UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SHINJI BABA

Appeal 2008-1362
Application 10/227,426
Technology Center 2800

Decided: September 8, 2008

Before KENNETH W. HAIRSTON, JOHN A. JEFFERY, and CARLA M. KRIVAK, *Administrative Patent Judges*.

KRIVAK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134 from a final rejection of claims 1, 6, 11, and 12. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

STATEMENT OF CASE

Appellant's claimed invention is directed to an improved structure of a magneto generator including a guard annulus or ring for protecting and positioning magnets mounted on an inner peripheral surface of a flywheel (Spec. 1:8-11). The apparatus includes a guard ring having retaining portions formed in a peripheral edge portion and a discontinuous flange portion formed of a series of adjacent discontinuous flange elements separated by V-shaped notches (Spec. 8:2-7; cl. 1).

Claim 1, reproduced below, is representative of the subject matter on appeal.

> 1. A magneto-generator, comprising:
>
> a flywheel implemented substantially in a bowl-like shape;
>
> a plurality of magnets disposed on and along an inner peripheral surface of said flywheel;
>
> a guard ring formed substantially in a smooth, continuous cylindrical shape and disposed in intimate contact with said plurality of magnets at inner side surfaces thereof, said guard ring being provided with retaining portions formed in an opened peripheral edge portion of said guard ring located at a bottom side of said flywheel and a discontinuous flange portion formed of a series of adjacent discontinuous flange elements separated by V-shaped notches, in an opened peripheral edge portion at a side opposite to said retaining portions for thereby positioning said magnets in a radial direction with the smooth outer peripheral surface of said guard ring while positioning said magnets in a rotational axis direction by sandwiching said magnets between said retaining portions and said discontinuous flange portion; and

a mass of resin filled between said flywheel and said guard ring around each of said magnets for securing fixedly said magnets integrally with said flywheel.

REFERENCES

Shimizu	US 4,877,986	Oct. 31, 1989
Hase	JP 10-145995 A	May 29, 1998

Claims 1, 6, 11, and 12 stand rejected under 35 U.S.C. § 103(a) based upon the teachings of Shimizu and Hase.

Appellant contends that the Examiner has failed to provide a motivation to combine Shimizu and Hase, and thus, has not established a prima facie case of obviousness (App. Br. 13 Reply Br. 4)[1]. Regarding claims 11 and 12, Appellant adds that even if the references were combinable, the combination would fail to teach or suggest a folded flange segment with two layers in a laminated state in a direction axially to the magneto-generator as claimed (App. Br. 18-19).

ISSUE

Did the Examiner err in rejecting claims 1, 6, 11, and 12 under 35 U.S.C. § 103(a) as obvious over Shimizu and Hase?

FINDINGS OF FACT

1. Appellant's invention teaches a magneto-generator including a flywheel, magnets disposed on an inner surface of the flywheel, a guard ring including one edge having retaining portions and the opposite edge having a

[1] We refer through out this opinion to the Appeal Brief mailed September 18, 2006.

discontinuous flange portion (cl. 1). The discontinuous flange portion is formed of a series of adjacent discontinuous flange elements separated by V-shaped notches (cl. 1). Resin is filled between the flywheel and the guard ring around each of the magnets to secure the magnets integrally with the flywheel.

2. Shimizu teaches a magneto-generator including a flywheel, a magnet-holding cylinder (guard ring) including one edge having retaining portions and the opposite edge having a continuous flange (Figs. 1, 3, and 4). The retaining portions include channel-bar-teeth having protrusions in the radial direction of the magnet-holding cylinder (col. 3, ll. 8-15). Resin is used to fill the space/gap formed between the wall of the flywheel, the magnet-holding cylinder, and the magnets (col. 3, ll.48-52).

3. Hase teaches a rotor for a magneto-generator. Hase includes a magnet protecting cover (6). A magnet (5) is mounted on an outer circumferential surface of a cylindrical unit (6a) and a collar unit (6b) of the magnet protecting cover covers an opening end side of the magnet (¶[0011])[2]. Radially arranged notches (6c) are formed at the collar unit of the magnet protecting cover to form flanges (6b) (¶[0013]). A liquid adhesive or resin is filled between the magnet and the magnet protecting cover (¶[0013]).

PRINCIPLES OF LAW

KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1734 (2007) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 12 (1966)), reaffirmed principles

[2] All references to Hase are with respect t to its official English language translation.

based on its precedent that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* The Court explained:

> When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740. The operative question in this "functional approach" is thus "whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id.*

If the Examiner's burden is met, the burden then shifts to the Appellant to overcome the prima facie case with arguments and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

ANALYSIS

The Examiner rejected claims 1, 6, 11, and 12 as obvious over Shimizu and Hase. The Examiner contends that Shimizu teaches all the features of Hase except for the discontinuous flange portion formed of a series of adjacent discontinuous flange elements separated by V-shaped notches. The Examiner then contends that Hase teaches discontinuous flange portion (Fig. 4) as taught by Appellant.

Appellant asserts that the Examiner has failed to provide a motivation to combine Shimizu and Hase because the "feature adopted from Hase to modify Shimizu performs a different function in a different way, there is no support that modifying Shimizu as attempted by the Examiner would have a reasonable chance of success" (App. Br. 13). Appellant alleges that the function and purpose of Shimizu and Hase are different in that the function of Shimizu is as a magnet holding cylinder; whereas Hase merely discloses a magnet protective cover (App. Br. 16). Therefore, Appellant asserts, there is no motivation to combine because the combination would sacrifice the structural characteristics of Shimizu's flange. (App. Br. 16). We do not agree.

Hase teaches to improve the bonding of magnets (See Abstract: Solution) as does Shimizu (col. 3, ll. 51-64; App. Br. 14-15). Thus, they both have the property, inherent or otherwise, of holding magnets in place on a magneto generator. The Examiner cited Hase as evidence that it was known to a skilled artisan at the time of the invention that flanges can have discontinuous flange portions. Because Shimizu and Hase are in the same field of endeavor, it would have been obvious to a skilled artisan, in our view, to notch the flange of Shimizu in view of Hase. Appellant has provided no evidence on this record that notching the flange in Shimizu would somehow render Shimizu inoperative, or that the combination would sacrifice the structural characteristics of Shimizu's flange.

Further, combining these references would require no more than the combination of familiar elements according to known methods that would do no more than yield predictable results. *KSR, supra*. As noted in *KSR*, if a technique has been used to improve one device, and a person of ordinary

skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *Id*. at 1740. In this instance, Hase teaches improving the bonding of magnets (See Abstract: Solution) as does Shimizu (col. 3, ll. 51-64; App. Br. 14-15). Hase was cited as evidence that it was known to a skilled artisan at the time of the invention that flanges can have discontinuous flange portions. Because Shimizu and Hase are in the same field of endeavor, it would be obvious to a skilled artisan to notch the flange of Shimizu in view of Hase. As we indicated previously, Appellant has provided no evidence that notching the flange in Shimizu would impair or defeat the function of Shimizu.

It should be noted, however, that claims 11 and 12 teach not only a series of circumferentially spaced flange sections, but also, each flange section includes "a folded flange segment that has two layers in a laminated state." The Examiner contends the folded flange segment in a laminated state is shown by the two layers 4c and 6b in Fig. 2 and J4 and J6 in Fig. 6 of Hase (Ans. 6). The Examiner further states that Appellant's Fig. 6 does not show the layers contacting each other entirely (Ans. 6), and since neither does Hase, Hase teaches this feature. We do not agree. The folded flange segment having two layers in a laminated state, as claimed, is not shown by Hase. Rather, Hase shows two separate elements that are not folded and are not laminated (Figs. 1 and 2; ¶[0010]). There is also no teaching or suggestion in Hase to form the flange in this manner.

Thus, for the above reasons, we find Appellant has provided no evidence rebutting the Examiner's prima facie case of obviousness with respect to claims 1 and 6 and therefore, Appellant has not persuaded us of

error in the Examiner's rejection of those claims. We therefore sustain the Examiner's rejection of claims 1 and 6. Appellant, however, has persuaded us of error in the Examiner's obviousness rejection of claims 11 and 12. Therefore, we reverse the rejection of those claims.

CONCLUSION

We therefore conclude that the Examiner did not err in rejecting claims 1 and 6, and that the Examiner did err in rejecting claims 11 and 12 under 35 U.S.C. § 103(a) as obvious over Shimizu and Hase.

DECISION

We affirm the decision of the Examiner rejecting claims 1 and 6 and reverse the decision of the Examiner rejecting claims 11 and 12.

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

AFFIRMED-IN-PART

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