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D E C I S I O N
of 22 August 1994

Case Number: T 0623/92 - 3.4.2

Application Number: 87200720.8

Publication Number: 0244012

IPC: G03B 41/00, G03F 9/00, B25J 7/00

Language of the proceedings: EN

Title of invention:
Positioning device

Applicant:
N. V. Philips' Gloeilampenfabrieken

Opponent:
-

Headword:
Positioning device/PHILIPS

Relevant legal norms:
EPC Art. 123(2)

Keyword:
"Amendments - broadening of claim (no)"

Decisions cited:
T 0331/87

Catchword:
-



Case Number: T 0623/92 - 3.4.2

D E C I S I O N
of the Technical Board of Appeal 3.4.2
of 22 August 1994

Appellant: N. V. Philips' Gloeilampenfabrieken
Groenewoudseweg 1
NL-5621 BA Eindhoven (NL)

Representative: Cuppens, Hubertus Martinus Maria
International Octrooibureau B.V.,
Prof. Holstlaan 6
NL-5656 AA Eindhoven (NL)

Decision under appeal: Decision of the Examining Division of the European
Patent Office dated 20 February 1992 refusing
European patent application No. 87 200 720.8
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: E. Turrini
Members: R. Zottmann
B. Schachenmann

Summary of Facts and Submissions

I. European patent application No. 87 200 720.8 with publication No. 0 244 012 was refused by decision of the Examining Division.

The reason given for the refusal was that Claim 1 filed with the letter dated 25 March 1991 did not fulfil the requirement of Article 123(2) EPC.

In particular, the Division argued as follows: Said claim defines the fixture of the Z-actuator as having (a) the motor mounted on one of the supports, whereas originally (a1) said motor is mounted on the second, lower support. Option (a1) is necessary for the functioning of the positioning of the upper support. Option (a2) that the motor is mounted on the upper support which is comprised by feature (a), is not disclosed in the original application document and would require the change of several construction features. Therefore, option (a2) leads to an unacceptable broadening of the scope of said claim.

II. The Appellant (Applicant) lodged an appeal against said decision maintaining refused Claim 1.

III. In a communication pursuant to Article 110(2) EPC, the Board expressed its preliminary opinion that option (a2) comprised by feature (a) of Claim 1 is not unambiguously disclosed in the original application and that features of Claim 1 closely related to features (a)/(a1)/(a2) are unclear. The Board informed the Appellant by which amendments the existing deficiencies could be removed. Feature (a) should be replaced by feature (a1). As an alternative, deletion of feature (a) seemed to be acceptable under Article 123(2) EPC.

IV. To meet these objections the Appellant submitted a correspondingly amended Claim 1 comprising neither feature (a), (a1) or (a2) and requested that the decision under appeal be set aside on the basis of the following documents:

description: pages 1 to 3 as filed with the letter dated 16 November 1991; pages 4 to 20 as originally filed;

claims:

No. 1 filed with the letter dated 1 July 1994

No. 2 to 5 filed with the letter dated 25 March 1991;

drawings:

sheets 1/8 to 8/8 as originally filed.

V. Claim 1 reads as follows:

"A positioning device (1) comprising a first, upper and a second, lower support (9, 11) which are coupled to each other by means of at least two elastically deflexible rods (17) acting together as a parallelogram mechanism, said first, upper support (9) being displaceable with respect to a base (3) of the device (1) in directions parallel to coordinate directions X and Y of an orthogonal coordinate system X, Y, Z, said first, upper support (9) further being displaceable with respect to said second, lower support (11) in a direction parallel to the Z-direction by means of a Z-actuator (19), characterized in that the Z-actuator (19) comprises an electric motor (21) of which a driving shaft (111) is coupled to an eccentric (25) by means of which the lower support (11) is displaceable with respect to the upper support (9) in a direction parallel to one of the coordinate directions X or Y, said relative displacement of said supports (9, 11) effecting

simultaneous elastic deflection of said rods (17), said deflection effecting displacement of the upper support (9) with respect to the lower support (11) in a direction parallel to the Z-direction, and in that the lower support (11) is guided and supported with respect to the base (3) by means of a static bearing (15) which is prestressed in the Z-direction and which comprises a viscous carrier medium (13)."

Claim 5 reads as follows:

"An optical lithographic device (275) for the manufacture of integrated circuits provided with a positioning device (1) as claimed in Claim 1, characterized in that an engagement surface for a substrate (31) on the first support (9) is arranged at right angles to an optical axis of a fixedly arranged optical projection lens (277), which axis coincides with the Z-direction, said optical lithographic device (275) comprising, viewed in the Z-direction, in order of succession the said positioning device (1) and projection lens (277), a table (287) for a mask (289) that can be translated in the Z-direction and can be rotated about an axis of rotation parallel to the Z-direction, a condenser lens (301), a diaphragm (297), a shutter (296) and a light source (291) for repeatedly exposing the substrate (31)."

Claims 2 to 4 are dependent on Claim 1.

VI. Arguments supporting the opinion that (new) Claim 1 complies with Article 123(2) EPC were not submitted by the Appellant.

Reasons for the Decision

1. The appeal is admissible.
2. *Extent of examination*

Since the only ground given for refusal was infringement of Article 123(2) EPC, the question to be decided in this appeal procedure is whether or not the present claims comply with the provisions of said article, that is whether or not the subject-matter of said claims extends beyond the content of the application as originally filed.

3. *Article 123(2) requirements with regard to the claims*

- 3.1 The Board is satisfied that all features of Claim 1 are disclosed in the originally filed application; reference is made to Figures 1 to 3, 5 and 6, the corresponding description and particularly to page 2 line 37 to page 3 line 7, page 6 lines 6 to 15 and page 20 from line 4 on and Claims 1 and 3.

It remains the question whether deletion of feature (a) without replacing it by feature (a1) entails an unacceptable broadening of the scope of said claim. Decision T 0331/87 establishes the requirements to be fulfilled when removing a feature from a claim: (1) the feature was not explained as essential in the disclosure; (2) it is not, as such, indispensable for the function of the invention in light of the technical problem it serves to solve; (3) the removal requires no real modification of other features to compensate for the change.

The skilled person being presented with the information of Claim 1 that the Z-actuator comprises an electric motor of a driving shaft coupled to an eccentric by means of which the upper support is displaceable with respect to the lower support in a direction parallel to one coordinate direction, this displacement of the supports being a relative displacement, would easily realize that mounting of the motor on one of the supports or on a member rigidly connected with one of said supports and cooperation of the (eccentric of the) Z-actuator with the other support or vice versa would equally effect the desired displacement. Mounting of the motor on other parts of the device, e.g. on the base, does not come into consideration since every displacement in the X- and Y-direction of the upper support (and thus equal displacement of the lower support because of its coupling to the upper support) with respect to the base would require a complicated mechanism effecting a corresponding follow-up displacement of the motor. It is, therefore, obvious that the position of the motor and the Z-actuator on a certain of said two supports or, respectively, of said members is of no relevance to the problem to be solved (see page 2 paragraph 3 filed with the letter of 16 November 1990 and the paragraph bridging pages 1 and 2 of the grounds of appeal: development of a positioning device in which the upper support can perform displacements in the Z-direction independent of the displacements of the upper support in the X- and Y-directions by simple, robust and reliable means which do not introduce play, friction or hysteresis). Furthermore, nowhere in the application it is stated that feature (a1) is essential to the invention, see e.g. page 6 lines 8 to 15: "... the first support 9 can perform a relative displacement parallel to the ... Y-axis with respect to the second support 11 ... This

displacement can be obtained by means of an actuator 19 secured to the second support." It is thus not indispensable for the characterization of the subject-matter of the application, that a feature determining the place where the motor is mounted, such as (a1), is contained in Claim 1 and, apparently, removal of said feature does not require real modifications of other features to compensate for said change.

Thus all three requirements set up in decision T 0331/87 are fulfilled. This applies in the opinion of the Board also to the passage describing the two modes of operation which passage is contained in original Claim 1 but not in Claim 1 as presently worded. Re-insertion of such features in Claim 1 would unduly restrict the scope of said claim and deprive the Appellant of the broadest possible protection.

3.2 Claims 2 to 5 are, except for unimportant amendments, equal to originally filed Claims 2, 4, 5 and, respectively, 6.

3.3 Thus, it is the opinion of the Board that the claims meet the requirements of Article 123(2) of the EPC.

4. Therefore, the only ground given for refusal (infringement of Article 123(2) EPC) has been overcome by filing a new Claim 1.

However, substantive examination with respect to all the other requirements of the EPC still has to be carried out in respect of the substantially amended claims now on file. To avoid loss of an instance with respect to the matters not (fully) dealt with by the first instance, the Board makes use of its power under

Article 111(1) EPC to remit the case to the first instance for further prosecution.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the Examining Division with the order to continue the examination on the basis of Claims 1 filed with the letter dated 1 July 1994 and Claims 2 to 5 filed with the letter dated 25 March 1991.

The Registrar:

P. Martorana

The Chairman:

E. Turrini

