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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MARCO KÖHLER, GERHARD GÖMMEL,
FREERK JACOBUS OUDE KOTTE, and THOMAS RETTIG

Appeal 2019-006805
Application 14/893,456
Technology Center 2800

Before JENNIFER S. BISK, JASON J. CHUNG, 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 17–35, all the claims under consideration. We have jurisdiction under 35 U.S.C. § 6(b). Oral arguments were heard on August 27, 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 AG. Appeal Br. 2.

CLAIMED SUBJECT MATTER

Invention

Appellant's claimed subject matter relates to an electric motor having a stator configured "to efficiently air-cool [the] electric motor without a housing." Spec. ¶ 7.² The stator includes stator sheets that each have a large lug that "projects radially outwards between . . . two tension strips adjacent to the large lug in the circumferential direction about the axis of rotation over the two adjacent tension strips and has cantilevers extending there about the axis of rotation which reach over the two adjacent tension strips." *Id.* at ¶ 9. Because "the tension strips are fixed in the axial direction by the cantilevers," the "tension strips thus cannot lift away from the stator" if "bending torque acts on the electric machine." *Id.* at ¶ 10. This reduces the "bending torque to be accepted by an individual tension strip" and so the "tension strips can therefore be dimensioned smaller" to reduce any adverse effect on cooling caused by the tension strips. *Id.*; see ¶ 6.

Exemplary Claim

Claims 17 and 31 are independent. Claim 17, reproduced below with certain limitations at issue italicized, exemplifies the claimed subject matter:

17. An electric machine, comprising:
a rotor supported in bearings for rotation about an axis of rotation;
a stator arranged in radial surrounding relationship with respect to the axis of rotation and including at least a plurality of first stator sheets which are stacked upon one another in the

² We refer to: (1) the originally filed Specification filed November 23, 2015 ("Spec."); (2) the Final Office Action mailed June 25, 2018 ("Final Act."); (3) the Appeal Brief filed April 1, 2019 ("Appeal Br."); and (4) the Examiner's Answer mailed July 11, 2019 ("Ans.").

direction of the axis of rotation, said first stator sheets having a number of recesses radially outside with respect to the axis of rotation to form grooves in parallel relationship to the axis of rotation;

tension strips arranged in the grooves and having ends;
 and

end rings connected at the ends of the tension strips,
 wherein said first stator sheets each have at least one first lug configured to project radially outwards between two tension strips adjacent to the first lug as viewed about the axis of rotation in a circumferential direction over the two adjacent tension strips, *said first lug on each first stator sheet having cantilevers configured to extend about the axis of rotation and to reach over the two adjacent tension strips.*

Appeal Br. 9 (Claims Appendix).

REFERENCES

The Examiner relies on the following prior art references:

Name	Number / Title	Date
King	US 4,712,292	Dec. 15, 1987
Ciciliani	US 2004/0000821 A1	Jan. 1, 2004
Ishikawa	US 2008/0315702 A1	Dec. 25, 2008
Tomohara	US 2009/0026872 A1	Jan. 29, 2009
Allen	US 2013/0229084 A1	Sept. 5, 2013
Timan	US 2015/0306975 A1	Oct. 29, 2015
Ozeki	JP 06-70452	Sept. 30, 1994

REJECTIONS

The Examiner makes the following rejections:

Claims	Statute	Basis	Final Act.
17-20, 22, 25, 27, 28	§ 103	Ciciliani, King	6
23, 24, 26	§ 103	Ciciliani, King, Ozeki	11
21	§ 103	Ciciliani, King, Allen	14
29	§ 103	Ciciliani, King, Ishikawa	15

Claims	Statute	Basis	Final Act.
30	§ 103	Ciciliani, King, Tomohara	16
31–34	§ 103	Timan, Ciciliani, King	18
35	§ 103	Timan, Ciciliani, King, Ozeki	25

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) (2018). We disagree with Appellant that the Examiner erred and adopt as our own the findings and reasons set forth by the Examiner to the extent consistent with our analysis herein. We add the following primarily for emphasis.

The Examiner relies on Ciciliani to teach or suggest all of the limitations of claim 17 but finds that “Ciciliani does not explicitly teach said first lug on each first stator sheet having cantilevers configured to extend about the axis of rotation and to reach over the two adjacent tension strips.” Final Act. 8. The Examiner, however, finds that King teaches or suggests this limitation:

King teaches (see figs. 16–17 and annotated fig. 15 below) said first lug (see annotated fig. 15 below) on each first stator sheet (these are the stator sheets 175 on which cantilevers 67 are formed, see annotated fig. 16 below) having cantilevers (67) configured to extend about the axis of rotation and to reach over the two adjacent tension strips (65, cantilevers 67 are on both sides of the lug contacting adjacent tensions strips 65).

Id.

Appellant argues the Examiner's proposed combination would not have been obvious because:

the configuration of the extensions 52 in Ciciliani to form fins 37 and to leave between the extensions 52 grooves 54 for passing bars 35 (Ciciliani's paragraph [0047] clearly mitigate against a modification of Ciciliani with the King's disclosure to arrive at the present invention because such a modification would, in fact, render Ciciliani unsatisfactory for its intended purpose of cooling and connecting the bars in the grooves. Ciciliani's intent in the configuration of the extensions is to maximize the spacing between the extensions 52 by inclining the ends of confronting extensions away from one another, i.e. at an obtuse angle in relation to the vertical center line in Fig. 5.

Appeal Br. 6.

Appellant's argument that the Examiner's reliance on the combined teachings of Ciciliani and King would render Ciciliani unsatisfactory for its intended purpose is not supported by evidence found in the record and is, instead, supported only by attorney argument, which "cannot take the place of evidence." *In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974). Appellant does not provide evidence that supports the allegations that Ciciliani's intended purpose is "cooling and connecting the bars in the grooves" or that "Ciciliani's intent in the configuration of the extensions is to maximize the spacing between the extensions 52 by inclining the ends of confronting extensions away from one another." Appeal Br. 6. Furthermore, even assuming the alleged intended purpose of Ciciliani is accurate, Appellant does not provide evidence to establish that deforming Ciciliani's extensions 52 so that they extend over adjacent tension bars and fix them in place, "would entail both a marked change in cooling performance of the extensions, as well as change or even obstruct the flow of cooling air." *Id.*

As a result, Appellant fails to demonstrate why the constraints of *In re Gordon* apply to Appellant's electric machine. *See In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984) (The court reversed the Board's holding that it would have been obvious to turn the prior art device upside down, finding that if the prior art device was turned upside down it would be inoperable for its intended purpose because the gasoline to be filtered would be trapped at the top, the water and heavier oils sought to be separated would flow out of the outlet instead of the purified gasoline, and the screen would become clogged).

In response to Appellant's arguments, the Examiner notes that "the allegation that modifying Ciciliani to provide cantilevers would prevent proper cooling of Ciciliani is not supported by actual facts," i.e., evidence. Ans. 4. In addition the Examiner finds that,

[t]he modification of Ciciliani to include these cantilevers for the added benefit of improving structural strength of the stator will in no way impede cooling performance of the device of Ciciliani because lugs 52 that extend radially and are used as cooling fins will still remain, the gaps (see annotated fig. 4 below) between these axially stacked lugs will also still remain. Additionally grooves 54 that extend axially would also still be present since secondary reference King teaches in figure 17 that the cantilevers (67) extend over tension strips (77) leaving an axially groove (see annotated fig. 17 below) that can accommodate air flow.

Id. at 5.

Appellant, in turn, has not rebutted the Examiner's additional reasoning and findings articulated in the Answer. Consequently, Appellant has not shown error in these additional factual findings or in the Examiner's conclusion of obviousness.

For the reasons discussed, Appellant has not persuaded us of error in the Examiner’s obviousness rejection of independent claim 17.

Accordingly, we sustain the Examiner’s rejection of that claim, as well as the rejection of independent claim 31, and dependent claims 18–30 and 32–35, which Appellant does not argue separately with particularity. Appeal Br. 7.

CONCLUSION

We affirm the Examiner’s decision to reject claims 17–35 under 35 U.S.C. § 103.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
17–20, 22, 25, 27, 28	103	Ciciliani, King	17–20, 22, 25, 27, 28	
23, 24, 26	103	Ciciliani, King, Ozeki	23, 24, 26	
21	103	Ciciliani, King, Allen	21	
29	103	Ciciliani, King, Ishikawa	29	
30	103	Ciciliani, King, Tomohara	30	
31–34		Timan, Ciciliani, King	31–34	
35	103	Timan, Ciciliani, King, Ozeki	35	
Overall Outcome			17–35	

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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