

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DIRK KALTENBACH and HELMUT STATER

Appeal 2008-1140
Application 10/683,463
Technology Center 2800

Decided: March 31, 2008

Before KENNETH W. HAIRSTON, ROBERT E. NAPPI, and, KARL EASTHOM, *Administrative Patent Judges*.

HAIRSTON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from a final rejection of claims 1 to 8. We have jurisdiction under 35 U.S.C. § 6(b).

We will sustain the rejections.

Appellants have invented a magnetic position sensor that comprises a magnetic field sensor, a first magnet movable with respect to the magnetic field sensor, and a second magnet arranged in the vicinity of the magnetic field sensor when the first magnet is not in the vicinity of the magnetic field sensor. The magnetic field of the second magnet differs substantially from

the magnetic field of the first magnet. The second magnet applies a defined magnetic field to the magnetic field sensor which is superimposed on external interference magnetic fields (Fig. 3; Spec. 8 to 10).

Claim 1 is the only independent claim on appeal, and it reads as follows:

1. A magnetic position sensor, for a belt buckle for occupant protection in a motor vehicle, comprising:

a magnetic field sensor and a first magnet which is moveable from a first position to a second position, with the first position arranged away from the magnetic field sensor and the second position being located in the immediate vicinity of the magnetic field sensor, wherein the magnetic field produced by the first magnet in its first position has no effective influence on the magnetic field sensor and

a second magnet is formed, whose magnetic field differs substantially from the first magnet, and the second magnet arranged in the immediate vicinity of the magnetic field sensor at least when the first magnet is in its first position, with the second magnet applying a defined magnetic field to the magnetic field sensor which is superimposed on interference external magnetic fields.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Avery US 4,443,716 Apr. 17, 1984

Nelle US 5,793,201 Aug. 11, 1998

The Examiner rejected claims 1 to 4 under 35 U.S.C. § 103(a) based upon the teachings of Applicants' admitted prior art and Nelle.

The Examiner rejected claims 1 and 5 to 8 under 35 U.S.C. § 103(a) based upon the teachings of Applicants' admitted prior art and Avery.

ISSUE

In response to the obviousness rejection based upon the admitted prior art and Nelle, Appellants contend *inter alia* that the reference to Nelle is from nonanalogous art inasmuch as it is not in the same field of endeavor as safety buckles used to protect vehicle occupants, and it is not concerned with the problem of protecting magnetic sensors from external magnetic fields (App. Br. 4 to 7; Reply Br. 2 and 3). With respect to the combined teachings of the admitted prior art and Avery, Appellants contend that the admitted prior art magnetic position sensor when modified by Avery "will be activated by any small magnetic fields whether they are the magnetic field being measured or an unwanted magnetic field" (App. Br. 8). Thus, the issue before us is whether or not the Appellants have successfully rebutted the Examiner's showing of obviousness based upon the combined teachings of the admitted prior art and the applied references?

FINDINGS OF FACT

1. Appellants' admitted prior art describes a magnetic position sensor that comprises a magnetic field sensor 17 and a magnet 16 which is moveable from a first position to a second position (Fig. 2). The first position is arranged away from the magnetic field sensor 17 and the second position is located in the immediate vicinity of the magnetic field sensor 17. In the first position, the magnetic field produced by the magnet has no effective influence on the magnetic field sensor. According to Appellants, an external magnetic interference field 19 when located in the vicinity of the magnetic field sensor 17 can generate a signal therein that interferes with the

proper operation of the magnetic field sensor 17 and the evaluation circuit 28 (Spec. 7).

2. Appellants' disclosed and claimed invention uses a second magnet 18 with a magnetic field that differs substantially from the magnetic field of the first magnet 16 (Fig. 3). The second magnet 18 is arranged in the immediate vicinity of the magnetic field sensor 17 at least when the first magnet is in the noted first position. In this position, the second magnet 18 applies a defined magnetic field to the magnetic field sensor 17 that is superimposed on interference external magnetic fields 19 (Spec. 8 and 9). According to Appellants, "the magnetic field sensor 17 has a defined magnetic field applied to it not only when the occupant is belted in but also when the occupant is not belted in" (Spec. 9).

3. Nelle describes a magnetic position sensor in a machine tool environment that uses a Hall element magnetic position sensor 7 to sense the movement of magnets 5.1 and 5.2 (Fig. 1; col. 1, ll. 13 to 17; col. 2, ll. 43 to 67; col. 3, ll. 29 to 33)

4. Avery describes the placement of a magnet 35 in the vicinity of a Hall sensor switch 29 to thereby alter the operation of the Hall sensor based on external fields (Figs. 4 and 5; Abstract). According to Avery, much smaller fields are effective in activating the Hall sensor 29 (col. 3, ll. 42 to 46).

PRINCIPLES OF LAW

The Examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). If that burden is met, then the burden shifts to the Appellant to overcome the *prima facie* case with argument and/or evidence. *See Id.*

The Examiner's articulated reasoning in the rejection must possess a rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

According to the Court of Appeals for the Federal Circuit, “[t]wo separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.” *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004)(internal citations omitted).

Language in a claim preamble, however, acts as a claim limitation only when such language serves to give meaning to a claim and properly define the invention, not when the preamble merely states a purpose or intended use of the invention. *In re Paulsen*, 30 F.3d 1475, 1479 (Fed. Cir. 1994).

The prior art need not suggest solving the same problem set forth by Appellants. *In re Dillon*, 919 F.2d 688, 692-693 (Fed. Cir. 1990).

ANALYSIS

Appellants' argument that the reference to Nelle is from nonanalogous art is without merit because the reference is concerned with sensing the presence of a magnetic field with a magnetic position sensor (i.e., a Hall sensor). Such a magnetic sensing function places the teachings of Nelle squarely within the same field of endeavor of Appellants' disclosed and claimed invention. See *In re Bigio*, 381 F.3d at 1325 (Fed. Cir. 2004).

The vehicle belt buckle recited in the preamble of claim 1 on appeal does not serve to distinguish the claimed invention over the machine tool

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environment in which the Nelle magnetic position sensor is used because the belt buckle is not recited in the body of the claim, and it does not serve to give meaning to the claim nor serve to define the invention. *In re Paulsen*, 30 F.3d at 1479 (Fed. Cir. 1994).

Appellants' argument that Nelle does not mention the problem addressed by Appellants is equally without merit since the prior art need not suggest solving the same problem addressed by Appellants. *In re Dillon*, 919 F.2d at 692-693 (Fed. Cir. 1990).

Appellants' arguments (App. Br. 8) concerning small, measured, and unwanted magnetic fields in Avery are without merit since Avery recognizes that a magnet "arranged in the immediate vicinity of the magnetic field sensor" will apply "a defined magnetic field to the magnetic field sensor which is superimposed on interference external magnetic fields" as set forth in claim 1 on appeal. Appellants' argument (App. Br. 8) concerning the size of the magnetic field in Avery is without merit since claim 1 on appeal never recites a magnetic field size.

In summary, we find that the Examiner did not have to resort to the use of impermissible hindsight to demonstrate the obviousness of the claimed subject matter (App. Br. 8; Reply Br. 2 and 3).

CONCLUSION OF LAW

The Examiner has established the obviousness of claims 1 to 8.

ORDER

The obviousness rejections of claims 1 to 8 are affirmed.

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

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AFFIRMED

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