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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* EHUD LEVY

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Appeal 2019-006718  
Application 15/839,365  
Technology Center 1700

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Before ROMULO H. DELMENDO, JEFFREY B. ROBERTSON, and  
JANE E. INGLESE, *Administrative Patent Judges*.

DELMENDO, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellant<sup>1</sup> appeals under 35 U.S.C. § 134(a) from the Primary Examiner’s final decision to reject claims 1, 4–12, and 15–20.<sup>2</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42—i.e., “SELECTO, INC.” (Application Data Sheet filed December 12, 2017 at 6), which is also identified as the real party in interest (Appeal Brief filed April 19, 2019 (“Appeal Br.”) at 2).

<sup>2</sup> See Appeal Br. 5–15; Reply Brief filed September 11, 2019 (“Reply Br.”) at 1–2; Final Office Action entered September 14, 2018 (“Final Act.”) at 5–27; Examiner’s Answer entered July 12, 2019 (“Ans.”) at 4–26, 28–33.

## I. BACKGROUND

The subject matter on appeal relates to a method for removing lead from water containing total organic carbon (“TOC”) and total trihalomethane (“TTHM”) and to a fluid purification system for use in such a method (Specification filed December 12, 2017 (“Spec.”) ¶¶ 2, 155; Abstract). Representative claim 1 is reproduced from the Claims Appendix to the Appeal Brief, as follows:

1. A method of removing lead from water comprising the steps of:

contacting the water with a fluid purification system, comprising:

a first fluid purification media comprising a first rigid porous purification block, comprising:

a longitudinal first surface;

a longitudinal second surface disposed inside the longitudinal first surface; and

a porous high density polymer disposed between the longitudinal first surface and the longitudinal second surface;

a second fluid purification media, comprising a pleated fibrous, nonwoven fabric disposed adjacent to the first surface of the first fluid purification media, the second surface of the first purification media, or both wherein the fibrous nonwoven fabric of the second fluid purification media is folded to form a plurality of pleats and comprising an active material disposed on, among, or in the pleated, fibrous, nonwoven fabric, and wherein:

the longitudinal first surface has a first transverse dimension;

the longitudinal second surface is an inner surface having a second transverse dimension;

the ratio of the first transverse dimension to the second transverse dimension is in the range of 1.2 to 3.5, and the difference between the first transverse dimension and the second transverse dimension is the thickness of the porous purification block;

a third fluid purification media, comprising a second rigid porous purification block having a longitudinal outer surface and

a longitudinal inner surface, wherein the longitudinal inner surface is disposed transversely outside the longitudinal first surface of the first fluid purification media and defining a transverse gap therebetween, or wherein the longitudinal outer surface is disposed inside the longitudinal second surface of the first fluid purification media, and defining a transverse gap therebetween;

a fourth fluid purification media comprising particles of a fluid purification material disposed in the transverse gap; and

removing the lead from the water also containing at least one of TOC and TTHM.

(Claims App. 1–2).

## II. REJECTIONS ON APPEAL<sup>3</sup>

The claims on appeal stand rejected under pre-AIA 35 U.S.C. § 103(a) as follows:

- A. Claims 1, 4–10, 12, and 15–20<sup>4</sup> as unpatentable over Taylor et al.<sup>5</sup> (“Taylor”), VanderBilt et al.<sup>6</sup> (“VanderBilt”), Rinker et al.<sup>7</sup>

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<sup>3</sup> The Examiner states that a rejection under 35 U.S.C. § 112, ¶ 2, of claims 9 and 12, as set forth in the Final Action (Final Act. 3–4), has been withdrawn following entry of an Amendment filed November 27, 2018 (Ans. 26–27; Advisory Action entered December 17, 2018).

<sup>4</sup> The Examiner lists only claims 1, 6, 7, 12, 15, 16, and 19 as rejected in the statement of the rejection but mentions claims 1, 4–10, 12, and 15–20 in the body of the rejection (Ans. 4, 15; Final Act. 5, 16). Because the Appellant understands claims 1, 4–10, 12, and 15–20 to be rejected on this ground (Appeal Br. 5), the Examiner’s error is harmless.

<sup>5</sup> US 2006/0043024 A1, published March 2, 2006.

<sup>6</sup> US 4,753,728, issued June 28, 1988.

<sup>7</sup> US 2006/0000763 A1, published January 5, 2006.

(“Rinker”), Levy,<sup>8</sup> Smith et al.<sup>9</sup> (“Smith”), Tepper et al.<sup>10</sup>  
 (“Tepper”), and Hong;<sup>11</sup> and

B. Claim 11 as unpatentable over the same references identified  
 above further in view of Beswick et al.<sup>12</sup> (“Beswick”).  
 (Ans. 4–26, 28–33; Final Act. 5–27).

### III. DISCUSSION

#### REJECTION A

##### 1. Grouping of Claims

Although the Appellant provides various arguments or comments  
 under separate sub-headings for claim 1, claims 4–11 (claim 11 not being  
 subject to Rejection A),<sup>13</sup> claim 12, and claims 15–20, the Appellant relies  
 on the same arguments for claims 1, 4–10, 12, and 15–20 (Appeal Br. 5–14).  
 Therefore, we confine our discussion of this rejection to claim 1, which we  
 designate as representative pursuant to 37 C.F.R. § 41.37(c)(1)(iv). Claims  
 4–10, 12, and 15–20 stand or fall with claim 1.

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<sup>8</sup> US 2006/0207925 A1, published September 21, 2006.

<sup>9</sup> US 6,136,189, issued October 24, 2000.

<sup>10</sup> US 2007/0175196 A1, published August 2, 2007.

<sup>11</sup> US 6,106,725, issued August 22, 2000.

<sup>12</sup> US 2008/0047902 A1, published February 28, 2008.

<sup>13</sup> For claims 4–11, the Appellant states that the rejection as to these claims  
 should be reversed “for at least the reasons given [for claim 1] and in [the]  
 Appellant’s prior responses, which are incorporated . . . by reference”  
 (Appeal Br. 9). A similar statement is offered for claims 15–20 (*id.* at 13).  
 But the Appellant’s prior responses do not offer any separate arguments for  
 claims 4–11 or 15–20 (Reply filed November 27, 2018 at 10; Reply filed  
 June 11, 2018 at 10–11).

2. The Examiner's Position

The Examiner finds that Taylor describes a method for removing contaminants, such as lead, from water using a filtration system that includes a porous composite carbon block (Ans. 4–5; Final Act. 5–6). The Examiner acknowledges multiple differences between Taylor's method and the subject matter recited in claim 1, but relies on various other references to resolve these differences and conclude that a person having ordinary skill in the art would have combined the references in the manner claimed by the Appellant (Ans. 5–11; Final Act. 6–12).

3. The Appellant's Contentions

The Appellant does not dispute the Examiner's findings regarding Taylor, VanderBilt, Rinker, Levy, Smith, and Tepper (Appeal Br. 5–14). Nor does the Appellant contest the Examiner's reasons in support of combining these references (*id.*). Rather, the Appellant's principal argument is that Hong, which is cited to establish the obviousness of applying the method suggested by the prior art references to remove lead from water that also contains TOC and TTHM, discloses "phosphate mineral" and "solid carbonate mineral," which "are each entirely absent from [the Appellant]'s claimed fluid purification system" (*id.* at 7). The Appellant urges that the Examiner "fails, therefore, to provide sufficient reasoning to support a conclusion that the claimed combination would [have been] obvious to a person having ordinary skill in the art and in view of the cited references" and that "[s]uch reasoning to combine is only present in [the Inventor]'s own [S]pecification" (*id.*). According to the Appellant, "[t]he fluid purification system of claim 1 provides new and unexpected results that render the claimed combination unobvious over the cited prior art" (*id.* at 8) (citing the

Appellant's published application, US 2018/0099878 A1, published April 12, 2018, ¶¶ 175–76; *see also* Spec. ¶¶ 154–55).

4. Opinion

We have fully considered the Appellant's arguments but do not find them persuasive to identify reversible error in the Examiner's rejection. *In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011).

As the Examiner finds (Ans. 4–5; Final Act. 5–6), Taylor teaches that water filtration systems based on carbon in the form of porous composite carbon blocks that include activated particles (e.g., activated carbon) and binders are effective to remove contaminants such as lead from water (Taylor ¶¶ 20–23, 26, 38). Similarly, Hong teaches that many organic compounds in water react with chlorine disinfectant to form toxic compounds such as trihalomethanes (“THM”), which the EPA regulated down to 80 ppb (Hong col. 3, ll. 16–44). To remove these contaminants as well as other pollutants such as lead, Hong discloses a filtration system that, like Taylor, is also based on activated carbon but further contains a mineral matrix comprising hydroxylapatite (i.e., a phosphate mineral) and a slightly soluble calcium carbonate (i.e., carbonate minerals) (*id.* at col. 4, ll. 10–14, 26–33, 51–54; col. 5, ll. 25–26).

Given these teachings, we discern no error in the Examiner's reliance on Hong to show that the water to be treated by Taylor's method, when disinfected with chlorine, would reasonably be expected to contain organic compounds (TOC) and trihalomethanes (TTHM) in addition to other contaminants such as lead (Ans. 11; Final Act. 12). Moreover, as the Examiner points out (Ans. 29–30), Hong, like Taylor, is also concerned with filtration media including activated carbon to remove lead from water, and

claim 1 does not limit the purification media in the “first rigid porous purification block” to any particular material (Claim App. 1). Under these circumstances, we find no reversible error in the Examiner’s articulated motivation for combining Taylor and Hong (Ans. 29–30), which is that a person having ordinary skill in the art would have reasonably expected that when Hong’s filtration media based on activated carbon and matrix minerals are implemented as the filtration media in Taylor’s porous composite carbon block based on activated carbon, the resulting system would be effective in reducing not only lead in chlorine-disinfected water but also toxic compounds such as TTHM. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007) (“[W]hen a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.”); *id.* at 417 (“[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.”).

As for secondary considerations (i.e., unexpected results), the Appellant relies on certain descriptions in the Specification (Spec. ¶¶ 154–55; published Application ¶¶ 175–176) (Appeal Br. 8). According to the Appellant, “‘a porous purification block as a first fluid purification media and a fibrous nonwoven fabric disposed as a second fluid purification media inside the first fluid purification media’ ‘is surprisingly more effective at removing lead, including fine lead particulates, than are commercially available carbon block filters’” (*id.* (quoting Spec. ¶ 154)) (emphasis omitted). As the Examiner observes (Ans. 30), the Appellant does not direct



us to objective evidence (e.g., back-to-back comparative tests against the closest prior art) that would support the allegation of unexpected results. Therefore, the argument fails. *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (“Mere argument or conclusory statements in the specification does not suffice.” (Internal citation omitted)).

For these reasons, and those well-stated by the Examiner, we uphold the Examiner’s rejection as maintained against claim 1.

#### REJECTION B

Regarding claim 11, the Appellant summarizes what Beswick teaches and adds that “[a]lthough the filters of Hong and/or Beswick et al. may be used for a similar purpose as the claimed fluid purification, namely removing lead from water, they do so using different materials and in different ways” (Appeal Br. 14–15). Then, in a conclusory fashion, the Appellant argues that “[i]t would not, therefore, [have been] obvious for a person having ordinary skill in the art to combine Hong, Beswick et al., and the six other cited prior art references, to arrive at the claimed method” (*id.* at 15).

We find the Appellant’s argument unpersuasive for the same reasons discussed above with respect to Rejection A. Merely pointing out what a reference discloses, which is coupled with a skeletal argument that the prior art references would not have rendered the claimed subject matter obvious to a person having ordinary skill in the art, does not constitute an argument for separate patentability of a claim. *In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (“[W]e hold that the Board reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation

of the claim elements and a naked assertion that the corresponding elements were not found in the prior art.”).

#### IV. CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1, 4–10, 12, 15–20	103(a)	Taylor, Vanderbilt, Rinker, Levy, Smith, Tepper, Hong	1, 4–10, 12, 15–20	
11	103(a)	Taylor, Vanderbilt, Rinker, Levy, Smith, Tepper, Hong, Beswick	11	
<b>Overall Outcome</b>			1, 4–12, 15–20	

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

**AFFIRMED**