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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOCHEN BRETSCHNEIDER and THOMAS PITZ

Appeal 2018-008425
Application 14/732,202
Technology Center 2100

Before BRADLEY W. BAUMEISTER, JASON V. MORGAN, and
DAVID J. CUTITTA II, *Administrative Patent Judges*.

CUTITTA, *Administrative Patent Judge*.

DECISION ON APPEAL
STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1 and 3–9, all of the pending claims.² We have jurisdiction under 35 U.S.C. § 6(b). Oral arguments were heard on February 26, 2020. A transcript of that hearing will be added to the record in due time.

We AFFIRM.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as SIEMENS AKTIENGESELLSCHAFT. Appeal Br. 2.

² Claim 2 is cancelled. Appeal Br. 2.

CLAIMED SUBJECT MATTER

Appellant's "invention relates to a method for controlling a metal-cutting machine tool by providing a parts program for controlling the metal-cutting machine tool, wherein the parts program describes a number of cutting path sections running next to one another for producing a 3D contour." Spec. ¶ 2.³

Claims 1 and 9 are independent. Claim 1, reproduced below, exemplifies the claimed subject matter:

1. A method for controlling a metal-cutting machine tool with a parts program integrated on a Computer Aided Design/Computer Aided Manufacturing/Post Processor (CAD/CAM/PP) system, comprising:

describing with the parts program a path composed of a plurality of adjacent cutting path sections representing a 3D contour; with each cutting path section comprising a series of path elements composed of support points and line elements connecting respective pairs of the support points;

defining a tolerance value;

analyzing at least a part of a first of the cutting path sections as to whether the defined tolerance value is satisfied in relation to at least one path element of at least one second cutting path section adjacent to the first cutting path section;

separately examining a plurality or each of the support points of the first cutting path section by taking into account all support points located in a predefined spatial region around the support point to be examined,

³ Throughout this Decision we refer to: (1) Appellant's Specification filed June 5, 2015 ("Spec."); (2) the Final Office Action mailed October 18, 2017 ("Final Act."); (3) the Appeal Brief filed March 27, 2018 ("Appeal Br."); and (4) the Examiner's Answer mailed June 27, 2018 ("Ans.").

wherein the predefined spatial region is a sphere having a center point located at the support point to be examined;

optimizing a course of the path by modifying, adding to or removing from the first cutting path section at least one path element so that the defined tolerance value is satisfied; and

simultaneously controlling the metal-cutting machine in accordance with the optimized course of the path in real-time operation during a workpiece processing.

Appeal Br. 8 (Claims Appendix).

REFERENCES

The references⁴ relied upon by the Examiner are:

Name	Reference	Date
Kimura	US 3,619,581	Nov. 9, 1971
Higasayama	US 5,923,561	July 13, 1999
Roders	WO 2016/078781 A1	May 26, 2016

REJECTIONS

The Examiner rejects claims 1, 3–5, and 7–9 under 35 U.S.C. § 103 as unpatentable over the combined teachings of Roders and Higasayama. Final Act. 3–10.

The Examiner rejects claim 6 under 35 U.S.C. § 103 as unpatentable over the combined teachings of Roders, Higasayama, and Kimura. *Id.* at 10–11.

⁴ All citations to the references use the first-named inventor only.

OPINION

We review the appealed rejections for error based upon the issues identified by Appellant and in light of Appellant's arguments and evidence. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential). Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner rejects independent claims 1 and 9 under 35 U.S.C. § 103 as unpatentable over the combined teachings of Roders and Higasayama. Final Act. 2–5. Of particular relevance, the Examiner relies on Roders to teach “analyzing at least a part of a first of the cutting path sections” and “optimizing a course of the path by modifying, adding to or removing from the first cutting path section at least one path element so that the defined tolerance value is satisfied,” as recited in claim 1. *Id.* at 4 (citing Roders ¶ 9).

Appellant argues claims 1 and 9 together. Appeal Br. 4. As such, we select claim 1 as representative of the independent claims. *See* 37 C.F.R. § 41.37(c)(1)(iv). Appellant argues Roders fails to teach “optimizing a course of the path by modifying, adding to or removing from the first cutting path section,” as recited in claim 1, because “Roders only teaches insertion or addition” (i.e., adding to the first cutting path), but not “modifying or removing from the first cutting path.” Appeal Br. 4.

The Examiner responds, “since the claims use the conjunction ‘or’ in ‘modifying, adding to or removing’, Examiner needed to map only one of the three possible changes, which is ‘adding’.” Ans. 3.

Appellant's argument is unpersuasive. Based on the disjunctive language recited in the disputed limitation, we determine the claim only requires optimizing a course of the path by *one of* (a) modifying, (b) adding

to or (c) removing from the first cutting path section. *See Brown v. 3M*, 265 F.3d 1349, 1351 (Fed. Cir. 2001) (When a claim contains alternatives, the claim is met if any of the alternatives is known in the prior art.) Moreover, Appellant fails to show error in the Examiner's finding (Final Act. 4) that Roders' inserting of an auxiliary line teaches adding to the first cutting path section. Final Act. 4 (citing Roders ¶ 9); Ans. 3.

Next, Appellant argues "[t]he present invention also differs from Roders with respect to the steps of optimizing and analyzing" because Roders "teaches that analyzing and optimizing may only be performed on the controller itself during machining" but "[t]he present invention allows for the option of performing the steps of analyzing and optimizing both beforehand as well as on a different machine, a PC." Appeal Br. 5 (citing Roders ¶¶ 12, 31).

This argument is unpersuasive because we agree with the Examiner that "the current claims do not disclose the concept of analyzing and optimizing beforehand on a PC." Ans. 3. Appellant, therefore, argues for patentability on the basis of a limitation that is not recited in the claim. Limitations not appearing in the claims cannot be relied upon for patentability. *In re Self*, 671 F.2d 1344, 1348 (CCPA 1982).

Claim 1 further recites

separately examining a plurality or [sic] each of the support points of the first cutting path section by taking into account all support points located in a predefined spatial region around the support point to be examined, wherein the predefined spatial region is a sphere having a center point located at the support point to be examined.

Appeal Br. 8.

The Examiner finds “Roders teaches separately examine a plurality [of] each of the support points of the first cutting path section by taking into account all support points located in a predefined spatial region around the support point to be examined.” Ans. 5; Final Act. 4 (citing Roders ¶ 34). The Examiner finds “Roders does not teach that the predefined spatial region is a sphere having a center point located at the support point to be examined. However, Higasayama teaches such spatial region.” Ans. 5; Final Act. 5 (citing Higasayama 16:35–60). The Examiner determines that motivation existed “to modify Roders by implementing the limitations as taught by Higasayama because that would make the definition points (support points) spaced apart by an optimal distance.” Final Act. 5.

Appellant argues

Though both the present invention and that of Higasayama teach the use of a sphere, they differ in what entities are to be considered within that sphere. The present invention teaches that optimization is based upon support points other than the point at the center of the sphere and based on other courses of paths: “taking into account all support points located in a predefined spatial region around the support point to be examined, wherein the predefined spatial region is a sphere having a center point located at the support point to be examined” (see paragraph [0054] and Figure 8). The size of this sphere can also be changed in order to increase or decrease the number of support points to be considered. On the other hand, Higasayama (column 16, lines 40-60, Figure 16) only teaches the use of two points (the center of the sphere and the intersection of the sphere with the path), only teaches consideration of the single path, and does not change the size of the sphere. Thus, the present invention and Higasayama base their optimization on different factors.

Appeal Br. 5.

In response to Appellant’s argument that Higasayama “does not change the size of the sphere,” (*id.*) the Examiner explains that the claimed limitation “has nothing about the size of the sphere, much less changing the size of the sphere” (Ans. 5). We agree with the Examiner and find this argument unpersuasive because Appellant argues for patentability on the basis of a limitation that is not recited in the claim. *In re Self*, 671 F.2d at 1348.

In response to Appellant’s arguments that Higasayama “only teaches the use of two points (the center of the sphere and the intersection of the sphere with the path), [and] only teaches consideration of the single path” (Appeal Br. 5), the Examiner finds “Rodgers teaches separately examin[ing] a plurality of each of the support points of the first cutting path section by taking into account all support points located in a predefined spatial region around the support point to be examined.” Ans. 5.

Appellant’s arguments are unpersuasive, then, because the Examiner relies on Rodgers rather than Higasayama to teach multiple paths and “taking into account all support points,” as claimed, and therefore the arguments are not responsive to the rejection. *See Nat’l Steel Car, Ltd. v. Canadian Pac. Ry., Ltd.*, 357 F.3d 1319, 1336–37 (Fed. Cir. 2004) (rejecting argument directed at the wrong reference). Thus, we determine the Examiner has shown that all elements of the limitation at issue here are taught by the combination of Rodgers and Higasayama, and that Appellant has not demonstrated error in the Examiner’s findings.

Appellant presents several other arguments at the oral hearing in addition to the arguments discussed above. To the extent any of these arguments do not appear in the Appeal Brief, we decline to consider such

arguments raised for the first time in the oral hearing. This is because these arguments are deemed waived in the absence of a showing of good cause by Appellant, because the Examiner has not been provided a chance to respond. *See* 37 C.F.R. §§ 41.41(b)(2), 41.47(e)(1); *In re Hyatt*, 211 F.3d 1367, 1373 (Fed. Cir. 2000) (noting that an argument not first raised in the brief to the Board is waived on appeal). Appellant has provided this record with no such showing of good cause.

For the reasons discussed, Appellant has not persuaded us of error in the Examiner's obviousness rejection of independent claim 1. Accordingly, we sustain the Examiner's rejection of that claim, as well as independent claim 9, which recites similar claim language and for which Appellant presents similar arguments. Appeal Br. 4–6. We likewise sustain the obviousness rejections of dependent claims 3–8, which Appellant does not argue separately. *Id.* at 6–7.

CONCLUSION

We affirm the Examiner's rejection of claims 1, 3–5, and 7–9 under 35 U.S.C. § 103 as unpatentable over the combined teachings of Roders and Higasayama.

We affirm the Examiner's rejection of claim 6 under 35 U.S.C. § 103 as unpatentable over the combined teachings of Roders, Higasayama, and Kimura.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	References	Affirmed	Reversed
1, 3-5, 7-9	103	Roders, Higasayama	1, 3-5, 7-9	
6	103	Roders, Higasayama, Kimura	6	
Overall Outcome			1, 3-9	

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED