

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES MORGAN MURPHY

Appeal No. 2001-1570
Application No. 09/081,393¹

ON BRIEF²

Before RUGGIERO, BLANKENSHIP and SAADAT, Administrative Patent Judges.

SAADAT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the Examiner's final rejection of claims 1-8, 10-12, 14-17 and 21-30. Claims 9 and 13 have been canceled and claims 18-20 are withdrawn from consideration as being drawn to a non-elected invention.

We affirm-in-part.

¹ Application for patent filed May 18, 1998, which claims the filing priority benefit under 35 U.S.C. § 119 of Provisional Application No. 60/051,694, filed July 3, 1997.

² The Oral Hearing set for September 18, 2002 was waived by Appellant in a communication, received by facsimile, on July 22, 2002.

BACKGROUND

Appellant's invention is directed to a second-stage, fine-positioning piezoelectric microactuator for positioning the head of a disk drive relative to a recording surface. The microactuator, as depicted in Figure 6, includes a flat metal sheet having a central beam 80 and two bent-up tabs 72 and 74 extending from opposite sides of the beam (specification, page 8). Piezoelectric elements 76 and 78 are attached to the tabs and form two monomorphs aligned symmetrically on either side of the central beam.

Representative independent claim 1 is reproduced below:

1. Apparatus for positioning a head adjacent a recording surface of a recording media, said recording surface defining multiple data track locations, the apparatus comprising:

a movable support arm supporting the head adjacent the recording surface and movable for course positioning of the head relative to each of the data track location; and

fine positioning means disposed on the movable support arm, for selectively mounting and fine [fine] positioning of the head relative to each of the data track location wherein the fine positioning means includes two monomorphs constructed from a metal sheet having symmetrically bent tabs on which a piezoelectric element is attached.

The Examiner relies on the following reference in rejecting the claims:

Boutaghou et al. (Boutaghou) 5,521,778 May 28, 1996

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Claim 27 stands rejected under 35 U.S.C. § 112, second paragraph as being indefinite.

Claims 1-8, 10-12, 14-17 and 21-30 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Boutaghou.

Rather than reiterate the viewpoints of the Examiner and Appellant regarding the above-noted rejections, we make reference to the answer (Paper No. 19, mailed October 19, 2000) for the Examiner's reasoning and the appeal brief (Paper No. 18, filed October 6, 2000) for Appellant's arguments thereagainst.

OPINION

With respect to the rejection of claim 27 under the second paragraph of 35 U.S.C. § 112, Appellant asserts that the term "pivot pin" is merely a typographical error and was intended to refer to the previously recited "pivot point" (brief, page 11). The Examiner agrees with Appellant's position and states that an amendment to correct "pin" to "point" would remove the rejection³ (answer, page 5). Accordingly, the 35 U.S.C. § 112 rejection of claim 27 is sustained pro forma.

³ Appellant's amendments (paper No. 11, filed April 10, 2000 and Paper No. 14, filed May 26, 2000) that included changes to claim 27 to correct this typographical error, were denied entry by the Examiner. Additionally, the Examiner has withdrawn the rejection with respect to "the lever arm" based on Appellant's argument asserting that the claim recites "wherein a lever arm is attached to the pivot point" and provides antecedent basis for "the lever arm."

Turning now to the 35 U.S.C. § 102(b) rejection of the claims, we note that Appellant states his intention that claims 1-8, 10-12, 14-17 and 21-30 be grouped together so that they stand and fall together (brief, page 10). Accordingly, we will consider the claims as one group and will limit our consideration to independent claim 1 as the representative claim of the group.

To rebut the 35 U.S.C. § 102 rejection of the claims, the focus of Appellant's arguments is that Boutaghou does not disclose monomorphs constructed from a metal sheet having two bent up tabs with attached piezoelectric elements (brief, page 12). Additionally, Appellant points out that the claimed "bent tabs" and "bent-up tabs" are different from tabs 47 of Boutaghou, which are "bent" only when the piezoelectric elements are energized (id.).

The Examiner responds to Appellant's arguments by relying on the disclosure of Boutaghou stating "PZT elements 44 preferably should be bi-morph in nature" (column 6, line 14) and concludes that the reference does not preclude using monomorphs since both bi-morphs and monomorphs are well known (answer, page 5). Additionally, the Examiner asserts that each piezoelectric element 44 on the sides of tab 47 of Boutaghou can be considered a monomorph structure (id.). The Examiner further argues that

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piezoelectric elements 44 cause tabs 47 to undergo deformation during the operation of the microactuator and thus, read on the claimed recitation of "bent tabs" and "bent-up tabs" (answer, page 6).

A rejection for anticipation under section 102 requires that the four corners of a single prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation. See Atlas Powder Co. v. Ireco Inc., 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999); In re Paulsen, 30 F.3d 1475, 1478-79, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

After reviewing Boutaghou, we agree with Appellant's assertion that the reference includes no teaching or suggestion related to monomorphs made of a metal sheet having bent tabs on which a piezoelectric element is attached. Boutaghou provides for PZT elements 44 which are preferably bi-morph in nature and are bonded to the sides of spokes 47 (column 6, lines 5-13). The Examiner provides no specific reference in Boutaghou related to the use of monomorph elements, nor can we find the necessary teachings in the reference that would have pointed to using such elements.

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Additionally, in contrast to the Examiner's assertion and different from the claimed monomorphs having bent tabs, the disclosed spokes of Boutaghou are bent only when the bi-morph elements are energized by an electrical potential and current (column 6, lines 14-19). Furthermore, we find nothing in Boutaghou that relates to the use of monomorphs formed of a piezoelectric element attached to bent tabs of a metal sheet. In fact, the Examiner has incorrectly identified bi-morph elements 44 attached to the sides of spoke 47 as two monomorphs, one on each side of the spoke, that may be combined to produce a bi-morph structure. Additionally, the Examiner's reference to the bent spokes that are deformed during the movement of the actuator, falls short of the claimed "two monomorphs constructed from a metal sheet having symmetrically bent tabs." In that regard, the spokes of Boutaghou, although bendable and deformable by an electrical potential and current energizing the bi-morphs, include neither the metal sheets nor any portions that are the same as the claimed "bent tabs." Accordingly, because the claimed monomorphs on bent tabs is not taught by Boutaghou, the prior art does not anticipate the claims and the 35 U.S.C. § 102 rejection of claims 1-8, 10-12, 14-17 and 21-30 cannot be sustained.

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CONCLUSION

In view of the foregoing, the decision of the Examiner rejecting claim 27 under 35 U.S.C. § 112 is affirmed, but reversed with respect to the rejection of claims 1-8, 10-12, 14-17 and 21-30 under 35 U.S.C. § 102.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

JOSEPH F. RUGGIERO)	
Administrative Patent Judge)	
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