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| 15/513,965 | 03/23/2017 | James Elmer Abbott JR. | 84601441 | 7114 |

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HP Inc.
3390 E. Harmony Road
Mail Stop 35
Fort Collins, CO 80528-9544

| EXAMINER | |
|---|---|
| SMITH JR., JIMMY R | |

| ART UNIT | PAPER NUMBER |
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| 1745 | |

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JAMES ELMER ABBOTT JR., ALEXANDER GOVYADINOV, VLADEK KASPERCHIK, KRZYSZTOF NAUKA, SIVAPACKIA GANAPATHIAPPAN, LIHUA ZHAO, HOWARD S. TOM JR., YAN ZHAO, and HOU T. NG

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Appeal 2021-000770
Application 15/513,965
Technology Center 1700

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Before BEVERLY A. FRANKLIN, DONNA M. PRAISS, and JANE E. INGLESE, *Administrative Patent Judges*.

FRANKLIN, *Administrative Patent Judge.*

## DECISION ON APPEAL

## STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 1, 5, and 15–20. We have jurisdiction under 35 U.S.C. § 6(b).

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[1] We use the word Appellant to refer to "applicant" as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Hewlett-Packard Development Company, L.P. Appeal Br. 1.

We REVERSE.

## CLAIMED SUBJECT MATTER

Claim 1 is illustrative of Appellant's subject matter on appeal and is set forth below:

> 1. A lighting device for an additive manufacturing machine, comprising an array of light sources each to emit monochromatic light within a band of wavelengths that includes a peak light absorption of a liquid coalescing agent to be dispensed on to layered build material, each of the light sources or each of multiple groups of the light sources individually addressable in the array to emit light independent of any other light source in the array or of any other group of light sources in the array, and where each of the light sources is a single light source to emit monochromatic light with a spectral intensity of at least $1X10^{12}Wm^{-3}sr^{-1}$.

Appeal Br. 10 (Claims App.).

## REFERENCES

The prior art relied upon by the Examiner is:

| Name | Reference | Date |
|---|---|---|
| Hopkinson | US 2006/0180957 Al | Aug. 17, 2006 |
| Miller | US 2016/0033756 Al | Feb. 4, 2016 |
| PhlatLight LED Illumination Product Datasheet pp. 5–8, May 2011. | | |

## REJECTIONS

1. Claim 1 is rejected 35 U.S.C. § 103 as being unpatentable over Miller.

2. Claim 5 is rejected under 35 U.S.C. § 103 as being unpatentable over Miller, as applied to claim 1 above, in view of Hopkinson.

3. Claims 15 and 17–20 are rejected 35 U.S.C. § 103 as being unpatentable over Miller, as applied to claim 1 above, and as evidenced by PhlatLight Datasheet.

4. Claim 16 is rejected 35 U.S.C. § 103 as being unpatentable over Miller as evidenced by the PhiatLight Datasheet, as applied to claim 15 above, in view of Hopkinson.

OPINION

We refer to the Examiner's statement of the rejection of claim 1 as set forth on pages 3–4 of the Answer. Therein, it is the Examiner's position that Miller teaches the claimed subject of claim 1, except for the recitation directed to "where each of the light sources is a single light source to emit monochromatic light with a spectral intensity of at least $1X10^{12}Wm^{-3}sr^{-1}$". Ans. 3. The Examiner relies upon a routine optimization rationale to meet the claimed spectral intensity range of at least $1X10^{12}Wm^{-3}sr^{-1}$. Ans. 3–4.

Appellant argues, *inter alia*, that Miller does not teach any range at all regarding spectral intensity, and, therefore, submits that the routine optimization rationale is unsupported. Appeal Br. 7–8. Appellant reiterates this position on pages 3–4 of the Reply Brief. We are persuaded by this line of argument. In the instant case, there is no range taught by Miller, which is akin to a very broad range (as there is not a set limit since no limit is provided in Miller); so broad that there is no invitation for routine optimization. We note that when the prior art discloses "very broad ranges," such "may not invite routine optimization." *Genetics Inst., LLC v. Novartis Vaccines & Diagnostics, Inc.*, 655 F.3d 1291 (Fed. Cir. 2011).

In view of the above, we reverse Rejection 1. We also reverse Rejections 2–3 for the same reasons (the Examiner does not rely upon the

additionally applied references to cure the stated deficiencies of Rejection 1).

## CONCLUSION

We reverse the Examiner's decision.

## DECISION SUMMARY

In summary:

| Claim(s) Rejected | 35 U.S.C. § | Reference(s)/Basis | Affirmed | Reversed |
|---|---|---|---|---|
| 1 | 103 | Miller | | 1 |
| 5 | 103 | Miller, Hopkinson | | 5 |
| 15, 17–20 | 103 | Miller, PhlatLight Datasheet | | 15, 17–20 |
| 16 | 103 | Miller, PhlatLight Datasheet, Hopkinson | | 16 |
| **Overall Outcome** | | | | 1, 5, 15–20 |

REVERSED