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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROBERT D. HALL, MICHAEL J. HANCHETT, and
ANDREW CAWSE

Appeal 2019-001789
Application 14/665,750
Technology Center 2800

Before DONNA M. PRAISS, CHRISTOPHER L. OGDEN, and
SHELDON M. McGEE, *Administrative Patent Judges*.

OGDEN, *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 21–29, 31, and 32. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

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 Prestolite Electric Inc. Appeal Br. 2.

The appeal record includes the following: Specification, March 23, 2015 (“Spec.”); Final Office Action, Mar. 9, 2018 (“Final Action”); Appeal Brief, Sept. 7, 2018 (“Appeal Br.”); Examiner’s Answer, Oct. 29, 2018 (“Answer”); and Reply Brief, Dec. 27, 2018 (“Reply Br.”).

CLAIMED SUBJECT MATTER

The claims are directed to an apparatus “for cooling a drive end bearing in an alternator.” Spec. ¶ 4. Independent claim 21, which we reproduce below, is representative of the subject matter:

21. An alternator comprising:
- a drive end;
 - a rear end opposite the drive end;
 - a drive end bearing;
 - a drive end fan at the drive end, the drive end fan comprising:
 - an outer edge,
 - an inner edge forming a shaft aperture,
 - a fan hub between the inner edge and the outer edge, and
 - a plurality of auxiliary air flow inlet apertures positioned circumferentially around the shaft aperture *between the fan hub and the outer edge*; and
 - a front housing face adjacent to the drive end fan, the front housing face between the drive end fan and the drive end bearing, *the front housing face comprising a plurality of auxiliary fins coupled to the drive end bearing*, the plurality of auxiliary fins protruding from the front housing face, and the plurality of auxiliary fins arrayed axially on the front housing face.

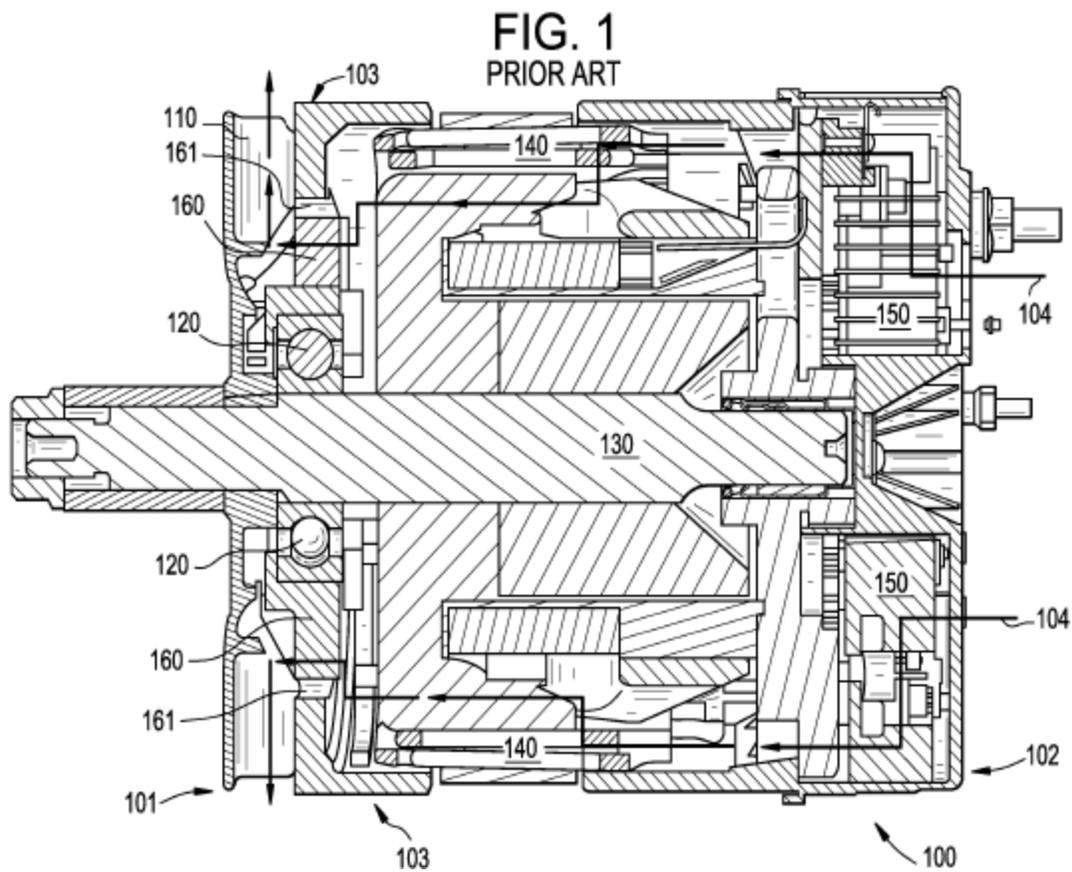
Appeal Br. 21 (emphasis of key portions added). Claims 22–29, 31, and 32 depend directly or indirectly from claim 21. *Id.* at 21–23.

The Examiner rejects claims 21–29, 31, and 32 under 35 U.S.C. § 103(a) as being unpatentable over the Applicant’s admitted prior art (“AAPA”) in view of Matson.² Final Action 5.

OPINION

1. *“The front housing face comprising a plurality of auxiliary fins coupled to the drive end bearing”*

The Examiner’s rejection of claim 21 relies primarily on Figure 1 of the Specification, which the Examiner identifies as AAPA. Figure 1 is reproduced below:



² Matson et al., US 5,214,325 (issued May 25, 1993) (“Matson”).

Figure 3 “is a partially exploded perspective view of an exemplary drive end fan [110] and front housing face [160] of an exemplary alternator.”

Spec. ¶ 15. According to the Specification, “front housing face 160 may comprise conventional fins 161 and auxiliary fins 162.” *Id.* ¶ 26. Although not clearly shown in Figure 3, auxiliary fins 162 are coupled to drive end bearing 120. *Id.* ¶ 23. The Specification teaches that these auxiliary fins serve to cool drive end bearing 120 “as the drive end fan 110 rotates to pull ambient temperature air through the auxiliary air flow inlet apertures 114 and across the auxiliary fins 162.” *Id.* ¶ 39; *see also id.* ¶ 24 (“The method . . . may comprise pulling . . . the air across a plurality of auxiliary fins 162 arrayed axially on a front housing face 160 to transfer drive end bearing heat to the air.”).

Appellant argues that “conventional fins 161 are different than the claimed plurality of auxiliary fins 162. Nowhere in the AAPA is there any disclosure of a plurality of auxiliary fins coupled to the drive end bearing.” Appeal Br. 10. Further, Appellant argues that it “does **not** admit that the claimed plurality of auxiliary fins is prior art.” Reply Br. 4.

In the Answer, the Examiner reproduces Figure 1 of the Specification, with an annotation indicating a part that the Examiner identifies as an auxiliary fin. *See Answer 3*. According to the Examiner, this part of Figure 1 “clearly shows the auxiliary fins having an identical structure to those described later in the application” such as in Figure 2. *Id.*

In determining the scope of an applicant’s admission of what is prior art, “it is necessary to consider everything that has been said about what is prior art.” *Aktiebolaget Karlstads Mekaniska Werkstad v. U.S. Int’l Trade Comm’n*, 705 F.2d 1565, 1574 (Fed. Cir. 1983) (citing *In re Nomiya*, 509

F.2d 566, 571 (CCPA 1975)). This includes Figure 1 itself, the explanatory text of the Specification, and what Appellant has said during prosecution.

The unlabeled part that the Examiner identifies as an auxiliary fin in Figure 1 has a similar shape to a part in Figure 2 labeled as auxiliary fin 162. But this alone is not determinative of an admission, because Figure 1 is a cross-sectional view, so the three-dimensional structure of the unlabeled part is ambiguous. Also, the air flow shown by arrows in Figure 1 does not pass near this unlabeled structure, so it is not clear that a person of ordinary skill in the art would interpret this structure as the recited auxiliary fin.

The Specification also makes a clear distinction between “conventional fins” 161, which were known in the art, and “auxiliary fins” 162, which the Specification characterizes as part of the inventive subject matter. *See Spec.* ¶¶ 38–39. The Examiner does not point to any statement in the Specification’s explanatory text or elsewhere in the prosecution record suggesting that Figure 1 contains such an auxiliary fin, or that such a fin was known in the art.

In light of everything that has been said in the prosecution record about what is prior art, we find that the Examiner has not shown, by a preponderance of the evidence, that Appellant has admitted that the recited auxiliary fins are part of the prior art.

2. *“[B]etween the fan hub and the outer edge”*

The Examiner states that “[t]he AAPA does not disclose a plurality of auxiliary air flow inlet apertures positioned circumferentially around the shaft aperture.” Final Action 6. Therefore, the Examiner cites Matson as teaching this limitation.

Figure 2 of Matson is reproduced below:

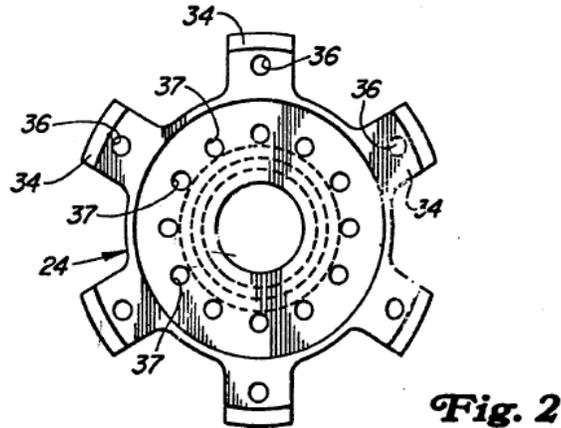
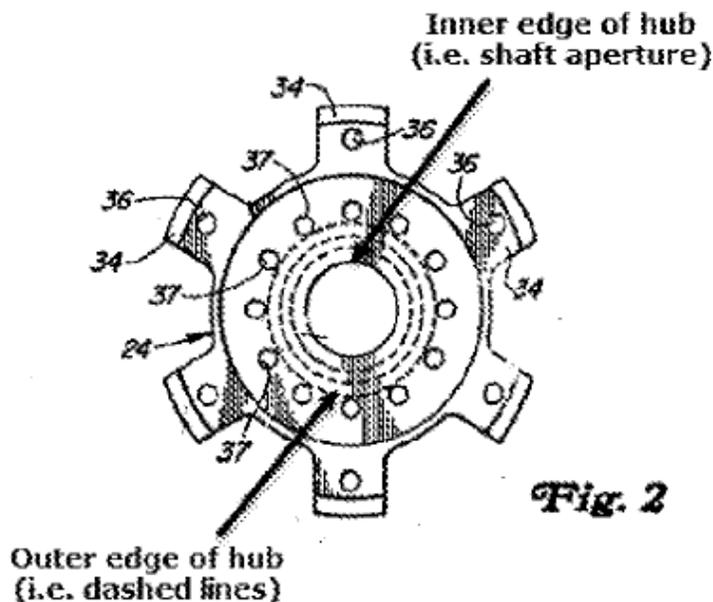


Figure 2 is “an end view of the fan blade carrier” 24 in an electrical machine. Matson 2:3–7. Fan carrier 24 contains a ring of openings 37. *Id.* at 2:51–54. The Examiner identifies these openings as the “plurality of auxiliary air flow inlet apertures [37] positioned circumferentially around the shaft aperture.” Final Action 6–7 (alteration in original).

As Appellant points out, the Examiner did not initially explain how these openings are “between the fan hub and the outer edge” as recited in claim 21. *See* Appeal Br. 11. But in the Answer, the Examiner elaborated by providing the following annotated version of Figure 2:



Ans. 5. The Examiner’s annotated version of Figure 2, above, includes an arrow pointing to the large interior opening at the center of fan carrier 24, labeled as “[i]nner edge of hub (i.e. shaft aperture).” Another arrow identifies a series of concentric dashed lines between the interior opening and the ring of apertures 37 as “[o]uter edge of [the] hub (i.e. dashed lines).”

In the Reply Brief, Appellant argues that the Examiner’s explanation in the Answer provides no “rationale as to why one of ordinary skill in the art would understand that only an arbitrary amount of the dashed lines of the fan carrier 24 of Matson is the claimed fan hub, and not the fan carrier 24 in its entirety, for example.” Reply Br. 9.

We find this argument persuasive. Matson does not appear to explain what the dashed lines are, and neither does the Examiner adequately explain what the dashed lines are, or why they represent the outer edge of a “fan hub” as recited in claim 21.

For the above reasons, the Examiner’s decision is *reversed*.

DECISION SUMMARY

In summary,

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
21–29, 31, 32	103(a)	AAPA, Matson		21–29, 31, 32

REVERSED