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EXAMINER
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JASTRZAB, KRISANNE MARIE

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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* ENHANCED SYSTEMS & PRODUCTS, INC.,  
Patent Owner and Appellant

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Appeal 2018–008632  
Reexamination Control 90/013,836  
Patent 7,896,959 B1  
Technology Center 3900

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Before RICHARD M. LEBOVITZ, JEFFREY B. ROBERTSON, and  
WESLEY B. DERRICK, *Administrative Patent Judges*.

ROBERTSON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appeal 2018–008632  
Reexamination Control 90/013,836  
Patent 7,896,959 B1

Enhanced Systems & Products, Inc., the owner of the patent under reexamination (hereinafter “the ’959 Patent”), appeals under 35 U.S.C. §§ 134(b) and 306 from a final rejection of claims 1–14 (Appeal Brief filed May 3, 2018, hereinafter “Appeal Br.,” 7; Final Office Action mailed November 13, 2017). We have jurisdiction under 35 U.S.C. §§ 134(b) and 306.

We AFFIRM.

#### STATEMENT OF THE CASE

This reexamination proceeding is based on a third-party request for *ex parte* reexamination filed by Kinetic Systems, Inc. (Request for *Ex Parte* Reexamination filed October 17, 2017, 1.) We are informed that the instant proceeding is related to Reexamination Control Number 90/013,835, which is an *ex parte* reexamination of U.S. Patent No. 7,390,340 B1, titled “Filtration Apparatus,” in which an appeal of the Examiner’s rejections has also been filed. (Appeal Br. 3.)

The ’959 Patent states that the invention relates to a fluid filtering device that filters undesirable chemicals, particles, hydrocarbons, and pathogens from liquids, gases, and vapors. (Col. 1, ll. 11–15.)

Claim 1 on appeal reads as follows:

1. A biological filtration apparatus which decontaminates biologics or chemicals for use in a system containing a gas or liquid to be decontaminated which comprises:

at least one housing having an inner chamber;  
an inlet and an outlet;

at least one filter means in said at least one chamber for decontaminating the gas or liquid;

an outlet portion for said apparatus for discharge of a decontaminated gas or liquid from said filter means and chamber associated with said at least one housing after decontamination;

an inlet portion of said apparatus associated with an inlet of said at least one housing for receiving said gas or liquid to be passed through said chamber and filter means;

first valve means associated with the inlet portion of said at least one housing to selectively close off the inlet to said at least one housing and to control the flow of said gas or liquid;

second valve means associated with the outlet portion of said at least one housing to selectively close off the outlet of said at least one housing and to control the flow of said gas or liquid whereby any biologics or chemicals are decontaminated.

(App. Br. 82 (Claims App'x).)

### THE REJECTIONS<sup>1</sup>

The Examiner rejected claims 1–14 under 35 U.S.C. § 103(a) as follows:

1. Claims 1, 2, 4–8, 10, 13, and 14 as obvious over Mason et al. (U.S. Patent No. 5,424,042, issued June 13, 1995, “Mason”) in view of Pittman (U.S. Patent No. 5,064,454, issued November 12, 1991, “Pittman);

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<sup>1</sup> The Examiner withdrew nonstatutory Double Patenting rejections set forth in the Final Action pages 12–13 over related patent, U.S. Patent No. 7,390,340 B1, as a result of the terminal disclaimer filed December 13, 2017. (Ans. 10.)

2. Claims 3, 9, and 11 as obvious over Mason, Pittman, and further in view of Kubokawa (U.S. Patent No. 6, 110,260, issued August 29, 2000, “Kubokawa”);
3. Claims 1–3 and 5–12 as obvious over Jaikaran (U.S. Patent No. 5,772,879, issued June 30, 1998, “Jaikaran”) in view of Gershon et al. (U.S. Patent No. 5,427,683, issued June 27, 1995, “Gershon”);
4. Claims 1, 2, 5–8, 10, 12, and 13 as obvious over Pittman in view of Reipur et al. (U.S. Patent No. 5,234,605, issued August 10, 1993, “Reipur”); and
5. Claims 3, 9, and 11 as obvious over Pittman and Reipur, further in view of Kubokawa or Gershon.

(Examiner’s Answer mailed May 31, 2018, hereinafter “Ans.,” 2–9.)

Appellant relied on certain parts of the following (Appeal Br. 85

(Evidence App’x)):

Declaration of Robert Monetti dated June 22, 2017, and attachments thereto (Ex. i) (“Monetti Declaration”).

Supplemental Declaration of Robert Monetti dated December 13, 2017 (Ex. ii) (“Suppl. Monetti Declaration”).

Declaration of Jonathan Hale dated December 12, 2017 (Ex. iii) (“Monetti Declaration”).

Supplemental Declaration of Jonathan Hale dated February 11, 2018 (Ex. iv) (“Suppl. Hale Declaration”).

#### *Level of Ordinary Skill*

The Examiner determined that all of the prior art applied in the rejection are directly pertinent to the claimed invention and clearly evinces

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the level of one of ordinary skill in the art at the time of the invention.

(Final Act. 15; Ans. 10.)

Appellant contends that the Examiner has not sufficiently established the level of ordinary skill in the art, because Mason and Pittman are silent to a biological filtration apparatus combined with a compressed gas system.

(Appeal Br. 11–12.)

We agree with the Examiner and expressly adopt the Examiner’s determination of the level of skill in the art. Appellant has not provided sufficient explanation as to why the alleged deficiencies of Mason and Pittman render them insufficient to provide the level of ordinary skill. That is, Appellant has not sufficiently explained why the alleged silence in Mason and Pittman means that such prior art is not pertinent to filtration apparatus such as those claimed, and as a result does not provide sufficient information as to the appropriate level of skill. *See In re GPAC*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (Holding that the Board did not err in concluding that the level of ordinary skill was best determined by references of record.)

### *Claim Interpretation*

#### *Claim 1: “Biological Filtration Apparatus”*

Appellant contends that the term “biological filtration apparatus” in conjunction with the phrase “whereby any biologics or chemicals are decontaminated” would have a specific meaning to one of ordinary skill in the art to require filters that remove all biologics and chemicals, or an “absolute rated filter,” that is, a filter with a “100% rating.” (Appeal Br. 13–14, citing Monetti Decl. ¶ 8, Attachment A, Suppl. Monetti Decl. ¶¶ 8–10,

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Hale Decl. ¶ 16.) Initially, we emphasize that the phrase “whereby any biologics or chemicals are decontaminated” is interpreted to mean removing biologics or chemicals from the gas or liquid consistent with the further language of claim 1 and the positions of Appellant and the Examiner throughout the briefing. Appellant argues that “decontaminated” would be interpreted as synonym for “sterilize” by one of ordinary skill in the art. (Appeal Br. 14, citing <http://www.thesaurus.com/browse/decontaminate>.)

The Examiner points to column 2, lines 5–6 of the ’959 Patent, where in the Background of the Invention, the ’959 Patent refers to “biological filters which can trap and/or kill pathogens.” (Ans. 2, 10.) The Examiner then stated “decontamination is met by trapping contaminants, either biological (**bacteria, virus, microorganism**) or chemicals.” (*Id.*)

We are not persuaded that one of ordinary skill in the art would have interpreted claim 1 in the manner articulated by Appellant. The ’959 Patent describes, with respect to filters (col. 5, ll. 5–11, emphasis added):

The filters can contain cationic, or anionic ion exchange material, charcoal, sand, biological filters or treating devices, HEPA filters, and the like *depending upon the system to be filtered or treated*. Filter media can be poly glass, membrane, PTFE membrane, or expanded PTFE membrane, activated charcoal bio-filters or any other available media *depending on the use*.

Claim 1 does not specify the requirements of the filter means with respect to the particular biologics or chemicals to be decontaminated. The Hoff Article<sup>2</sup> relied on by Appellant, discusses design considerations for

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<sup>2</sup> Hoff, “Sterilization and Hazard Containment” (Monetti Decl., ¶ 8, Attachment A.)

autoclaves in “BSL3 or BSL4 application” and refers expressly to filters of “0.2  $\mu\text{m}$  because this is smaller than any pathogen.” (Hoff Article 1–2.) Claim 1 is not limited to such applications, nor does claim 1 require that the apparatus be necessarily used in any particular environment for decontaminating pathogens. However, we agree with Appellant that “decontaminate” means more than simply trapping contaminants on filters. Rather, consistent with the ’959 Patent, “decontaminate” means that the gas or liquid is substantially freed of contaminants targeted for removal.

Claim 1, as discussed above, requires only that the apparatus be capable of decontaminating biologics or chemicals, and does not have any particular limitation as to the size of the biologics or chemicals to be removed. Thus, we decline to read any particular size limitation for the filter means into claim 1. This is also consistent with the disclosure of the ’959 Patent that the invention is a device that “filters undesirable chemicals, particles, hydrocarbons, pathogens and the like.” (Col. 1, ll. 11–15.) The ’959 Patent discloses that the filtration device may have “a multiplicity of different filters or indicators to detect and/or filter pathogens or hazardous chemicals.” (Col. 2, ll. 55–58.)

*“Valve means”*

Appellant contends that “valve means” as recited in claims 1 and 10 recites means plus function language such that the valves “are at least directed to a structure for **completely** closing off the inlet and outlets of a housing,” which, as shown in Figure 2 of the ’959 Patent, includes ball valves. (Appeal Br. 19–22.)

The Examiner stated that “valve means can be interpreted to include ball valves but by no means restricts or requires that be the only valve that properly meets the claimed valve means.” (Ans. 15.)

At the outset, we agree with Appellant that recitation of “valve means” invokes 35 U.S.C. § 112, 6<sup>th</sup> paragraph (pre-AIA), and thus limits “valve means” to the structure disclosed in the ’959 Patent and equivalents thereof. *Williams v. Citrix Online, LLC.*, 792 F.3d 1339, (Fed. Cir. 2015).

We agree with Appellant that the structure corresponding to the “valve means” is “structure for completely closing off the inlet and outlets of a housing in order to control or preclude the flow of gas or liquid to the housing so that the at least one filter can be removed or replaced.” (Appeal Br. 20, citing ’959 Patent, col. 2, ll. 23–24; col. 4, ll. 12–17.) We agree also that in view of Figure 2 of the ’959 Patent, an example of such a structure would be a ball valve or equivalents thereof. Even though the ’959 Patent does not use the term “ball valve,” we agree with Appellant as supported by the declaration evidence that one of ordinary skill in the art would have understood the valves depicted in Figure 2 to be ball valves. (Appeal Br. 20–22; Suppl. Monetti Decl. ¶¶ 13–14; Hale Decl. ¶¶ 8–11.)

*“Filter means”*

We interpret the corresponding structure with respect to “filter means” as the filter materials expressly listed above, reproduced from the ’959 Patent, and equivalents thereof. (Col. 5, ll. 5–11.) Appellant argues that “filter means” as recited in claim 1 “includes filters that are replaceable/removable.” (Appeal Br. 18.) The Examiner stated that there is

nothing in the claim language that requires the filters be replaceable or removable. (Ans. 14.) We find it unnecessary to resolve this dispute in order to decide this appeal. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017); *see also U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (holding claim construction is not necessary when it is not “directed to, or has been shown reasonably to affect, the determination of obviousness”).

### *Rejection 1*

Regarding claim 1, the Examiner found that Mason discloses an apparatus and method for processing industrial hospital and household wastes, which includes an off-gas cleaning and pollution control system. (Ans. 3, citing Mason col. 1, ll. 7–10, col. 2, ll. 61–68.) The Examiner found that the off-gas cleaning and pollution control system removes harmful pollutants from the off-gas to minimize stack emissions. (*Id.*, citing Mason, col. 4, ll. 17–21, col. 5, ll. 40–49.) The Examiner found that the off-gas cleaning and control subsystem includes a pair of HEPA filters, the filters being capable of removing particles 0.3  $\mu\text{m}$  and larger at approximately 99.97% efficiency. (*Id.*) The Examiner found that “[m]old and bacteria generally range in size from 1–5  $\mu\text{m}$ , thus the HEPA filters constitute biological filters.” (Ans. 3.) The Examiner found that although Mason discloses that the system remains in operation while one of the filters is changed, Mason does not disclose that valves located at inlets and outlets facilitate that operation. (*Id.*) the Examiner found that Mason discloses that monitoring pressure differentials may be used to determine whether a filter

may need to be replaced or cleaned, but that Mason does not disclose pressure gauges on the HEPA filters. (*Id.*)

The Examiner found that Pittman discloses a filtration removal system where valves are provided at both the inlet and exhaust of the filter units so as to isolate the filter unit from the flow of the system for cleaning. (*Id.* at 3–4, citing Pittman, 4, ll. 7–31, 34–36, 40–43; col. 5, ll. 5–10.) The Examiner found that Pittman discloses that pressure gauges are used to detect pressure drop across each filter unit to determine when cleaning is required. (*Id.* at 4, citing Pittman col. 5, ll. 10–25; Fig. 3.)

The Examiner determined that it would have been obvious to one of ordinary skill in the art to include valves such as those taught in Pittman in the filter units of Mason to selectively facilitate the individual cleaning or change out of filters without shutting down the system as disclosed in Mason. (*Id.*) The Examiner determined that it would have been obvious to employ pressure gauges as disclosed in Pittman associated with the filters of Mason to determine the filter loads requiring cleaning or change out. (*Id.*)

Appellant argues that the “minimally rated” HEPA filters disclosed by Mason do not satisfy the requirements of claim 1. (Appeal Br. 13–15.) Appellant contends that the “pneumatic valves” disclosed in Pittman are not the equivalent of the ball valves disclosed in the ’959 Patent, because the valves in Pittman are knife edge gate valves that do not close long enough to control or preclude the flow of air to allow the filters to be removed or replaced during cleaning. (Appeal Br. 23–27.) Therefore, Appellant argues that Pittman does not provide sufficient evidence that the valves disclosed therein would allow the filters in Mason to be changed without releasing

radioactive particles into the environment, which would render Mason inoperable for its intended purpose. (Appeal Br. 28–31.)

## ISSUES

Thus, the principal issues with respect to this rejection are:

1. Did the Examiner err in finding that the HEPA filter disclosed in Mason decontaminate biologics or chemicals as required in claim 1?
2. Did the Examiner err in finding that the valves in Pittman are capable of acting as the “valve means” recited in claim 1?

## DISCUSSION

### *Issue 1*

We are not persuaded by Appellant’s arguments that by reciting “decontaminating” as interpreted above, the claims require a level of removal of biologics or chemicals, sufficient to distinguish the HEPA filters disclosed in Mason. That is, Mason discloses that the HEPA filters disclosed therein are capable of removing particles of 0.3  $\mu\text{m}$  or larger at approximately 99.97% efficiency. (Col. 16, ll. 25–30.) As discussed above, claim 1 does not recite any particular application, particular size of the particles to be removed, or efficiency of the broad recitation related to “biologics or chemicals” to be decontaminated. Thus, given the extent of removal disclosed in the HEPA filter in Mason, in conjunction with the Examiner’s unchallenged finding that mold and bacteria generally range in size from 1–5  $\mu\text{m}$  (Ans. 3), we are of the view that the HEPA filters in

Mason are capable of decontaminating biologics or chemicals as recited in claim 1.<sup>3</sup>

*Issue 2*

We are not persuaded by Appellant’s argument that the valves disclosed in Pittman do not read on the “valve means” recited in the claims. Specifically, we do not agree with Appellant that the “pneumatic valves” disclosed in Pittman, when incorporated into Mason’s filtering apparatus, would be incapable of “selectively clos[ing] off the inlet” and “selectively clos[ing] off the outlet” as recited in claim 1. Pittman discloses that “pneumatic valves 38 and 40 are closed to isolate the filter unit.” (Col. 4, ll. 41–43.) Although Appellant contends that the pneumatic valves in Pittman “only close[] to the extent needed to isolate the collectors 16 in order to prevent asbestos particles that are blown off the screens by the force of the air jets 42 from reattaching themselves to the screens of the dust collectors 16” (Monetti Decl. ¶ 10), Appellant does not provide sufficient evidence or explanation to support this position to outweigh the express disclosure in Pittman.

In this regard, that Pittman discloses the presence of a secondary HEPA filter does not support Appellant’s position as to the operation of the pneumatic valves. First, Pittman discloses that the secondary HEPA filter 18 is optional. (Pittman, col. 3, l. 60 – col. 4, l. 3, e.g., col. 3, ll. 66–67, “This is

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<sup>3</sup> We observe that independent claim 10 does not expressly recite a “biological filtration apparatus,” but does recite “whereby any biologics or chemicals are decontaminated” as in claim 1. Accordingly, our reasoning applies equally to claim 10.

accomplished by filter units 16, *preferably* followed by backup HEPA filter unit 18.”; col. 7, ll. 20–22 “the backup filter 18 may not be strictly essential in normal operations, though it is certainly desirable for safety purposes.”) Second, although the Monetti Declaration asserts that one of ordinary skill in the art recognizes that use of the backup HEPA filter 18 ensures that air is treated during “normal operation or cleaning” (Monetti Decl. ¶ 11), Pittman itself does not mention that the backup HEPA filter 18 is used during cleaning, and even so, such does not inform the capability of the pneumatic valves themselves. Pittman’s disclosure related to back-up HEPA filter units 18 is “primarily for the purpose of avoiding an accidental release of contaminant in the event of failure of one of the filter units.” (Col. 4, ll. 3–6.) Appellant has not provided sufficient support for the position that one of ordinary skill in the art would have understood Pittman’s disclosure of back-up HEPA filters to be related to cleaning procedures that would preclude the valves from being selectively closed as opposed to avoiding an accidental release of contaminant during normal operating conditions.

Appellant contends that the pneumatic valves disclosed in Pittman are “uni-directional, knife edge gate valves,” and such valves do not “have a structure that functions to reliably and repeatedly provide 100% leakage protection after multiple uses.” (Hale Decl. ¶¶ 12, 13.) Appellant contends that a knife-edge gate valve has a structure where “some leakage will always occur” due to build-up of material in the valve and particularly at the forces the airjets in Pittman (at least 6 atmospheres) would place on the knife gate valves. (Hale Decl. ¶¶ 12–14, Supp. Hale Decl. ¶¶ 7–9.)

We are not persuaded by these statements made in the Hale Declarations. First, we observe that the claims do not recite any particular requirements with respect to the longevity of the filter means provided in the apparatus, and we decline to impart any particular longevity requirement to the term “valve means.” Second, these statements are unsupported by evidence, such as typical pressure ratings for ball valves and pneumatic valves. Third, the Supplemental Hale Declaration expressly acknowledges that knife-edge gate valves have been used “for more than 50 years” to “isolate different chambers for cleaning.” (Suppl. Hale Decl. ¶ 5.) Appellant has not provided a sufficient definition, or support for such a definition, of “isolate” for the apparent use of the term in a manner inconsistent with its customary use, such as that disclosed in Pittman: “Valves are provided for blocking flow from each filter unit for cleaning when desired.” (Col. 2, l. 23–24.)

Appellant’s additional argument that the valves in Pittman only need to be closed momentarily because of the duration of the emission of compressed air from the airjets disclosed in Pittman (Monetti Decl. ¶ 12) also does not address the capability of the pneumatic valves in Pittman as applied to Mason. Rather, it focuses only on the valves as applied in the context of Pittman alone, and not the combination of prior art as a whole. In this regard, Appellant’s argument that completely closing the valves of Pittman to allow for filter removal is completely counter to the purpose of Pittman, directed to cleaning filter units without removal (Suppl. Monetti Decl. ¶ 16), is similarly not persuasive as it does not inform the capability of the valves in the context of Mason’s system, particularly in light of

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Pittman’s disclosure that the pneumatic valves are used to “isolate” the filters.

Appellant’s remaining arguments with respect to the combination of Mason and Pittman are based on the position that the pneumatic valves disclosed in Pittman do not completely close (Appeal Br. 31–32), and thus, are not persuasive for similar reasons as discussed above.

*Claim 2*

Claim 2 recites: “The filtration apparatus of claim 1 including a pressure differential gauge associated with said at least one housing.”

Appellant’s arguments regarding whether Mason and Pittman disclose the claimed filter means and whether the combination would decontaminate biologics or chemicals as recited in claim 1 are not persuasive for the reasons discussed above. (Appeal Br. 31–34.) To the extent Appellant provides separate arguments with respect to claim 2, we agree with the Examiner (Ans. 19) that the pressure monitoring disclosed in Pittman, in order to detect clogged filter units, would have provided sufficient reasons for one of ordinary skill in the art to incorporate a pressure gauge into the apparatus in Mason. That is, one of ordinary skill in the art would have understood that pressure monitoring to detect filter clogging was a known technique to determine whether filters require cleaning, and therefore it would have been obvious to have applied pressure gauges as disclosed in Pittman to the filters of the off-gas cleaning and control system disclosed in Mason.

*Claim 4*

Appellant’s argument that the Examiner did not present any rationales in support of the rejection of claim 4, which recites the presence of HEPA filters in the housing (Appeal Br. 34) is without merit. The Examiner found that Mason discloses HEPA filters. (Ans. 3, 20.)

*Claim 13*

Claim 13 recites “[t]he apparatus of claim 10 in combination with a compressed gas system.”

The Examiner found that Mason and Pittman both disclose gas filtration such that the combination would be capable with a gas source of compressed gas. (Ans. 5)

Appellant contends that because Mason and Pittman are directed to systems applying negative pressures, one of ordinary skill in the art would not have appreciated that the proposed are capable of operating with a compressed gas system, which is a positive pressure system. (Appeal Br. 34–40.) In particular, Appellant argues that one of ordinary skill in the art would recognize that the use of positive pressures created by a compressed gas system would cause failures in the systems of Mason and Pittman. (Appeal Br. 36–37.) Appellant points to the Monetti Declaration (¶ 20) and Supplemental Monetti Declaration (¶¶ 19–24) for support. (Appeal Br. 37–40.)

We have reviewed the declaration evidence, and are not persuaded that the filtration apparatus resulting from the combination of Mason and Pittman would be incapable of operating in conjunction with compressed air.

That is, we find the opinions expressed in the declarations to lack sufficient explanation and support to be persuasive. In particular, the Monetti Declaration sets forth general statements that the use of compressed air would risk damage/destruction of elements, etc. of the treatment systems of Mason and Pittman without explanation as to what such damage might be and why a system that can withstand the use of negative pressure differentials would not be able to withstand a positive pressure differential. (Monetti Decl. ¶ 20.) In addition, although the Supplemental Monetti Declaration discusses the components in Mason and Pittman in more detail, the declaration makes similar conclusory statements regarding the effect of negative pressures on such systems without detailed explanation. (Suppl. Monetti Decl. ¶¶ 19–24.) Such declaration evidence is insufficient to address the capability of the combined disclosures of Mason and Pittman, particularly in view of Pittman, which discloses the use of compressed air jets for cleaning. (Pittman, col. 2, ll. 33–37.)

*Rejection 2–Claims 3, 9, and 11*

Claim 3 recites: “The filtration apparatus of claim 1 wherein said filter means contains an indicator.” Claims 9 and 11 contain similar limitations.

Appellant contends that Kubokawa, relied on by the Examiner for disclosing an indicator for filter media, does not disclose that its patch indicator may be used in the presence of biologics or in conjunction with a filter that decontaminates biologics or chemicals from a gas or liquid. (Appeal Br. 45; Ans. 5.) Appellant argues that Kubokawa is designed to

capture larger particles than that of biologics such as pathogens and that one of ordinary skill in the art would have understood that Kubokawa’s patch would not function at all, or would be of such a size to reduce the effectiveness of the filter to the point where Kubokawa would be unsatisfactory for its intended purpose. (Appeal Br. 45–46.)

Kubokawa discloses a change indicator for a filter that changes appearance in response to the accumulation of contaminants. (Abstr.) Kubokawa discloses that the change indicator changes color and appearance “dependent on the nature of contaminants encountered.” (Col. 6, ll. 20–21.) Kubokawa discloses (col. 8, ll. 31–38):

It will also be appreciated that the size and configuration of an indicator patch for a particular application may be calibrated to take into the account the characteristics of the filter media, the HVAC systems, the expected contaminants to be encountered and the air impervious qualities of the indicator patch material, along with any other pertinent factors to provide an accurate indication of the accumulation of the contaminants in the air filter.

In view of these disclosures in Kubokawa, we are not persuaded that one of ordinary skill in the art would not have been able to have selected an appropriate indicator to detect contaminants consistent with the disclosure of Mason in view of Pittman. (Ans. 21.) Kubokawa provides express guidance as to the ability of the indicator to be selected based on the contaminant, and the Monetti Declaration relied on by Appellant discusses inoperability with respect to Kubota’s air filter and not in the application of an appropriate indicator to the filters of Mason. (Monetti Decl. ¶ 39.) We are not persuaded that simply because Kubokawa may disclose an embodiment

where the contaminants involve larger particles such as dust, lint, smoke, pollen, or dander (Reply Br. 27–28), that one of ordinary skill in the art would not have been able to adjust the indicator for applications in other contexts, including contaminants that would be present in the hospital applications expressly disclosed in Mason. (Mason, col. 1, l. 10.)

*Rejection 3–Jaikaran and Gershon*

The Examiner found that Jaikaran discloses a water treatment system having certain elements required by the claims, but that Jaikaran does not disclose a filter that traps pathogens or chemicals as required by the claims. (Ans. 6.) The Examiner found that Gershon discloses a filtration system to filter a water supply where the filter means is constructed to remove toxins pesticides, and viral microorganisms. (*Id.*) The Examiner concluded that it would have been obvious to have utilized the filter units of Gershon in the system of Jaikaran “to optimize effective water treatment . . . because it would minimize or eliminate the need for further treatment.” (*Id.* at 7.)

Appellant argues that because Gershon “is completely silent as to the extent that [viral] microorganisms are decontaminated,” Gershon does not provide sufficient evidence that the filter disclosed therein would satisfy the recitation “whereby any biologics or chemicals are decontaminated” in claim 1. (Appeal Br. 48–49.)

We agree with Appellant that, in contrast to Mason discussed above, although Gershon expressly discloses that contaminants that are removed from the liquid stream include “heavy metal ions, hormones, toxins, viral microorganisms, and pesticides” (col. 1, ll. 14–17; col. 5, ll. 4–6), Gershon

does not expressly disclose the extent or efficiency of such a removal. Indeed, the Examiner in the rejection, only stated that by using Gershon’s filters, further treatment may be minimized. (Ans. 7, 21–22.) We do not view this as sufficient to support the position that using Gershon’s filters would decontaminate biologics or chemicals as required by the independent claims.

Accordingly, we reverse the Examiner’s rejection of claims 1–3 and 5–12 as obvious over Jaikaran and Gershon.

*Rejection 4-Pittman and Reipur*

Appellant’s arguments with respect to the valves disclosed in Pittman (Appeal Br. 60–66) have been addressed above.

Appellant argues that Pittman’s disclosure of broader applications than the removal of particulate and fibrous matter generally cannot be interpreted to include fluids, which is the medium filtered in Reipur. (Appeal Br. 67.)

Pittman discloses that the apparatus disclosed therein “is particularly intended for use as an asbestos removal system, but has broader application to the removal of particulate and fibrous material generally.” (Col. 1, ll. 8–12.) Appellant points to Pittman, which discloses “[t]he entrained solid matter must be filtered from the air.” (Pittman, col. 3, l. 65–66; Appeal Br. 67.) Appellant points to the Supplemental Monetti Declaration, in which it is stated: “Pittman’s statement . . . would not indicate to one of ordinary skill that Pittman’s filtering system can be applied to cover fluids, but may indicate that it can be applied to other methods of removing relatively fluffy

solid particulate.” (Appeal Br. 67, Suppl. Monetti Decl. ¶ 27.) The Supplemental Monetti Declaration does not provide any further explanation or citation to evidence with respect to this interpretation of Pittman.

We agree with the Examiner (Ans. 25–26) that Appellant appears to be unduly limiting Pittman, both to exclude fluids and in limiting the disclosure to “relatively fluffy” solid particulate (Suppl. Monetti Decl. ¶ 27). The Supplemental Monetti Declaration does not provide sufficient explanation to support the narrow reading of Pittman to exclude applications in the areas of filtering liquids and gases. Moreover, in view of Reipur, which discloses a filtering apparatus that may be used with “fluids” including gas, air, and liquids such as water (col. 1, ll. 15–22), we are not persuaded that one of ordinary skill in the art would have limited the disclosure of Pittman in the manner proposed by Appellant.

Appellant further argues that the combination of Pittman and Reipur would change the operation of Pittman, which according to Appellant, operates with an outside-in flow of air, whereas Reipur’s filter operates with an inside-out flow of water. (Appeal Br. 69, citing Monetti Decl. ¶¶ 34–36, Attachments F, G.) We are not persuaded by Appellant’s argument and evidence, because it appears to focus on the bodily incorporation of the filters of Reipur into Pittman without accounting for modifications that would have been made by one of ordinary skill in the art and does not provide sufficient explanation as to why one of ordinary skill in the art would have been incapable of such modifications.

*Claim 2*

Appellant sets forth similar arguments with respect to the pressure differential gauges recited in claim 2 with respect to Pittman as addressed above in the discussion of Rejection 1. (Appeal Br. 70–71.) We are not persuaded for similar reasons as addressed above.

*Claim 12*

Claim 12 recites that the apparatus of claim 10 is “in combination with a water supply system.” Appellant’s argument that the Examiner has not set forth sufficient rationale for claim 12 is not persuasive. The Examiner expressly found that Reipur discloses the filtration of liquids from waste water, and that the combination of Pittman and Reipur would allow for flexibility to treat liquid sources. (Ans. 8, citing Reipur col. 1, ll. 10–22.) Appellant has not provided a sufficient explanation as to why such findings and conclusions by the Examiner were not sufficient to address claim 12.

*Claim 13*

Appellant contends that Pittman operates under negative pressure and therefore is not capable of operating with a compressed air system, which operates under positive pressure, and as such the combination suggested by the Examiner fails because, Pittman is not analogous art, it requires a change to Pittman’s principle of operation, and renders Pittman unsatisfactory for its intended purpose of removing and pulling asbestos through its system. (Appeal Br. 72–77; Monetti Decl. ¶¶ 19–21.)

We are unpersuaded by Appellant’s arguments in this regard for similar reasons as discussed above with respect to Rejection 1. We are also not persuaded by Appellant’s argument that Pittman is non-analogous art because it is directed to the use of negative pressure. (Appeal Br. 74–75.) We observe, as discussed above, that Pittman at least uses compressed air in cleaning the filter units. (Col. 2, ll. 33–37.) Thus, we are not persuaded that because Pittman also uses negative pressure, it is not reasonably pertinent to the ’959 Patent. As found by the Examiner, Pittman teaches filtration removal of matter from gas streams with valves that are used to isolate each filter unit (Ans. 3–4, citing Pittman col. 4, ll. 7–31, 34–36, 40–43, and col. 5, ll. 5–10), such that if Pittman could not be considered as in the same field of endeavor as the ’959 Patent, it would at the very least be reasonably pertinent to the ’959 Patent.

*Claims 3, 9, and 11*

Appellant sets forth similar arguments with respect to the indicator limitation and Kubokawa as discussed above. (Appeal Br. 77–79.) We are not persuaded for similar reasons as discussed above with respect to Rejection 2.

CONCLUSION

We affirm the Examiner’s rejection of claims 1, 2, 4–8, 10, 13, and 14 as obvious over Mason in view of Pittman.

We affirm the Examiner’s rejection of claims 3, 9, and 11 as obvious over Mason, Pittman, and Kubokawa.

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We affirm the Examiner’s rejection of claims 1, 2, 5–8, 10, 12, and 13 as obvious over Pittman in view of Reipur.

We affirm the Examiner’s rejection of claims 3, 9, and 11 as obvious over Pittman, Reipur, and Kubokawa.

We reverse the Examiner’s rejection of claims 1–3 and 5–12 as obvious over Jaikaran and Gershon.

#### DECISION

The Examiner’s decision to reject claims 1–14 as discussed above under 35 U.S.C. § 103(a) is affirmed.

Requests for extensions of time in this *ex parte* reexamination proceeding are governed by 37 C.F.R. § 1.550(c). *See* 37 C.F.R. § 41.50(f).

#### AFFIRMED

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