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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RYOHEI KOKAWA¹

Appeal 2018-004695
Application 15/030,914
Technology Center 2800

Before BRADLEY W. BAUMEISTER, MICHAEL J. STRAUSS, and
RUSSELL E. CASS, *Administrative Patent Judges*.

BAUMEISTER, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–4, which constitute all claims pending in this application. Appeal Br. 4.² We have jurisdiction under 35 U.S.C. § 6(b). Oral argument was held on December 9, 2019. A copy of the transcript will be added to the record in due course. We reverse.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Shimadzu Corporation. Appeal Brief filed January 2, 2018 (“Appeal Br.”), 2.

² Rather than repeat the Examiner's positions and Appellant's arguments in their entirety, we refer to the above mentioned Appeal Brief, as well as the following documents for their respective details: the Final Action mailed May 9, 2017 (“Final Act.”); the Examiner's Answer mailed February 8, 2018 (“Ans.”); and the Reply Brief filed March 28, 2018 (“Reply Br.”).

CLAIMED SUBJECT MATTER

Appellant describes the present invention as follows:

The invention provides a cantilever attachment fitting that makes it easy to attach a [scanning probe microscope] cantilever to a cantilever holder. The cantilever attachment fitting has an attachment platform of which the upper surface is to have a cantilever placed on, a pressing member for pressing the cantilever against the upper surface of the attachment platform, and a lifting mechanism for moving the pressing member upward from the upper surface of the attachment platform. The cantilever attachment fitting is further provided with [the following elements]: a sliding platform having a sliding surface for sliding the cantilever toward the attachment platform; a base for fixing the cantilever holder in the horizontal direction so that the attachment platform is in a predetermined location relative to the sliding platform; and a pressing unit for pressing downward the cantilever holder fixed to the base.

Abstract.

Independent claim 1, reproduced below, illustrates the appealed claims:

1. A cantilever attachment fitting to be used for attaching a cantilever to a cantilever holder, comprising:
 - an attachment platform including an upper surface configured to have a cantilever placed on the upper surface,
 - a pressing member for pressing the cantilever against the upper surface of the attachment platform,
 - a lifting mechanism for moving the pressing member upward from the upper surface of the attachment platform,
 - a sliding platform having a sliding surface, the sliding surface being configured to allow said cantilever to be slid along the sliding surface by a person toward said attachment platform;
 - a base for fixing said cantilever holder in the horizontal direction so that said attachment platform is in a predetermined location relative to said sliding platform; and

a pressing unit for pressing downward said cantilever holder fixed to said base so that the cantilever is attached to the cantilever holder,

wherein the upper surface of the attachment platform and said sliding surface of the sliding platform face upward relative to the vertical direction, the vertical direction being a direction perpendicular to a plane of the ground that supports the cantilever attachment fitting.

STATEMENT OF THE REJECTIONS

Claims 1–4 stand rejected under 35 U.S.C. § 112(b) or pre-AIA 112, ¶ 2, as being indefinite. Final Act. 3.

Claims 1–4 stand rejected under 35 U.S.C. § 103 as being unpatentable. Final Act. 3–7.

The Examiner bases the prior-art rejection on the following references:

Name	Reference	Date
Young et al.	5,705,814	Jan. 6, 1998
Howard	5,450,746	Sept. 19, 1995

STANDARD OF REVIEW

We review the appealed rejections for error based upon the issues identified by Appellant, and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential).

THE INDEFINITENESS REJECTION

Determinations and Arguments

The Examiner initially finds that there is insufficient antecedent basis for claim 1’s term “the vertical direction” and determines that “it is therefore

unclear which direction is ‘the vertical direction.’” Final Act. 3. The Examiner does not further address the indefiniteness rejection either in the “Response to Arguments” section of the Final Action (*see id.* at 2) or in the Examiner’s Answer (*see* Ans. 3–5).

The Examiner does clarify in the Answer’s discussion of the obviousness rejection, though, how the claim language, “the vertical direction” is being interpreted:

Although it appears that Appellant believes that claim 1 is limited only to the interpretation that the “vertical direction” is the positive Z-direction perpendicular to and away from the ground, claim 1 can reasonably be interpreted that the “vertical direction” is instead the negative Z-direction (which is still perpendicular to and away from the ground); in which case “upward” becomes “downward”, and “upper” becomes “lower”.

Ans. 5.

As such, we understand the Examiner’s position to be that claim 1’s recitation of “the vertical direction” is unclear because it might be referring to a direction perpendicular to the ground that is either away from the ground (the positive Z-direction) or towards the ground (the negative Z-direction).

Appellant argues that, reading claim 1 as a whole, it is reasonably clear that the recited “vertical direction” refers to the positive Z direction.

Appeal Br. 5–6.

Analysis

For the purposes of the indefiniteness rejection, we need not decide whether the claim recitation of “the vertical direction” is limited to the positive Z-direction, as Appellant urges, or is broad enough to read on either direction of a vertical axis (either the positive or negative Z-direction), as the

Examiner determines. Even if we were to assume, solely for the sake of argument, that the Examiner correctly determined that “the vertical direction” corresponds to the vertical axis that could indicate either the positive or the negative direction, that interpretation would not render the claim scope indefinite. That interpretation merely would make the claim scope generic to two possible embodiments and, therefore, broader than Appellant urges it to be. The legal principle has been long and clearly established that breadth of a claim is not to be equated with indefiniteness. *See, e.g., In re Miller*, 441 F.2d 689, 693 (CCPA 1971).

Accordingly, we do not sustain the indefiniteness rejection of independent claim 1 or of dependent claims 2–4.

THE OBVIOUSNESS REJECTION

Determinations and Arguments

The Examiner finds that Young discloses all of the limitations of claim 1 with the exception that “there is no explicit disclosure of sliding the cantilever by a person along the sliding surface.” Final Act. 4–5. The Examiner finds that Howard teaches that the removal and replacement of such a cantilever and holder can be performed by a person, and the Examiner concludes that motivation existed to have modified Young according to the teachings of Howard. *Id.* at 5.

The embodiment of Young’s Figure 6 on which the Examiner relies differs from the present invention, *at least as disclosed*, in some notable aspects. Primarily, Young’s probe mount pickup mechanism 32 has an orientation that essentially is upside down (i.e., inverted) relative to the orientation of Appellant’s cantilever holder 20. That is, the present

invention is designed to hold the cantilever down upon the upper surface of an attachment platform 21, whereas Young's probe pickup mechanism is designed to hold the cantilever 4 up against the bottom surface of the probe mount 32. *Compare, e.g.,* Appellant's Figure 1 *with* Young's Figure 6.

The Examiner and Appellant do not disagree on this fact. Rather, the Examiner interprets Appellant's claim 1 to be drafted broadly enough reasonably to read additionally on such an upside down orientation. As noted in the preceding section of this Opinion, the Examiner reasons, as follows:

Although it appears that Appellant believes that claim 1 is limited only to the interpretation that the "vertical direction" is the positive Z-direction perpendicular to and away from the ground, claim 1 can reasonably be interpreted that the "vertical direction" is instead the negative Z-direction (which is still perpendicular to and away from the ground); in which case "upward" becomes "downward", and "upper" becomes "lower".

Ans. 5.

Appellant presents various arguments for why the Examiner's failure to take the recited directions into consideration leads to an unreasonably broad construction of the claim language. Appeal Br. 6. For example, Appellant argues that claim 1 recites a *lifting* mechanism, whereas Young's probe 4 is lowered, which is the opposite of lifting. *Id.* Appellant also argues, "it is the Examiner's position that a *lower* surface of the mount 32 corresponds to the recited sliding surface that *faces upward.*" *Id.* (citing Final Act. 4:14–20).

Analysis

Appellant's arguments are persuasive. As previously noted, the Examiner appears to justify the broad interpretation of "upward" and "the

vertical direction” on the premise that “the vertical direction” is broad enough to mean either the positive or negative Z-direction. Ans. 5. But this adopted interpretation requires reading the claim term “vertical direction” in isolation and out of context from the remainder of the claim. The Examiner even admits that in order for the claim to read on the cited art, the claim language “‘upward’ becomes ‘downward’, and ‘upper’ becomes ‘lower’.” *Id.*

That is, the Examiner acknowledges that he premises the adopted claim interpretation on broadly attributing meanings to various claim terms that are the exact opposite of their generally understood meanings. Such interpretations run contrary to the well-established principle that during examination of a patent application, pending claims are given their broadest reasonable construction *consistent with the specification*. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969); *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004).

Furthermore, the Examiner neither takes the position, nor cites evidence or reasoning sufficient to support a conclusion, that Young’s device would be operable in an upside-down orientation. Final Act. 3–7; Ans. 3–5.

Accordingly, we do not sustain the obviousness rejection of independent claim 1 or of dependent claims 2–4.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
1-4	112(b)	Indefiniteness		1-4
1-4	103	Young, Howard		1-4
Overall Outcome				1-4

REVERSED