9 but all prior art lifts having a machine room mounted at the top of the shaft have the traction sheave above the counterweight. D9 has moved the machine room and has maintained the position of the traction sheave above the counterweight so there is no new teaching derivable regarding the positioning of the machine unit. The figure is merely schematic so it is not possible to derive any teaching regarding the relative proportions of the machine unit. Finally, D9 is silent regarding the space available within the shaft.

As regards inventive step when beginning from D9, it is not correct to say that any of D22, D24 and D26 provides a teaching to the skilled person regarding the provision of a machine room for a traction sheave lift. D25 relates only to larger lifts which in practice are primarily of the traction sheave type and for which a machine room was always required. The aim of D26 was to replace the optional EEC Directive 84/529 which refers to D25. In so doing the scope has been extended to include lifts for which a machine room never has been provided. D22 and D24 relate to a smaller type of lift which includes other drive means for which a machine room has never been required.

When considering D1 as the closest prior art it must be borne in mind that this is a small lift which serves as an alternative to a stair lift and is quite different to standard lifts. The machine unit is not disclosed as being relatively flat and the space requirement for the lift is dictated by the diameter of the sheave which is perpendicular to the wall. The motor of D7 is a unit for altogether larger and more expensive lifts and would offer no space saving in D1. D1 discloses an integrated design which aims to avoid application of loads to the building and arranging the sheave parallel to the wall would necessitate substantial re-design. The arrangement according to D4 is a substantially different one which does apply loads to the building.

Reasons for the Decision

Opposition ground according to Article 100(c) EPC

1. The only grounds for opposition which were substantiated within the period according to Article 99(1) EPC were novelty and inventive step (Article 100(a) EPC) and insufficient disclosure (Article 100(b) EPC). Following the late introduction of the ground according to Article 100(c) EPC by opponent III (second appellant) the opposition division considered that it was *prima facie* not relevant so exercised its discretion to disregard the ground. This action was not challenged in the statement of grounds of appeal of the second appellant. The matter before the opposition division was whether there was a basis in the parent application for the term "substantially" in the claims. In its letter of 3 February 2006, on the other hand, the second appellant argued for the first time that the opposition division should have considered the ground according to Article 100(c) EPC because it is immediately clear that there is no basis in the parent application for the claimed features "parallel to the adjacent car wall" and "parallel to the shaft wall".

1.1 Although the second appellant has stated that the opposition division was wrong in exercising its discretion, it is clear from the above that its present objection under Article 100(c) EPC is different from that advanced in the opposition procedure. The second appellant's arguments therefore are unable to put into question the manner in which the opposition division exercised its discretion. Moreover, the board considers that the opposition division's discretion was correctly

exercised with respect to the objection that was before it.

1.2 In G 10/91 (*supra*) the Enlarged Board of Appeal stated its opinion that "fresh grounds for opposition may be considered in appeal proceedings only with the approval of the patentee". In the present case the patent proprietor has not given its approval but the second appellant argues that the ground is sufficiently relevant that the board must exercise its discretion to consider it. However, Article 16 RPBA states "should a Board consider it necessary to deviate from an interpretation or explanation of the Convention contained in an earlier opinion or decision of the Enlarged Board of Appeal, the question shall be referred to the Enlarged Board of Appeal." From this provision of the RPBA it is clear that the board does not have discretion to consider a new ground for opposition without the consent of the patent proprietor. Moreover, the second appellant provided no arguments serving to put into question the relevant finding of G 10/91 (*supra*) and which could provide the basis for a new referral to the Enlarged Board.

Amendments (Article 123(2) EPC)

2. The application as originally filed contained two independent claims, 1 and 2. The subject-matter of the two claims was identical except that claim 1 specified that the motor had a "discoidal rotor" whereas according to claim 2 the machine unit was "of a flat construction type compared to its width". The description stated that "to meet the need to achieve a reliable elevator … for which the space requirement in

the building … is substantially limited to the space required by the elevator car and counterweight on their paths including the safety distances and the space needed for the hoisting ropes and in which the above drawbacks can be avoided, a new type of traction sheave elevator is presented as an invention. The traction sheave elevator of the invention is characterised by what is presented in the characterization part of claim 1." In the form as granted which contained essentially unchanged claims 1 and 2 the corresponding section of the description differed in the final wording "… characterized by claims 1 and 2", thereby teaching a link between the relatively flat construction and the claimed space requirement.

2.1 The amendments made by the respondent according to its present request place the feature of the machine unit being "of a flat construction type compared to its width" in claim 1 and the motor having a discoidal rotor is now a preferred embodiment specified in claim 2. The description has been amended to refer once again only to the characterising portion of claim 1.

2.2 It follows from the above that the teaching of the amended specification is that the "new type of traction sheave elevator" according to the invention and having the specified space requirement in the building comprises a machine unit which is "of a flat construction type compared to its width." However, this information was already included in the patent specification as granted by virtue of the reference to claim 2. The objection raised by the appellants therefore does not have a basis in an amendment made since the patent was granted and does not fall within

the scope of Article 123(2) EPC. If the appellants had considered this objection valid they should have raised it in accordance with Article 100(c) EPC during the opposition procedure. As already set out above, in the present case the board may not consider an objection in accordance with Article 100(c) EPC.

Novelty

3. The appellants submitted in respect of claim 1 as granted that the claimed priorities were not valid and that D15 and D16 therefore would form prior art within the meaning of Article 54(3) EPC and would anticipate the subject-matter of the claim. Subsequent to the respondent's amendment of its request the appellants maintained the same objection in respect of the amended claim but refrained from submitting any reasoning why, despite the amendments made, the priority claims would remain invalid and the claim would lack novelty. The board considers that both priorities are validly claimed in respect of the present claim 1 and that D15 and D16 therefore do not form prior art. Detailed reasoning for this view is unnecessary since even if the priorities were not valid neither D15 nor D16 would anticipate the subject-matter of present claim 1 because both are silent as regards the space requirement in the building.

4. D9 relates to a lift arrangement in which the machine room is positioned beside the upper extremity of the lift shaft in order to reduce the height requirement for the lift installation in a building. The machine unit is mounted on a cantilevered beam between the shaft and the machine room, is shown in a plan view as

being contained within the surface area of the beam and as having a smaller dimension extending in the direction of the width of the counterweight than in the direction orthogonal thereto. The cabling is an underslung arrangement with the cable passing under the lift car.

4.1 D9 is silent as regards the desirability of the unit being "flat" within the meaning of the contested patent. The machine unit itself does not form part of the teaching of D9 and a reference to the size of the machine unit in the final paragraph relates to the desirability of the underslung support of the car; it draws conclusions merely in respect of the consequential effect on the size and cost of the machine unit without concerning itself with the relative dimensions. Since the machine unit may and, in the drawings indeed does, extend into the machine room there is no reason for the skilled person to understand that the latter should be "flat … compared to its width".

4.2 Contrary to the submissions of the appellants, there is no foundation in D9 for understanding that what is described as a machine room ("Maschinenraum") is anything other than that. Any other interpretation relies on an *ex-post* attempt to fit the disclosure of D9 to the subject-matter of present claim 1. The machine room according to D9 is optionally separated from the shaft by a partition. The absence of this partition merely renders the lift shaft open to the machine room and does not render the machine room or its wall a part of the lift shaft.

4.3 Present claim 1 specifies that the space requirement in the building is substantially limited to the space required by the elevator car and counterweight on their paths including the safety distances and the space needed for the hoisting ropes. This requirement goes beyond the disclosure of D9 in which it is clearly visible in the drawings that parts of the motor and gearbox are in the machine room, outside the lateral extent of the shaft. The appellants are incorrect when they assert that the essential feature of present claim 1 is that the machine unit is arranged above the counterweight. Whilst this may be a result of putting the claimed subject-matter into practice, the requirements of the claim are more restrictive.

4.4 The board concludes from the foregoing that the subject-matter of present claim 1 is new with respect to the disclosure of D9.

Inventive step

5. The appellants use two lines of attack when arguing that the subject-matter of present claim 1 does not involve an inventive step. One approach uses D1 as the starting point and combines it with the teachings of D4 and D7. In the other D9 is the closest prior art and the subject-matter of present claim 1 would result from relaxation in technical rules relating to the construction of lifts (D22, D24, D26). In accordance with the board's finding concerning the validity of the priority dates claimed for the present patent D22 does not form prior art. However, equivalent information is contained within D24, whose availability to the public has been established to the board's satisfaction.

6. D1 relates to a small lift for installation in private houses and the like, which reduces the space requirement in the building and which does not introduce loads into the structure of the building. It achieves this by providing in the shaft a frame supported on the base of the shaft and on which the various elements of the lift are mounted. The machine unit is illustrated as a conventional geared unit mounted on the upper end of the frame with the traction sheave perpendicular to the adjacent walls of both the shaft and the lift car whereby the cable passes directly from the sheave to a frame on the rear of the car and to the counterweight. D1 is silent as regards the relative dimensioning of the shaft and the lift components but the machine unit is illustrated as essentially occupying the space available between the lift car and the shaft wall. In the board's view D1 forms the closest prior art for consideration of inventive step since it already teaches the installation of all elements of a lift within the lift shaft.

6.1 The subject-matter of present claim 1 differs from the disclosure of D1 by the features that:

- the machine unit is of a flat construction type compared to its width;

- the rotation plane of the traction sheave is substantially parallel to the adjacent car wall and/or shaft wall and/or the plane between the counterweight guide rails; and

– the space requirement in the building is substantially limited to the space required by the car and counterweight on their paths including the safety distances and the space needed for the hoisting ropes.

The differentiating features combine to provide a lift having the minimum space requirement in the building.

6.2 D4 relates to a traction sheave lift arrangement in which the shaft size has been reduced both in cross-section and in height because no machine room need be provided above it. The motor is located in a machine room beside the upper part of the shaft but with the traction sheave located parallel to the adjacent shaft wall. An essential aspect of the teaching of D4 is the particular arrangement of the counterweight with a part of its mass located above the point at which it is supported by a pulley and the reduction in the cross-section of the shaft is attributed to this. According to D4 there is an important link between this arrangement and an underslung arrangement of the cable passing under the lift car (see the paragraph bridging columns 2 and 3), which in turn results in connection of one end of the cable to the top of the shaft at the side opposite to the traction sheave and the counterweight.

6.3 D4 aims to solve a similar problem to D1 but the respective solutions are quite different and mutually incompatible. Whereas D1 sets out to avoid any connection to the structure of the building, D4 teaches that one end of the cable is connected to the shaft at the side remote from the machine unit and counterweight.

If this teaching were transferred to D1 it would require connection of a cable at a position remote from the supporting frame and therefore contrary to the basic teaching of D1 that all loads be borne by the frame. Although D4 does disclose that the traction sheave is parallel to the shaft wall, it draws no conclusions in this respect as regards the space requirement and there is no incentive for the skilled person to attempt to introduce this feature into the D1 arrangement.

6.4 The appellants' argument that it is possible to employ the parallel arrangement of the traction sheave according to D4 without the underslung cable arrangement relies on an *ex-post* approach. In the absence of any teaching specific to the parallel arrangement of the traction sheave the skilled person would not attempt to adopt it in D1, particularly in view of the basic differences between the respective arrangements. Moreover, the appellants' argument fails to help their case because amending the arrangement according to D1 to include a traction sheave in a parallel arrangement would only be possible with substantial consequential modifications.

6.5 D7 relates to a traction sheave machine unit having a large diameter relative to its axial dimension and which would fall within the definition in present claim 1 of "a flat construction type compared to its width." Whilst it is intended to provide a machine unit requiring less space in the direction of the rotational axis of the sheave, there is no suggestion that its use may serve to avoid the need for a machine room and thereby help in reducing the space requirement to that

presently claimed. If the skilled person would attempt to use such a machine unit in the lift arrangement of D1 the reduced dimension would be in the direction of the rotational axis of the sheave and would not help to reduce the space requirement in the way presently claimed.

6.6 Finally, in all of the combined teachings of D1, D4 and D7 there is no suggestion to reduce the space requirement that required by the elevator car and counterweight on their paths including the safety distances and the space needed for the hoisting ropes. Although both D1 and D4 concern themselves with improved use of space they are silent in respect of the presently claimed requirement and, as far as it may be derivable from the schematic drawings in D1 the space requirement is determined by the size of the machine unit. It may be considered that the figures of D4 show nothing which would require the space requirement to be greater than that presently claimed but this can only be so with the benefit of hindsight.

6.7 The board concludes from the above that the subject-matter of present claim 1 is not rendered obvious by the combination of D1, D4 and D7.

7. D9 has already been analysed above in respect of novelty. The subject-matter of present claim 1 differs from the disclosure of D9 by the following features:

- the drive machine unit is placed in the space between the shaft space needed by the lift car on its path and/or the overhead extension of the shaft

space needed by the lift car and a wall of the elevator shaft;

– the machine unit is of a flat construction type compared to its width; and

– the space requirement for the lift in the building is substantially limited to the space required by the car and counterweight on their paths including the safety distances and the space needed for the hoisting ropes.

7.1 The appellants' arguments when beginning from D9 essentially are based on an alleged relaxation of technical rules providing that traction sheave lifts no longer need have a machine room, as evidenced by D24. In D24 under the provisions for arrangement of the motor there is indeed a requirement that it may be provided either in a machine room or in the shaft. However, the board disagrees that D24 would provide the skilled person with the incentive to amend the construction of traction sheave lifts in this way. As convincingly set out by the respondent, D24 relates to lifts of a restricted size ("Vereinfachte Aufzüge") but which may employ a variety of drives including not only a traction sheave but also others such as hydraulic cylinder and rack-and-pinion. The appellants have not denied that lifts employing some of these drives other than traction sheave never have been required to comprise a machine room. D25, which was valid at the priority date of the present patent, requires that a machine room be provided to house the motor of conventional traction sheave lifts of the type known from D9. D26 sets out to create a new requirement for

all lifts in all buildings, replacing D25 with compulsory validity from 1 January 1998. However, D26 relates to all types of lifts, including such ones as never had been provided with a machine room, and specifies a functional rather than constructional requirement. So here again there is no suggestion that traction sheave lifts should be provided without a machine room.

7.2 It follows from the foregoing that D24 and D26 do not provide a teaching to the skilled person to dispose of the machine room provided in D9. As a result, the skilled person would not be motivated by these documents to arrive at the first differentiating feature set out under point 7 above, relating to the placing of the drive machine unit. Furthermore, as results from considerations similar to those set out under point 6.6 above in respect of D1 and D4, without the benefit of hindsight there is no teaching in D9 to reduce the space requirement to that presently claimed. The board therefore concludes that the subject-matter of present claim 1 is not rendered obvious by the combination of D9 with D24 and/or D26.

8. Since claims 2 to 13 contain all features of the subject-matter of claim 1 the above conclusions regarding novelty and inventive step apply equally to these claims.

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 the first instance with the order to maintain the patent on the basis of claims 1 to 13 and amended description filed during the oral proceedings and drawings as in the granted patent.

The Registrar: The Chairman:

A. Vottner S. Crane