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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte REED J. BLAU, LISA S. LIU,
RONALD L. HANSEN, and RICHARD AMES

Appeal 2014-004324
Application 13/457,996
Technology Center 1700

Before CHUNG K. PAK, JAMES C. HOUSEL, and MONTÉ T. SQUIRE, *Administrative Patent Judges*.

HOUSEL, *Administrative Patent Judge*.

DECISION ON APPEAL[1]

Pursuant to 35 U.S.C. § 134(a), Appellants[2] appeal from the Examiner's decision finally rejecting claims 1–5, 9–11, 19–21,[3] 24–27, 29–

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[1] Our decision refers to Appellants' Appeal Brief (Appeal Br.) filed September 18, 2013, the Examiner's Answer (Ans.) delivered November 21, 2013, and Appellants' Reply Brief (Reply Br.) filed January 15, 2014.

[2] According to Appellants, the real party in interest is Alliant Techsystems Inc. Appeal Br. 4.

[3] Although the Examiner's statement of rejection omits claim 21, we note that the body of the rejection specifically addresses this claim (*see* Ans. 5). In addition, Appellants acknowledge that claim 21 stands rejected (*see*

33, and 35–37[4] under 35 U.S.C. § 103(a) as unpatentable over Freeman[5] in view of Blau,[6] and as applied to claims 6–8 and 28, further evidenced by Pyrocreations.[7] We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We AFFIRM.

STATEMENT OF THE CASE

The invention relates to a non-lethal, payload device and a method for delivering improved flash, noise, and pressure variances to incapacitate and/or distract one or more subjects. Spec. ¶ 3. Such non-lethal devices, commonly referred to as "flash-bangs," produce a flash of light and noise (bang) of sufficient intensity to temporarily overwhelm a person's visual and auditory senses thereby incapacitating the person. *Id.* at ¶ 4. Appellants disclose that it is desired to improve the incapacitating characteristics of such devices, such as reduced lethality or injury, flashes which impair the visual sense for a longer period of time, and bangs that shock without causing permanent auditory damage. *Id.* at ¶ 11.

Claim 1, reproduced below from the Claims Appendix to the Appeal Brief, is illustrative of the subject matter on appeal.

Appeal Br. 5 and 7). Thus, we hold the Examiner's omission to be harmless error.

[4] Pending claims 12–18 and 34 have been withdrawn from consideration and are not before us on appeal.

[5] Freeman, US 3,760,729, issued September 25, 1973.

[6] Blau et al., US 2005/0115721 A1, published June 2, 2005 ("Blau").

[7] http://www.pyrocreations.com/colored_stars, last accessed October 18, 2016. We note that Appellants do not challenge the prior art status of this website and its content.

1. A device for producing illuminance, comprising:
an igniter/activator within a device casing, the igniter/activator having a flame temperature greater than 2000 K;
an initiation device contacting the igniter/activator; and
an illuminant within the device casing, the device casing configured to produce non-lethal shrapnel upon activation of the igniter/activator and the illuminant.

Method claim 12, the remaining independent claim on appeal, is directed to a method of producing a diversionary flash from a device similar to claim 1, by igniting the igniter/activator to heat and disperse the illuminant into a cloud of illuminant and air, followed by activating the cloud to produce the flash.

Appellants do not argue the claims separately, but instead focus on the limitations of claim 1. Accordingly, we similarly limit our discussion below to claim 1; the remaining claims on appeal stand or fall with claim 1.

ANALYSIS

The dispositive issue before us on appeal is whether Appellants have identified reversible error in determining that the device resulting from the Examiner's proposed combination is "configured to produce non-lethal shrapnel upon activation of the igniter/activator and illuminant." On this record, we answer this question in the negative and, therefore, will sustain the Examiner's rejection.

The Examiner finds, without dispute, Freeman teaches a device for an illuminant comprising a case with a hole for receiving a primer charge (igniter/activator) for igniting the illuminant, wherein the illuminant may be powdered magnesium. Ans. 2. However, the Examiner acknowledges

Freeman fails to teach the primer or igniter/activator has a flame temperature above 2000°K. *Id.* Nonetheless, the Examiner finds, again without dispute, Blau teaches igniters for pyrotechnic compositions, wherein the igniters can contain a well-known composition, B/KNO_3, containing 15–30% boron and 70–85% potassium nitrate; a composition, $Mg/SrNO_3$; or mixtures thereof. *Id.* at 3. The Examiner further finds, that, although Freeman and Blau are silent regarding the flame temperature of the igniter/activator, since Blau's composition is the same as Appellants', it is reasonable to expect Blau's composition's properties to be the same as Appellants', including a flame temperature above 2000°K. *Id.* The Examiner concludes it would have been obvious to modify Freeman's device to include an igniter/activator composition including B/KNO_3, $Mg/SrNO_3$, or mixtures thereof with a reasonable expectation of success. *Id.*

The Examiner further finds use of the M116A1 simulator case is a well-known case for pyrotechnics which would not be expected to produce lethal shrapnel, and its use in Freeman's related device for igniting illuminant would have been an obvious choice of design. *Id.* Alternately, the Examiner finds that because Freeman's cap would remain intact upon rupture at the weld, shrapnel produced would be expected to be non-lethal. *Id.*

Appellants contend that Freeman and Blau, alone or in combination, fail to teach, suggest, or otherwise render obvious a device casing "configured to produce non-lethal shrapnel upon activation of the igniter/activator and the illuminant." Appeal Br. 10. According to Appellants, Freeman's cap and case would be lethal shrapnel upon separation during use and operation of the cartridge. *Id.* at 11. Appellants

assert this is so because Freeman's cap and case are made from hard, rigid materials. *Id.* Appellants further argue that Freeman's launched case would itself be lethal upon being launched. *Id.* at 11–12. Finally, Appellants urge that because Freeman's device is designed to be launched into the air to about 225–275 feet, Freeman is not concerned with the lethality of the device upon activation of the igniter and illuminant. *Id.* at 13–14.

We do not find Appellants' arguments persuasive of reversible error in the Examiner's obviousness rejection of claim 1. Initially, we note a dispute arose in this appeal with regard to the construction of the term, "shrapnel," as used in the claims. *Compare* Ans. 8 *with* Reply Br. 4–6. Without belaboring the point, we agree with Appellants that the broadest reasonable interpretation of "shrapnel," consistent with the Specification, is "fragments of a bomb, shell, or other object thrown out by an explosion." *See* Reply Br. 4–6. Nevertheless, such a construction does not support reversible error in the Examiner's rejection. We note the Examiner finds Appellants' admitted prior art, the M116A1 casing, is a known non-lethal casing for use in pyrotechnic devices whose use in Freeman's device is an obvious design choice. Appellants do not dispute this finding. Thus, regardless of the merits of Appellants' argument that Freeman's cap and case would be lethal shrapnel, Appellants have not disputed the Examiner's alternative position that it would have been obvious to use the M116A1 casing with the Freeman illuminant and the Blau igniter/activator.

Indeed, given the M116A1 device includes an igniter/activator, an illuminant, and a casing configured to produce non-lethal shrapnel upon activation, we have no difficulty concluding that it would have been obvious to have substituted Blau's igniter/activator and Freeman's illuminant in the

M116A1 device as well-known alternatives in this art with a reasonable expectation of success. *In re Droge*, 695 F.3d 1334, 1338 (Fed. Cir. 2012); *In re O'Farrell*, 853 F.2d 894, 903–04 (Fed. Cir. 1988) ("For obviousness under § 103, all that is required is a reasonable expectation of success."). Accordingly, Appellants have not identified reversible error in the Examiner's rejection.

We note that in order to sustain the rejection, specific reliance on Appellants' admitted prior art, the M116A1 device, is required. As the Examiner's statement of rejection does not include reference to Appellants' admitted prior art, we restate the Examiner's rejection as based on a combination of Appellants' admitted prior art, the M116A1 device, Blau, and Freeman. However, Appellants have had opportunity to challenge the Examiner's findings and reliance on the M116A1 device (*see* Final Act. 4; Ans. 3–4), but failed to do so.[8]

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[8] In addition, we note that the prior art references must be evaluated, taking into account, *inter alia*, "the background knowledge possessed by a person having ordinary skill in the art," and "the inference and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007); *see also In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) ("[A] prior art reference must be 'considered together with the knowledge of one of ordinary skill in the pertinent art.'") (quoting *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)). The knowledge attributable to one of ordinary skill in the art includes what was admittedly known in the art by Appellants at the time of the invention. *Constant v. Advanced Micro-Devices Inc.*, 848 F.2d 1560, 1570 (Fed. Cir. 1988) ("A statement in a patent that something is in the prior art is binding on the applicant and patentee for determining anticipation and obviousness."); *In re Fout*, 675 F.2d 297, 301, 213 USPQ 532, 536 (CCPA 1982) ("[i]t is not unfair or contrary to the policy of the patent system that appellants' invention be judged on obviousness against their actual contribution to the art") (footnote omitted).

CONCLUSION

The Examiner's rejections of claims 1–5, 9–11, 19–21, 24–27, 29–33, and 35–37 under 35 U.S.C. § 103(a) as unpatentable over the combination of Appellants' admitted prior art, the M116A1 device, Blau, and Freeman, and of claims 6–8 and 28 adding Pyrocreations, are sustained.

DECISION

Upon consideration of the record, and for the reasons given above and in the Answer, the decision of the Examiner rejecting claims 1–11, 19–21, 24–33, and 35–37 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)(1).

AFFIRMED