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Datasheet for the decision of 9 May 2017

Case Number: T 2242/13 - 3.4.02

Application Number: 06740721.3

Publication Number: 1866689

IPC: G02B21/26

Language of the proceedings: EN

Title of invention:
MICROSCOPE STAGE WITH FLEXURAL AXIS

Applicant:
GE Healthcare Bio-Sciences Corp.

Relevant legal provisions:
EPC Art. 123(2)

Keyword:
Added subject-matter - Inadmissible generalisation (yes - all requests)

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Case Number: T 2242/13 - 3.4.02

D E C I S I O N
of Technical Board of Appeal 3.4.02
of 9 May 2017

Appellant: (Applicant)	GE Healthcare Bio-Sciences Corp. 800 Centennial Avenue Piscataway, NJ 08855 (US)
Representative:	Cavill, Ross David GE Healthcare UK Limited Pollards Wood Nightingales Lane Chalfont St Giles, Buckinghamshire HP8 4SP (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 6 June 2013 refusing European patent application No. 06740721.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	R. Bekkering
Members:	F. J. Narganes-Quijano
	T. Karamanli

Summary of Facts and Submissions

I. The applicant (appellant) lodged an appeal against the decision of the examining division refusing European patent application No. 06740721.3.

In its decision the examining division held that claim 1 of the main and the auxiliary requests then on file did not fulfil the requirements of Articles 84 and 123(2) EPC and that the corresponding subject-matter was not new in view of the state of the art (Article 54(1) EPC).

II. With the statement setting out the grounds of appeal the appellant filed a set of claims according to a main request and a first auxiliary request, and requested that the decision under appeal be set aside and a patent be granted on the basis of one of these set of claims.

III. In a communication under Article 15(1) RPBA annexed to the summons to oral proceedings, the board gave a preliminary assessment of the case. In particular, the board raised objections under Article 84 EPC 1973 and Article 123(2) EPC with regard to claim 1 of the main and first auxiliary requests, submitted with the statement of grounds of appeal.

IV. In reply to the summons to oral proceedings, the appellant submitted with its letter dated 10 April 2017 a further set of amended claims according to a second auxiliary request and a third auxiliary request, respectively.

V. Oral proceedings were held on 9 May 2017.

During the oral proceedings the appellant filed a set of amended claims 1 to 6 of a new third auxiliary request, replacing the set of claims of the previous third auxiliary request.

The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the main request filed with the statement of grounds of appeal or, as an auxiliary measure, of one of the first auxiliary request filed with the statement of grounds of appeal, the second auxiliary request filed with letter of 10 April 2017, or the third auxiliary request filed during the oral proceedings of 9 May 2017.

At the end of the oral proceedings the chairman announced the decision of the board.

VI. The wording of claim 1 of each of the main and first to third auxiliary requests is as follows:

Main request:

"A microscope stage comprising:

a plate (120) disposed substantially orthogonal to an optical axis of a microscope, and arranged to support objects to be imaged;

an actuator (130) operably coupled to a proximal side of said plate (120) and operative to translate said proximal side in the direction substantially parallel to the optical axis; and

characterized by a flexural component (160) operably coupled to a distal side of said plate and operative to allow rotation of said plate (120) about a hinge axis (170) orthogonal to the optical axis, the

hinge axis being fixed in the direction of the optical axis."

First auxiliary request:

"1. A microscope stage arranged to be positioned in the optical path of a microscope, the stage comprising:

a plate (120) disposed substantially orthogonal to an optical axis of the microscope, and arranged to support objects to be imaged;

an actuator (130) operably coupled to a proximal side of said plate (120) and operative to translate said proximal side in the direction substantially parallel to the optical axis; and

characterized by a flexural component (160) operably coupled to a distal side of said plate and operative to allow rotation of said plate (120) about a hinge axis (170) orthogonal to the optical axis, the hinge axis being fixed in the direction of the optical axis."

Second auxiliary request:

"1. A microscope stage for use with a microscope having an optical axis, the stage comprising:

an X-Y translation base (110);

base a plate [*sic*] (120) repositionable substantially orthogonally to the optical axis in X and Y directions on the base 110 [*sic*], arranged to support objects to be imaged and allowing movement of objects at least in a Z direction which is parallel to the optical axis;

an actuator (130) operably coupled to a proximal side of said plate (120) and operative to translate said proximal side in the Z direction; and a flexural hinge component (160) having a hinge axis (170), the

hinge being operably coupled to a distal side of said plate and operative to allow rotation of said plate (120) under the influence of said actuator about the hinge axis (170) orthogonal to the optical axis, the stage being characterised in that the hinge axis is fixed in relation to the Z direction."

Third auxiliary request:

"1. A microscope stage for use with a microscope having an optical axis, the stage comprising:

a translation base (110);

a plate (120), arranged to support objects to be imaged and allowing movement of objects at least in a Z direction which is parallel to the optical axis;

an actuator (130) operably coupled to a proximal side of said plate (120) and operative to translate said proximal side in the Z direction; and a flexural hinge component (160) having a hinge axis (170), the flexural hinge component (160) being rigidly attached to the base so that the flexural component is fixed in the Z direction and operative to allow rotation of said plate (120) under the influence of said actuator about the hinge axis (170) orthogonal to the optical axis, the hinge axis being fixed in relation to the Z direction, the stage being characterised in that said translation base (110) supports said plate (120) so that the plate (120) is repositionable substantially orthogonally to the optical axis in X and Y directions, and in that the flexural hinge component (160) is operably coupled to a distal side of the plate (120)."

Reasons for the Decision

1. The appeal is admissible.

2. *Main request - Claim 1 - Article 123(2) EPC*

2.1 Claim 1 of the main request is directed to a microscope stage comprising a plate arranged to support an object to be imaged, the plate being disposed orthogonal to a direction identified in the claim as the optical axis of a microscope. According to claim 1, the microscope stage includes an actuator operative to translate the proximal side of the plate in a direction parallel to the optical axis, and a flexural component coupled to a distal side of the plate and operative to allow rotation of the plate about a hinge axis orthogonal to the optical axis.

2.2 Claim 1 requires, in addition, that "the hinge axis [is] fixed in the direction of the optical axis".

The appellant submitted that this feature was based on paragraph [0021] of the description of the application as originally filed.

This passage of the description discloses an embodiment of the flexural component, the component being represented in Fig. 4 and 5. According to this passage, the flexural component has means that "may allow flexural component 160 to be rigidly attached to X-Y translation base 110 which is typically fixed in the Z dimension", the "Z dimension" or Z direction corresponding, in the context of the application, to the optical axis of the microscope referred to in claim 1. In addition, according to the same paragraph

[0021], the flexural component has means that "may allow flexural component 160 to be rigidly or fixedly attached to" the plate under consideration.

The board agrees with the appellant in as much as the particular structural arrangement disclosed in the mentioned passage and specifically involving a flexural component "rigidly or fixedly attached to" the plate and "rigidly attached to" an X-Y translation base, which "is fixed in" the direction of the optical axis, implies that the hinge axis determined by the arrangement would also be "fixed in the direction of the optical axis" as required by the claimed subject-matter. However, claim 1, apart from specifying that "the hinge axis [is] fixed in the direction of the optical axis", does not require any of the above mentioned structural features, let alone those required for ensuring that the hinge axis is fixed in the direction of the optical axis. In particular, claim 1 requires that the flexural component is "operably coupled to a distal side of said plate", without however requiring that the plate is "rigidly or fixedly attached" to the flexural component as in the structural arrangement mentioned above and disclosed in paragraph [0021] of the description. The claim does not even require rigidly fixing the flexural component to a base fixed in the dimension of the optical axis. As a consequence, the claimed subject-matter constitutes a generalisation of the disclosure of paragraph [0021] of the application as filed beyond the degree of generalisation that the corresponding disclosure would allow. More specifically, although the claimed feature "the hinge axis being fixed in the direction of the optical axis" is - as submitted by the appellant - derivable from the disclosure of paragraph [0021] of the application as filed, there is no support in the

application as originally filed for isolating this feature and extracting it from the specific technical context in which it is disclosed.

During the oral proceedings the appellant submitted that the skilled person reading claim 1 would understand that the feature "the hinge axis being fixed in the direction of the optical axis" implicitly required the features of the specific arrangement mentioned above and disclosed in paragraph [0021] of the original description.

However, none of the features defined in claim 1 supports the contention of the appellant in this respect. In particular, the claimed subject-matter encompasses the specific arrangement disclosed in paragraph [0021], but it also encompasses other arrangements departing from it. For instance, claim 1 encompasses arrangements in which the hinge axis is, as claimed, fixed in the direction of the optical axis, but in which the plate is not rigidly or fixedly attached to the flexural component, and/or in which the flexural component is not rigidly attached to a base fixed in the direction of the optical axis; however, none of these arrangements are disclosed in, or are derivable from, the disclosure of paragraph [0021] of the original description.

2.3 Apart from paragraph [0021] of the description, no other part of the application as originally filed has been cited by the appellant as a possible basis for the amendments made to claim 1. No basis is apparent to the board either. The board thus concludes that the subject-matter of claim 1 of the main request constitutes a generalisation of the disclosure of paragraph [0021] of the original description that

extends beyond the content of the application as originally filed (Article 123(2) EPC).

3. *First auxiliary request - Claim 1 - Article 123(2) EPC*

Claim 1 of the first auxiliary request differs from claim 1 of the main request essentially in that the introductory phrase of the claim requires that the claimed microscope stage is "arranged to be positioned in the optical path of a microscope". This amendment has no influence on the finding in point 2 above that the claimed feature "the hinge axis being fixed in the direction of the optical axis" constitutes an inadmissible generalisation of the content of the application as originally filed.

Therefore, the subject-matter of claim 1 of the first auxiliary request does not fulfil the requirements of Article 123(2) EPC for the same reasons given in point 2 above in respect of claim 1 of the main request.

4. *Second auxiliary request - Claim 1 - Article 123(2) EPC*

Amended claim 1 according to the second auxiliary request includes the feature "the hinge axis is fixed in relation to the Z direction", this direction being defined in the claim as "a Z direction which is parallel to the optical axis". Consequently, claim 1 of this request requires that the hinge axis is fixed in the direction of the optical axis and, therefore, the claim also includes the same feature objected to in point 2 above with respect to claim 1 of the main request.

In addition, when compared with claim 1 of the main request, claim 1 of the second auxiliary request

includes further amendments, but these amendments do not overcome the objection raised in point 2 above with regard to the feature relating to the hinge axis being fixed in the direction of the optical axis. In particular, claim 1 of the second auxiliary request requires that the microscope stage comprises an "X-Y translation base", and that the plate is "repositionable substantially orthogonally to the optical axis in X and Y directions on the base". However, neither the provision of the X-Y translation base, nor the repositionable arrangement of the plate as claimed have an influence on the conclusion in point 2 above that the fixed arrangement of the hinge axis in the direction of the optical axis constitutes a generalisation of the disclosure of paragraph [0021] of the original description that extends beyond the content of the application as originally filed. More particularly, although claim 1 requires that the hinge is "operably coupled" to a distal side of the plate and the claimed subject-matter presupposes - as submitted by the appellant - some interconnection between the plate and the translation base, claim 1 leaves open whether or not the flexural component is rigidly or fixedly attached to both the plate and the translation base.

Therefore, the subject-matter of claim 1 of the second auxiliary request does not fulfil the requirements of Article 123(2) EPC for the same reasons given in point 2 above in respect of claim 1 of the main request.

5. *Third auxiliary request - Claim 1 - Article 123(2) EPC*

Claim 1 of the third auxiliary request was filed during the oral proceedings. According to the appellant, the amendments made to claim 1 overcame the objection under

Article 123(2) EPC considered in points 2 to 4 above in view of paragraph [0021] of the description of the application as originally filed.

Claim 1 has been amended as to specify that "the flexural hinge component (160) [is] rigidly attached to the [translation] base so that the flexural component is fixed in the Z direction". However, according to an additional amendment made in the claim, the flexural hinge component "is operably coupled to a distal side of the plate", and the claim does not require that the flexural hinge component is rigidly or fixedly attached to the plate as disclosed in paragraph [0021] of the description. As a consequence, the claimed subject-matter encompasses embodiments in which the flexural hinge component, in addition to being operative to allow rotation of the plate with respect to the translational base as claimed, could for instance also be operative to allow displacements of the plate with respect to the translation base in directions orthogonal to the Z direction. This conclusion is further supported by the claimed feature according to which "said translation base (110) supports said plate (120) so that the plate (120) is repositionable substantially orthogonally to the optical axis in X and Y directions", this feature encompassing the possibility that the plate is repositionable in the X and the Y directions by means of the movement of the translation base, but also encompassing the possibility that the plate is repositionable with respect to the translation base in the X and the Y directions. The displacement or re-positioning of the plate with respect to the translation base in directions orthogonal to the Z direction, i.e. in the X and Y directions, is, however, not supported by the disclosure in paragraph [0021] of the original

description, and is even inconsistent with the arrangement, which is disclosed in this paragraph and which constitutes, according to the appellant's submissions, the basis for the claimed feature "the hinge axis being fixed in relation to the Z direction". Indeed, in this arrangement the flexural hinge component is rigidly attached to the translation plate and also rigidly or fixedly attached to the plate (paragraph [0021], second and third sentences, and Fig. 4 and 5), thus excluding the relative movement or re-positioning of the plate with respect to the translation base in the X and Y directions.

It follows that the mentioned amendments allow for a relative movement or re-positioning of the plate with respect to the translation base in the X and Y directions, thus amounting to a generalisation of the specific arrangement disclosed in paragraph [0021] of the original application. In addition, no basis for this generalisation can be found in the remaining parts of the application as originally filed. In particular, dependent claim 4 of the application as originally filed, which was also referred to by the appellant during the oral proceedings in support of the amended claimed subject-matter, refers to a flexural component comprising means "allowing said flexural hinge to be rigidly attached to said plate"; as already noted above, however, claim 1 does not require that the flexure hinge component is rigidly attached to the plate, and already for this reason original dependent claim 4 cannot constitute an adequate basis for the generalisation under consideration.

The board concludes that the subject-matter of claim 1 of the third auxiliary request constitutes an

inadmissible generalisation of the content of the application as originally filed (Article 123(2) EPC).

6. In view of the above considerations, the board concludes that none of the requests of the appellant is allowable and that the appeal must therefore be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

M. Kiehl R. Bekkering

Decision electronically authenticated