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D E C I S I O N
of 1 February 2005

Case Number: T 0657/03 - 3.2.2

Application Number: 94903095.1

Publication Number: 0628290

IPC: A61B 19/02

Language of the proceedings: EN

Title of invention:

Stand device of optical instrument for medical use

Patentee:

MITAKA KOHKI CO., LTD.

Opponent:

Carl Zeiss AG

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56, 123

Keyword:

"Amendments - added subject matter (no)"
"Novelty and inventive step (yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0657/03 - 3.2.2

D E C I S I O N
of the Technical Board of Appeal 3.2.2
of 1 February 2005

Appellant: Carl Zeiss AG
(Opponent) Carl-Zeiss-Strasse 22
D-73447 Oberkochen (DE)

Representative: Gnatzig, Klaus
Carl Zeiss
Patentabteilun
D-73446 Oberkochen (DE)

Respondent: MITAKA KOHKI CO., LTD.
(Proprietor of the patent) 1-4, Ohsawa 5-chome
Mitaka-shi
Tokyo 181 (JP)

Representative: Skone James, Robert Edmund
GILL JENNINGS & EVERY
Broadgate House
7 Eldon Street
London EC2M 7LH (GB)

Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
8 May 2003 concerning maintenance of European
patent No. 0628290 in amended form.

Composition of the Board:

Chairman: T. K. H. Kriner
Members: D. Valle
U. J. Tronser

Summary of Facts and Submissions

- I. The appellant (opponent) lodged an appeal on 14 June 2003 against the interlocutory decision of the opposition division posted on 8 May 2003 on the amended form in which the European patent EP-B-628 290 can be maintained. The fee for the appeal was paid simultaneously and the statement setting out the grounds of appeal was received on 15 September 2003.
- II. The opposition division held that the grounds for opposition mentioned in Article 100(a) EPC (lack of novelty and inventive step) and in Article 100(c) EPC (extension of the subject-matter of the patent beyond the context of the application as filed) did not prejudice the maintenance of the patent in amended form.
- III. The following documents, cited during the opposition proceedings, played a role in the appeal proceedings
- D1' = JP Heisei 4-16442
 - D7 = The translation of D1'
 - D4 = US-A-4 339 100
 - D12 = US-A-3 630 389
 - D16 = "Gewichtsausgleich an feinmechanischen Geräten",
H. Hilpert, Feingerätetechnik, 14. Jg.,
Heft 2/1965, Seiten 61 bis 66.
- IV. Oral proceedings before the Board of Appeal took place on 1 February 2005.

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

The respondent (patentee) requested that the appeal be dismissed (main request) or that the patent be maintained on the basis of the auxiliary request filed with letter dated 30 December 2004.

V. Claim 1 of the main request reads as follows:

"A stand apparatus for a medical optical equipment comprising

a pair of parallel vertical links (21, 22) and a pair of parallel horizontal links (23, 24) combined to form a parallel linkage (20), an intermediate portion of one of said vertical links (21) being pivotally supported through a fulcrum (19) to a stand (18) disposed on a surface; and

a counterweight (W1, W2) provided to counterbalance a weight applied in a lowering direction of said parallel linkage about said fulcrum and thereby keep said medical optical equipment still in a floating condition,

characterized in that

one of said horizontal links (23) of said parallel linkage is extended to form a supporting link (26), and a substantially vertical front link (27) is pivotally supported to said supporting link at a front end thereof, said medical optical equipment being supported to a lower end of said front link, and in that

a joint shaft (β_1) of said parallel linkage (20) is set at a rear end of said supporting link (26), and a crank member (34) having a first horizontal fulcrum (β_6) lying on a horizontal line on which said joint shaft lies and a second horizontal fulcrum (β_7) lying on a vertical line on which said joint shaft lies is supported to said joint shaft,

said first horizontal fulcrum of said crank member and a portion of said stand (18) being connected together by a vertical sublink (37) parallel to said one vertical link of said parallel linkage and having a length equal to the linear distance between said joint shaft of said one vertical link and said fulcrum of said parallel linkage,
said second horizontal fulcrum (β_7) of said crank member (34) and a portion of said front link being connected together by a horizontal sublink (38) parallel to said supporting link and having a length equal to that of said supporting link, wherein the parallel linkage is selectively moveable to cause the medical optical equipment to move horizontally and vertically with respect to the fulcrum (9)."

VI. In support of his request the appellant relied essentially on the following submissions.

The feature of claim 1 according to which the parallel linkage was selectively moveable was not originally disclosed, and was merely introduced as a disclaimer in order to delimit the claimed invention with respect to D1'. However, since the term "selectively" was of indefinite meaning, it covered a disclosure which was not contained in the application as filed.

The subject-matter of claim 1 of the main request was not novel having regard to the apparatus disclosed in D1'. The stand of this apparatus was formed by the body (1) and the link mechanism (4) which could be considered as belonging to the stand, since this element could be fixedly connected to the element (1) by means of the electromagnetic clutch (C3).

Furthermore, when the stand was tilted, for example because the floor was not exactly horizontal, the parallel linkage (5) was selectively moveable to cause the equipment to move such that it comprised a horizontal and a vertical component with respect to the direction of gravity, or in other words that it was horizontally and vertically moveable with respect to the fulcrum.

Furthermore, the subject-matter of claim 1 of the main request did not imply an inventive step having regard to a combination of the teaching of D4 and D12, of D4 and D1' or D12 and D16.

Starting from D4, which undisputedly disclosed the features of the preamble of claim 1, the object underlying the invention was to be seen in providing a stand apparatus for optical equipment which was easy to be positioned and held by the operator (see description of the patent in suit, column 2, section 0009). The person skilled in the field of the invention was a mechanical engineer. When confronted with the object to be achieved, he would therefore consider the teaching of D12, although the apparatus of D12 did not concern an apparatus for medical optical equipment. Since D12 suggested an apparatus comprising all features of the characterising portion of claim 1 (see in particular column 2, lines 59 to 72, column 6, lines 60 to 63, column 7, lines 24 to 32, Figures 6 and 7), it was obvious to provide these features in an apparatus according to D4.

Furthermore, the characterising features of claim 1 were also suggested by D1' (see in particular

Figure 5). Therefore, the combination of the teaching of D4 and D1' would also lead in an obvious way to the subject-matter of claim 1.

Finally, also a combination of the teaching of D12 and D16 would make claim 1 obvious. D12 could be considered as the closest state of the art, since it was directed to a similar purpose or effect as the present invention, which was to handle objects. Since D16 suggested that the use of balancing weights to simplify the manipulation of objects was common practice, the provision of such weights in the apparatus according to D12 was obvious.

VII. The respondent disputed the views of the appellant. His arguments can be summarized as follows:

As to the objection of extension of the originally filed disclosure, the feature according to which the parallel linkage was selectively moveable to cause the medical optional equipment to move horizontally and vertically, introduced in claim 1, obviously meant that the amount of movement of the parallel linkage in any direction was selectable. Since this was clearly supported by Figures 2 to 4 of the patent in suit, the corresponding amendment was allowable.

The subject-matter of claim 1 of the main request was novel. The structure and function of the link mechanism (4) shown in D1' did not justify to subsume it under the term "stand" in the sense of the invention. Furthermore, in the apparatus of D1' the groove (31) allowed only a vertical movement of the parallel linkage (29), and the groove (14) allowed only a

horizontal movement of the parallel linkage (11, 21). Therefore the parallel linkage was not selectively moveable as described in claim 1.

The subject-matter of claim 1 of the main request involved also an inventive step. A combination of the teaching of D4 and D1' would not lead in an obvious way to the invention, since the equipment of D4 needed a lot of modifications in order to make it suitable to be combined with the necessary elements of D1' to arrive at the claimed invention. For example the stand had to be modified in order to support the vertical sublink. The necessary combination of features could be obtained only with the benefit of hindsight. D12 would not have been considered by the skilled person in the field of the invention, since the device described in D12 was a large scale equipment comparable to a crane, which was not suitable for supporting a medical optical equipment.

Reasons for the Decision

1. The appeal is admissible.
2. *Main request*
- 2.1 Amendments

The board agrees to the appellant's statement that the term "selectively" as such is of indefinite meaning. However, in the context of the feature according to which the parallel linkage is selectively moveable to cause the medical optional equipment to move

horizontally and vertically with respect to the fulcrum, and in the light of the description of the patent in suit, it is clear that this term has to be interpreted such that the movement of the parallel linkage in any direction is selectable.

Since it is clearly derivable from the Figures 2 to 4 of the originally filed application that the parallel linkage is selectively movable with respect to the fulcrum (19) to cause the medical equipment to move vertically (see in particular Figures 2 and 3), and that the parallel linkage is also selectively movable to cause the medical equipment to move horizontally (see in particular Figures 2 and 4), the last feature of claim 1 of the main request forms part of the disclosure of the originally filed documents.

Accordingly claim 1 of the main request complies with Article 123(2) EPC.

2.2 Novelty

D1' discloses a stand apparatus for a medical optical equipment (3) comprising:

- a pair of parallel vertical links (37, 26) and a pair of parallel horizontal links (34, 38) combined to form a parallel linkage, an intermediate portion of one of said vertical links (37) being pivotally supported through a fulcrum (between 20 and 36) to an element (2) of said apparatus; and
- a counterweight (W1, W2);

- one of said horizontal links (34) of said parallel linkage being extended to form a supporting link (34a), and a substantially vertical front link (43) being pivotally supported to said supporting link at a front end thereof, said medical optical equipment being supported to a lower end of said front link,
- a joint shaft (35) of said parallel linkage being set at a rear end of said supporting link (34a), and a crank member (3) having a first horizontal fulcrum lying on a horizontal line on which said joint shaft lies and a second horizontal fulcrum (between 39 and 42) lying on a vertical line on which said joint shaft lies, being supported to said joint shaft,
- said first horizontal fulcrum of said crank member and a portion of said element (2) being connected together by a vertical sublink (40) parallel to said one vertical link of said parallel linkage and having a length equal to the linear distance between said joint shaft (35) of said one vertical link and said fulcrum of said parallel linkage,
- said second horizontal fulcrum of said crank member and a portion of said front link (43) being connected together by a horizontal sublink (42) parallel to said supporting link (34a) and having a length equal to that of said supporting link."

However, D1' does not disclose that

- (a) the element, to which an intermediate portion of one of said vertical links is pivotally supported through a fulcrum, is a stand (18) disposed on a surface.
- (b) the counterweight is provided to counterbalance a weight applied in a lowering direction of said parallel linkage about said fulcrum and thereby keep said medical optical equipment still in a floating condition, and
- (c) the parallel linkage is selectively movable to cause the medical optical equipment to move horizontally and vertically with respect to the fulcrum.

With respect to feature (a) D1 discloses that the vertical links are supported to a horizontal movable element (4). This element forms part of a linkage structure which causes the medical optional equipment to move, and which as a whole is supported by a stand (1). Contrary to the assertion of the appellant, the element (4) does not belong to the stand (1), although it can be fixed to the stand through an electromagnetic clutch (C3). Moreover, according to the description of the patent in suit (see column 2, section 0008; column 5, section 0021) and to Figure 1, the support column or stand is made of an element at which an arm member is pivotally mounted for movement around an horizontal axis. The stand itself, in the embodiment of Figure 1 is comprised of a base (16) on which an upper portion (18), which can rotate around a

vertical axis, is mounted. This embodiment corresponds exactly to the embodiment of the stand shown in Figure 1 of D1' (see reference numbers 1 and 6).

Feature (b) is not disclosed in D1', since the counterweights (W1, W2) shown in this document, are not provided to counterbalance a weight applied in a lowering direction of said parallel linkage **about the fulcrum** (between 20 and 36).

With respect to feature (c) the parallel linkage (29) shown in D1 is selectively movable exclusively to cause the medical optical equipment to move vertically with respect to the fulcrum (see in particular Figures 5 and 6 of D1').

The appellant's argument that a vertical and a horizontal component of the movement of the optical element according to D1' could be achieved by tilting the stand is not convincing, since the stand comprises adjustment screws which are obviously provided for arranging the stand in a stable horizontal position, and not for tilting the stand.

Therefore the subject-matter of claim 1 of the main request is novel over the disclosure of D1'.

2.3 Inventive step

2.3.1 It is undisputed that D4 discloses a stand apparatus as defined in the preamble of claim 1.

Starting from D4 the object to be achieved by the invention is to be seen in providing a stand apparatus

for optical equipment which is easy to be positioned and held by the operator (see description of the patent in suit, column 2, section 0009).

This object is achieved by the features of claim 1 of the main request (see section 2.3.1).

2.3.2 The person skilled in the field of invention, to be considered in the present case for the evaluation of inventive step, is the technician involved in the design and development of medical equipments and not - as the appellant maintains - the general expert in mechanical engineering. The field of mechanical engineering is too vast and too manifold to be reasonably considered as the field of activity of a praxis-oriented average person skilled in a particular technical field. Furthermore the above defined field of the invention requires specialized knowledge and skills which are outside the field of the mechanical engineer.

2.3.3 Document D12 would not be taken into consideration by the relevant skilled person when confronted with the object defined above, since the apparatus described therein is dimensionally and functionally far away from the apparatus claimed by the patent in suit.

D12 discloses an articulated boom with a seat for an operator (see Figure 1) for temporarily handling objects such as glass slabs to be held by suction cups. Accordingly, the purpose of D12 is the provision of a material handling apparatus or manipulator of the kind in which the movements of a control or master member produces corresponding movements amplified in respect

to the force exerted thereby of a controlled or slave member (see column 1, lines 2 to 6).

By contrast, the invention relates to a stand apparatus for a medical optical equipment for use in microsurgery. This apparatus has the purpose to keep the equipment still in the air (see patent in suit, column 1, lines 1 to 9).

Accordingly, D12 is not apt to represent relevant prior art, and there is no reason to believe that a combination of the teaching of D4 and D12 could be lead in an obvious way to the invention as claimed in claim 1 of the main request.

- 2.3.4 The teaching of D1' is not suitable to suggest a modification of the apparatus of D4 which could lead the skilled person in an obvious way to the subject-matter of claim 1 of the main request. The selection of the necessary features from D1' in order to arrive at the claimed invention could only be obtained with the benefit of hindsight. There is no convincing reason why the skilled person should pick up from D1' only the upper linkage in order to achieve the object mentioned above, in particular since this linkage is only provided for vertical movement. If the skilled person would consider the teaching of D1', he would at best replace the complete linkage of D4 by the complete linkage of D1', since only the complete linkage of D1' is suitable to allow an easy handling of a stand apparatus. Moreover, the integration of the upper linkage in the apparatus according to D4 would require essential modifications of this apparatus, which cannot be regarded as obvious.

2.3.5 According to the case law of the boards of appeal (see 4th edition, English version, I.D.3.2, page 102) in selecting the closest prior art, the first consideration is that it must be directed to the same purpose of effect as the invention.

As shown in section 2.3.3 above, D12 has clearly not the same purpose as the present invention. Hence this document is not apt to represent the closest state of the art.

Consequently, a combination of D12 and D16, which is a general article concerning the balancing of weights in mechanical apparatuses, does not lead in an obvious way to the subject-matter of claim 1 of the main request.

2.3.6 From the above considerations, it follows that the subject-matter of claim 1 of the main request also involves an inventive step.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

V. Commare

T. Kriner