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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROBERT RIECK

Appeal 2018-009239
Application 13/653,243
Technology Center 3700

Before JAMES P. CALVE, WILLIAM A. CAPP, and LISA M. GUIJT,
Administrative Patent Judges.

CALVE, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the decision of the Examiner to reject claims 6 and 11, the only claims pending. Appeal Br. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ “Appellant” refers to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies Mr. Robert Rieck as the real party in interest. Appeal Br. 2.

CLAIMED SUBJECT MATTER

The present claims relate to pick axes with magnetic inserts placed in protective recesses to minimize their demagnetization by repeated impacts. Spec. ¶ 6. Pick axes are associated with heavy, high energy impact spectra that demagnetize magnetic pieces fixed to the blade or pick. *See id.* ¶ 10.

Claims 6 and 11 are independent, with claim 6 reproduced below.

6. In a pick axe assembly characterized by a ferromagnetic axe head mounted at one end of an elongate handle and defined by a generally orthogonally deployed arcuate pick and an opposing arcuate blade each extending in cantilever from said one end of said handle to align the concave portion thereof towards said handle, the improvement comprising:

- a generally circular recess extending through each said concave portion to a predetermined depth into the interior of said blade;
- a magnet comprising a rare earth alloy of a generally circular planform of a diameter smaller than the diameter of said recess and a thickness smaller than said predetermined depth received in said recess; and
- polymeric mounting adhesive selected from a group including polyurethane, flexible polyvinyl chloride and catalyzed mix of polyester resins deposited in said recess to fill the remaining volume between said magnet and said recess.

REJECTION

Claims 6 and 11 are rejected under 35 U.S.C. § 103(a) as unpatentable over Apex Picks, Talon Stubby, at <http://www.apexpicks.com> as evidenced by Williams, Super Magnets, <http://www.universetoday.com/79266/super-magnets/>, in view of Kurkjian (US 2,597,876, iss. May 27, 1952), further in view of Collins (US 6,405,617 B1, iss. June 18, 2002), as evidenced by MasterBond, <http://www.masterbond.com/techtips/what-epoxy-adhesive>.

ANALYSIS

Appellant argues claims 6 and 11 as a group. *See* Appeal Br. 4–8. We select claim 6 as representative. 37 C.F.R. § 41.37(c)(1)(iv). Claim 11 stands or falls with claim 6.

Regarding claim 6, the Examiner finds that Apex Picks teaches a pick axe called the Talon Stubby, which includes a circular recess formed on the blade to contain a rare earth alloy magnet also referred to as a super magnet as evidence by Williams’ article describing such material as super magnets. Final Act. 2. The Examiner finds that Apex Picks does not teach the magnet recess extending *through* concave portions of the blade to a predetermined depth or a polymeric mounting adhesive. *Id.* at 3.

The Examiner finds that Kurkjian places a permanent magnet 17 in a circular recess of a hammer body to a predetermined depth, and Collins uses adhesive material in a similar cavity 22 of a hammer head to retain magnetic material 16 in the cavity as claimed. *Id.* The Examiner determines it would have been obvious to a skilled artisan to improve Apex Picks Talon Stubby similarly with these teachings of Kurkjian and Collins. *Id.*

Appellant argues that Kurkjian and Collins are non-analogous art and cannot be relied on in an obviousness rejection. Appeal Br. 4–5. Appellant asserts that the references are wholly unrelated to the problem addressed by Appellant of sheltering expensive, scarce, brittle, and easily destroyed rare earth magnets. *Id.* at 5. Appellant argues that Kurkjian places the end of a nail against the magnet so any impact from the nail setting strike dissipates directly against the magnet. *Id.* at 6. Appellant argues that Collins inserts a magnet into the swung part of the hammer that sees the most impact, which is a less than optimal location if demagnetization is the concern. *Id.*

“Generally, a skilled artisan would only have been motivated to combine analogous art.” *In re Ethicon*, 844 F.3d 1344, 1349 (Fed. Cir. 2017); *see also KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417, 420 (2007) (“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.”; “Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.”).

“A reference qualifies as prior art for a determination under § 103 when it is analogous to the claimed invention.” *Innovation Toys, LLC v. MGA Entm’t., Inc.*, 637 F.3d 1314, 1321 (Fed. Cir. 2011); *see also In re Klein*, 647 F.3d 1343, 1348 (Fed. Cir. 2011) (“A reference qualifies as prior art for an obviousness determination under § 103 only when it is analogous to the claimed invention.”) (citing *Innovation Toys*, 637 F.3d at 1321; *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004); *In re Clay*, 966 F.2d 656, 658 (Fed. Cir. 1992)). Two 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.

Klein, 647 F.3d at 1348 (quoting *Bigio*, 381 F.3d at 1325).

The PTO determines the appropriate field of endeavor by reference to explanations in the patent application to include the embodiments, function, and structure of the claimed invention. *Bigio*, 381 F.3d at 1325. References with the same structure and function as the claimed invention as perceived by a skilled artisan are within the same field of endeavor. *See id.* at 1326.

“A reference is reasonably pertinent if . . . it is one which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in considering his problem.” *Clay*, 966 F.2d at 659. In addition, “[i]f a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports use of that reference in an obviousness rejection.” *Id.* “The identification of analogous prior art is a factual question.” *Bigio*, 381 F.3d at 1324.

Are Kurkjian & Collins from the Same Field of Endeavor as the Invention?

The Specification describes the field of endeavor as “prospecting devices,” and more particularly “pick axes” with magnets inserted into a tool head recess to minimize demagnetization by repeated impacts. Spec. ¶ 6. The magnets attract and remove iron deposits from the soil so more valuable deposits are detectable. *Id.* ¶¶ 8, 21. A pick PI and adze AD are mounted on opposite sides of handle HA. *Id.* ¶¶ 20, 22. These impact tools are shaped to absorb repeated impacts to the ground with the impact energy depending on the compaction and hardness of the ground. *Id.* ¶ 20. However, the high energy impacts can demagnetize magnets that are affixed to these tools. *Id.* ¶ 10. We find that the field of endeavor of the claimed pick axe is impacting tools with magnetic inserts in the impact tool head. *See id.* ¶ 6.

The Examiner finds that Kurkjian and Collins are from the same field of endeavor as the claimed pick axe. In particular, the Examiner finds that both references are from the field of hand tools that use a striking implement to exert force on a workpiece, and the use of a blade or a flat head does not change their categorization. Final Act. 4. The Examiner also finds that both references are from the same field of endeavor of striking impact tools that mount magnets on a striking portion of the impact tool. Ans. 5.

Kurkjian's hammer drives nails. Kurkjian, 1:1–3. Hammer head 10 and arcuate claw attach to handle 11. *Id.* at 1:35–40. Hammer head 10 has a recess (socket 18) to receive magnet 17. *Id.* at 1:40–2:12. Magnet 17 retains a nail in hammer head channel 13 (*id.* at 2:1–12) just as magnets (slugs SL) in the claimed pick axe retain metals to the tool head (Spec. ¶ 21). We find that the hammer has the structure and function of the claimed pick axe, i.e., a magnetized impact tool head, and therefore is in the same field of endeavor.

Collins's hammer has impact face 18 for striking objects and claw 20 on opposite sides of handle 14. Collins, 1:1–65. Rare earth magnet 16 is mounted in cavity 22 in hammer head 12 via adhesive. *Id.* at 2:47–3:45, 4:13–20. Hammer 10 functions as an impact tool with a material retrieval feature that attracts objects to hammer head 12 via magnet 16. *Id.* 4:21–37. We find the hammer has the structure and function of the claimed pick axe, i.e., a magnetized impact tool head, and thus is in the same field of endeavor.

Appellant's arguments that Kurkjian and Collins are wholly unrelated to the *problem addressed by Appellant* (Appeal Br. 4–7; Reply Br. 3–8) do not apprise us of error in the Examiner's findings, as set forth above, that Kurkjian and Collins are analogous art because they are in the same *field of endeavor* as the claimed pick axe assembly. *See* 37 C.F.R. § 41.37(c)(1)(iv) (the Appeal Brief “shall explain why the examiner erred as to each ground of rejection contested by appellant.”); *see also In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (noting the Board's long-standing practice under its rules to require an applicant to identify the alleged error in an examiner's rejections and holding “even assuming that the examiner had failed to make a prima facie case, the Board would not have erred in framing the issue as one of ‘reversible error.’”).

Appellant recognizes that analogous art can be either in the field of an applicant's endeavor *or* reasonably pertinent to the problem that an applicant was addressing. Appeal Br. 6–7; Reply Br. 6. However, Appellant does not address the Examiner's findings that Kurkjian and Collins are analogous art because they are in the same field of endeavor as the claimed pick axe. *See* Reply Br. 6 (asserting that “[i]n the current instance both the problem and the field of endeavor coincide in a very limited way”). Thus, Kurkjian and Collins are properly relied on as analogous art under the field of endeavor test, and we sustain the rejection of claims 6 and 11 on this basis.

Are Kurkjian & Collins Reasonably Pertinent to Appellant's Problem?

Appellant also argues that the problem addressed was finding a way to shelter and preserve expensive, scarce, brittle, and easily destroyed rare earth magnets. Appeal Br. 5; Reply Br. 6. Appellant argues that Kurkjian places the end of a nail against the magnet so that the ringing that follows the nail setting strike is directly dissipated into the magnet itself, evidencing that the reference cannot be concerned with magnet preservation. Appeal Br. 6.

The Examiner has the better position. Kurkjian places the nail in a channel 13 with the nail head against rear wall 15 of the hammer head 12 as illustrated in Figures 1, 2, and 4. Kurkjian, 1:35–2:3. A nail is driven into a wall or other structure by applying pressure to the nail head via *rear wall 15* of hammer head rather than the magnet as Appellant argues. *Id.* at 1:35–2:1. We find no teaching in Kurkjian to apply impact energy to a nail via magnet 17. To the contrary, Kurkjian places magnet 17 transversely to nail *shank* 12 to hold the nail in channel 13 while impact force is applied to the nail head via rear wall 15. *Id.* at 1:35–2:21. This design therefore shields magnet 17 from direct impact energy. Socket 18 also shields magnetism. *Id.* at 2:4–17.

These teachings are reasonably pertinent to the problem confronted by Appellant of securing a magnet in a striking head of an impact hand tool in a way that attracts objects to the tool head while protecting the magnet from impact energy of the tool against a work piece. In response to Appellant's arguments that Kurkjian does not protect the magnet, the Examiner cites Johnson (US 5,988,020) as evidence that Kurkjian's configuration would be understood to serve the same purpose as the claimed invention of extending the useful life of the magnet and preventing it from losing its magnetic flux prematurely. *See* Ans. 4; Johnson, 3:40–45, Figs. 1, 2; Appeal Br. 6.

Moreover, Collins couples a rare earth magnet 16 in a hammer head cavity 22 at a recessed distance using adhesive material. Collins, 3:15–4:20.

The Specification admits it was known to weld a set of collars to the axe blade to contain circular magnetic slugs. Spec. ¶¶ 10, 21 (Apex Picks, Extreme). The prior art Apex Picks Talon Stubby, cited by the Examiner (Final Act. 2), teaches this arrangement with the collars placed on concave portions of the blade as claimed. Therefore, the prior art teaches that it is known to attach magnets to concave surfaces of pick axe heads and blades. The problem to be solved is finding a better way to do so, i.e., that better protects the magnets. *See* Spec. ¶¶ 11, 14, 22, 24; Appeal Br. 5–6.

The Examiner determines that the teachings of Kurkjian and Collins are reasonably pertinent to a skilled artisan confronting this problem. Both references teach to embed a magnet/rare earth magnet in a recess/cavity in a hammer head and, in the case of Collins, to use adhesive to do so. The prior art configurations serve the same purpose as the claimed configuration. They enable the magnets to retrieve and retain ferromagnetic items to the impact tool head while protecting the magnetism/integrity of the magnet.

Johnson is evidence that these features provide these benefits and serve the same purpose that Appellant sought to achieve with the claimed configuration. The Examiner can cite references as background information to demonstrate the knowledge and perspective of a skilled artisan regarding prior art teachings of Kurkjian or Collins, and we must consider this critical evidence. *See Randall Mfg. v. Rea*, 733 F.3d 1355, 1362 (Fed. Cir. 2013).

Even if the Examiner’s citation to Johnson creates a new ground of rejection in the Answer, as Appellant alleges (Reply Br. 2–5), Appellant’s recourse was to petition the Director under 37 C.F.R. § 1.181 within two months of entry of the Answer and before the filing a Reply Brief. *See* 37 C.F.R. § 41.40(a); MPEP § 1207.03. Appellant’s decision to file a Reply Brief instead of a petition to the Director waives any argument that the rejection must be designated as a new ground. *See* 37 C.F.R. § 41.40(a).

Accordingly, Kurkjian and Collins are properly relied on as analogous art because they are reasonably pertinent to the particular problem with which Appellant was involved, and we sustain the rejection of claims 6 and 11 on this additional basis as well.

CONCLUSION

Claims Rejected	35 U.S.C. §	Reference/Basis	Affirmed	Reversed
6, 11	103(a)	Apex Picks, Super Magnets, Kurkjian, Collins, MasterBond	6, 11	
Overall Outcome			6, 11	

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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