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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DANILO MOLTENI

Appeal 2015-004705
Application 13/381,801
Technology Center 2800

Before KAREN M. HASTINGS, MICHAEL P. COLAIANNI, and
JULIA HEANEY, *Administrative Patent Judges*.

COLAIANNI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134 the final rejection of claims 1–5. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

We AFFIRM.

Appellant’s invention is directed to an electromagnet used in a device for moving tubular members and bundles of tubes (Spec. 1:3–5). The allegedly novel aspect of the invention is that the laterally dispersed magnetic field is eliminated in the device (Spec. 1:5–6). The electromagnet structure uses ferromagnetic side panels of a suitable thickness to short-circuit substantially the whole lateral flux thereby preventing the dispersion of the flux (Spec. 6:26–31; 7:1–3; Fig. 2).

Claim 1 is illustrative (emphasis added to highlight argued limitation):

1. An electromagnet comprising:
 - at least two solenoids each wound on a respective core of a polar yoke, side panels,
 - bottom baffles for protection of the at least two solenoids,
 - first polar shoes at the cores of the polar yoke, and
 - second polar shoes at poles of the polar yoke;wherein:
 - the polar yoke has a shape corresponding to at least two aligned E-shaped yokes with at least two cores and three poles,
 - the side panels are made from ferromagnetic material and magnetically connect the poles while being magnetically insulated from the cores, and
 - the side panels have a thickness sized such that the side panels are suitable to short-circuit the whole lateral flux of a magnetic field generated by the electromagnet and to convey the lateral flux towards the second polar shoes,

wherein, during operation, the at least two cores have a first polarity, and the side panels and the at least three poles have a second polarity opposite to the first polarity.

Appellant appeals the following rejection:

Claims 1–5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Cardone '582 (US 4,847,582, issued July 11, 1989) in view of Chernikov et al. (US 4,684,112, issued Aug. 4, 1987) (“Chernikov”) and Cardone '625 (US 4,956,625, issued Sept. 11, 1990).

Appellant’s argument focus on the subject matter of claim 1 only (App. Br. 5–15). Claims 2–5 will stand or fall with our analysis of the rejection of claim 1.

FINDINGS OF FACT & ANALYSIS

The Examiner finds that Cardone '582 teaches all the limitations of claim 1, except for the entire flux path passing through the side panels or that the cores have a first polarity and the poles have a second polarity (Final Act. 2–3). The Examiner finds that Chernikov teaches side panels (8) that carry the whole lateral flux (Final Act. 3). The Examiner finds that Cardone '625 teaches in Figure 2 that all poles 15 have a first polarity and all cores 13 and side panels have a second polarity. *Id.* The Examiner concludes that “it would have been obvious to make the wall thicknesses of Cardone to carry the whole lateral flux as taught by Chernikov in order to provide sufficient safety and proper functionality by not having objects attracted to unwanted locations on the device due to outwardly extending flux lines.” *Id.* The Examiner further concludes that it would have been obvious to configure the device of Cardone '582 with the pole/core polarity configuration of Cardone '625 to provide an increased number of gripping locations. *Id.*

Appellant argues that the Examiner's combination of the teachings of Cardone '582 and Cardone '625 are based on impermissible hindsight (App. Br. 5–7; Reply Br. 3). Appellant contends that Cardone '582 and Cardone '625 operate in a different way and so to combine Cardone '625's multiple cores having the same polarity with Cardone '582's electromagnet that uses cores with opposite polarity would have frustrated the purpose of Cardone '582 and rendered Cardone '582's electromagnet unsuitable for its intended purpose (App. Br. 8–11). Appellant argues that operating Cardone '582 according to Cardone '625's method would not have worked because control of the magnetization cores 29 of Cardone '582's Figure 6 would not be possible (App. Br. 13).

Claim 1 is directed to an electromagnet (i.e., a device or apparatus). Claim 1 recites the structure of the electromagnet as including at least two cores and at least three poles. Claim 1 recites that “*during operation*, the at least two cores have a first polarity, and the side panels, and the at least three poles have a second polarity opposite to the first polarity” (emphasis added). The claim language plainly requires that the electromagnet is structured so that during its use the at least two cores have a polarity opposite that of the at least three poles. In other words, the distinction argued by Appellant is directed to how the device is used rather than a difference in the structure of the prior art.

Appellant's argument that Cardone '582 and Cardone '625 would not have been combined because doing so would frustrate the purpose of Cardone '582 or render it unsuitable for its intended purpose fails to address the Examiner's specific rejection. The Examiner's position is that Cardone '582 discloses the structure of the electromagnet recited in claim 1 with the

exception of the entire magnetic flux passing through the side panels (Final Act. 3). The Examiner relies upon Chernikov to teach using side panels on an electromagnet to carry the whole lateral flux. *Id.* Appellant does not contest the Examiner's conclusion that it would have been obvious to combine the teachings of Chernikov and Cardone '582 (App. Br. 5–15).

With regard to the claim limitation that during operation there are at least two cores and at least three poles having opposite polarity, the Examiner further finds that Cardone '625 teaches this claim requirement as a different configuration of Cardone '582's (Final Act. 3). The Examiner finds that the polarity of the magnetic field can be easily changed by controlling the energizing of the coils (Ans. 4). The Examiner finds that Cardone '582 is capable of operating the electromagnet according to Cardone '625's mode of operation. *Id.* In other words, the Examiner finds that Cardone '582 as modified by Chernikov has all the structure recited in claim 1 and thus would have been capable of having at least two cores and at least three poles of opposite polarity. The Examiner's rejection is based upon the capability of Cardone '582's electromagnet structure. Appellant's arguments regarding the frustration of purpose or the rendering unsuitable for its intended purpose fail to address the Examiner's position that Cardone '582's structure is capable of operating so that there are two cores and three poles with opposite polarity.

Appellant argues that “modified device obtained by combining Cardone '582 and Cardone '625 would not work since control of the magnetization of magnetic cores 29 of Fig. 6 of Cardone '582 would not be possible” (App. Br. 13). Appellant contends that the time for magnetization of Cardone '582's permanent magnet is much shorter than the time for

magnetization of Cardone '625's electromagnet so that applying the longer duration pulses of Cardone '625 to Cardone '582 would burn out the coils (App. Br. 12–14, Reply Br. 6). Appellant refers to Figures C and D on pages 12 and 14 of the Appeal Brief as showing the difference in operation between Cardone '582 and Appellant's invention.

Appellant's arguments and evidence do not demonstrate that Cardone '582 is incapable of operating so that at least two cores and at least three poles have opposite polarity. Appellant's evidence relies on attorney argument that operating Cardone '582 according to Cardone '625 would burn the coils and ruin the device. Attorney argument, however, cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602 (CCPA 1965). Appellant's Figure C on page 12 is said to show how Cardone '582 functions. Appellant's Figure D on page 14 shows how Appellant's currently claimed invention operates (App. Br. 13). These figures do not specifically compare how Cardone '625 operates as compared to Cardone '582.

Contrary to Appellant's argument, Cardone '582 describes main magnet core 18 as "consisting of magnetically reversible permanent magnets" (col. 3, ll. 52–53). Cardone '625 similarly teaches that magnet 14 are "reversible magnets" and "permanent magnets **14** and **16**" (col. 3, l. 13, 50). It appears that Cardone '582 and Cardone '625 each use permanent magnets as part of the electromagnet. Therefore, Appellant's argument does not persuade us that Cardone '582's electromagnet structure is incapable of operating as demonstrated in Cardone '625.

On this record, we affirm the Examiner's § 103 rejection of all the pending claims over Cardone '582 in view of Chernikov and Cardone '625.

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Application 13/381,801

DECISION

The Examiner's decision is affirmed.

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

ORDER

AFFIRMED