

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FISHER & PAYKEL HEALTHCARE LIMITED,
Petitioner,

v.

RESMED LIMITED,
Patent Owner.

Case IPR2017-00635
Patent 8,944,061 B2

Before RICHARD E. RICE, BARRY L. GROSSMAN, and
JAMES J. MAYBERRY, *Administrative Patent Judges*.

RICE, *Administrative Patent Judge*.

DECISION
Denying Inter Partes Review
37 C.F.R. § 42.108

I. INTRODUCTION

A. Background

Fisher & Paykel Healthcare Limited (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 51–80 (“challenged claims”) of U.S. Patent No. 8,944,061 B2 (Ex. 1201, “the ’061 Patent”). Petitioner supported the Petition with a declaration from Jason Eaton, P.E. (Ex. 1205). ResMed Limited (“Patent Owner”) filed a Preliminary Response to the Petition (Paper 7, “Prelim. Resp.”).

Under 35 U.S.C. § 314, an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). Upon considering the Petition, including the evidence filed therewith, and the Preliminary Response, we determine that Petitioner has not shown a reasonable likelihood that it would prevail with respect to any of the challenged claims.

Accordingly, we do not institute an *inter partes* review.

B. Related Matters

The parties identify a related federal district court case involving the ’061 Patent: *Fisher & Paykel Healthcare Ltd. v. ResMed Corp.*, Case No. 3:16-cv-02068-DMS-WVG (S.D. Cal.). Pet. 7–8; Paper 4, 2. The parties also identify two additional petitions filed by Petitioner requesting *inter partes* review of the ’061 Patent. Pet. 8; Paper 4, 2; see IPR2017-00632, Paper 1; IPR2017-00634, Paper 1.

C. The ’061 Patent

The ’061 Patent, titled “Cushion to Frame Assembly Mechanism,” issued on February 3, 2015, and claims priority from an application filed on

January 12, 2006, and two provisional applications filed on October 14 and November 9, 2005, respectively. Ex. 1201, (45), (54), (60), (63). The patent relates to a patient interface for use in treatment of sleep disordered breathing such as obstructive sleep apnea, and, in particular, to an apparatus for securing a face-contacting portion of a patient interface, such as a cushion, to a frame or shell of the patient interface. *Id.* at 1:17–23.

Petitioner provides the following annotated version of Figure 3 of the '061 Patent illustrating mask assembly 210:

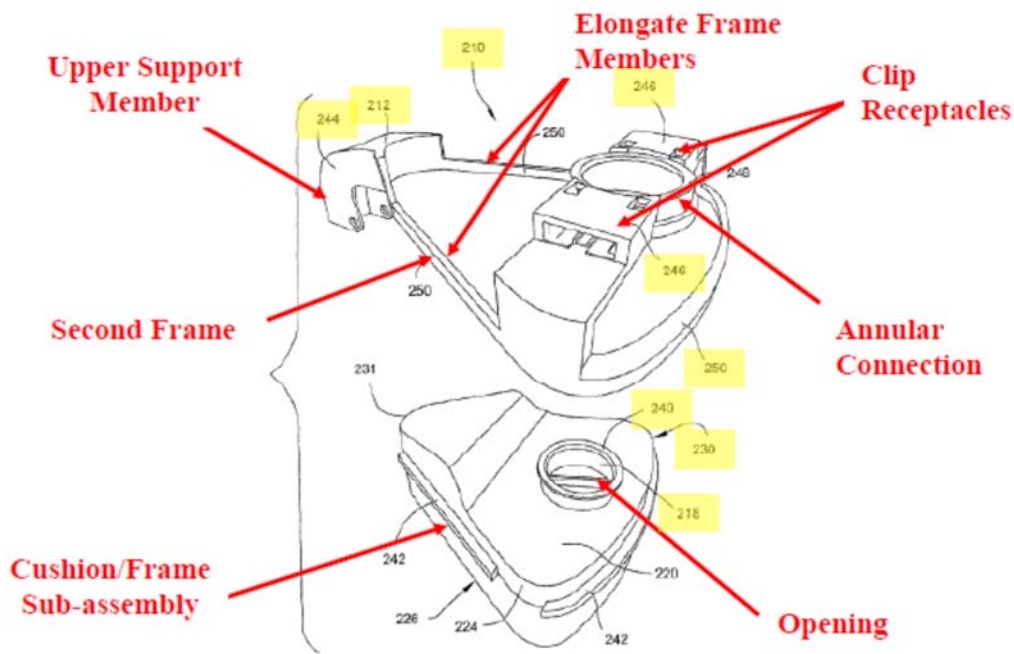


Fig. 3

Pet. 14; Ex. 1201, Fig. 3. As shown in annotated Figure 3 above, mask assembly 210 includes skeleton frame 212 (labeled “Second Frame” in the annotated figure above), which is adapted to interlock removably with cushion/frame sub-assembly 230. Ex. 1201, 6:53–58. Cushion/frame sub-assembly 230 comprises an integrally molded frame and cushion. *Id.*

at 6:59–60. The cushion/frame assembly includes opening 218, which is surrounded by annular wall 240. *Id.* at 6:64–67, 7:15–16, Fig. 3.

Petitioner's annotated version of Figure 4 of the '061 Patent illustrates skeleton frame 212 engaged with cushion/frame sub-assembly 230:

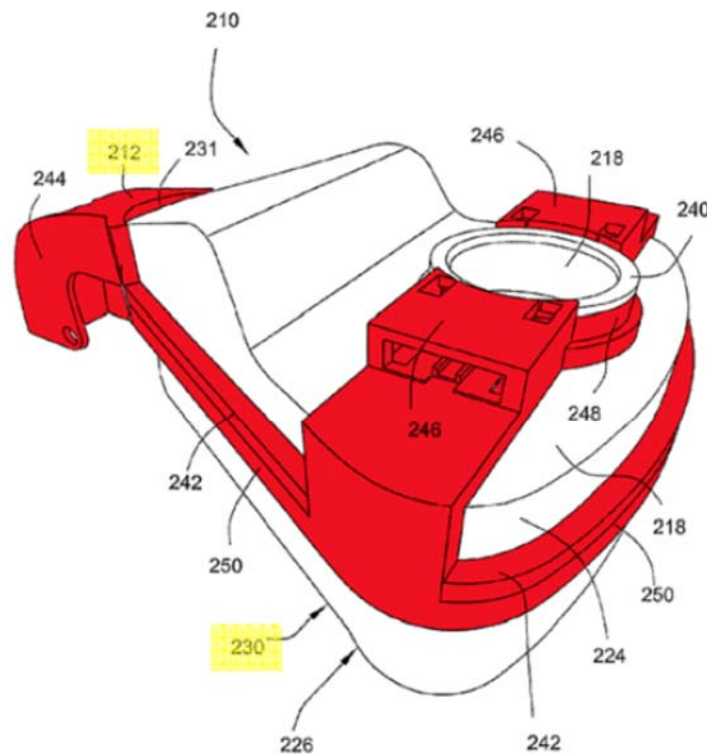


Fig. 4

Pet. 16; Ex. 1201, Fig. 4. As shown in annotated Figure 4 above, annular wall 240 of the cushion/frame sub-assembly interlocks with annular elbow connection seal 248 of skeleton frame 212. Ex. 1201, 7:22–25, Fig. 4. The annular elbow connection seal of skeleton frame 212 is adapted to engage an inlet conduit, e.g., an elbow. *Id.* at 7:15–16. Skeleton frame 212 includes upper support member 244 adapted to support a forehead support and lower headgear clip receptacles 246 adapted to engage clips on straps of a headgear assembly. *Id.* at 7:11–14.

The challenged claims include independent claims 51, 58, 65, and 74. Each of these claims recites, *inter alia*, a “first frame” or “frame” and a “second frame” or “skeleton frame.” In our discussion below, we focus on the limitations relating to the second or skeleton frame. Claim 51 recites, *inter alia*,

a second frame . . . including *an upper member configured to provide forehead support*; lower portion with a second opening aligned with the first opening so that the inlet conduit fluidly communicates with a breathing chamber formed by the cushion and the first frame . . . ; *two elongate frame members that interconnect the upper member and lower portion*; and *an open space bounded at least in part by the two elongate frame members and the lower portion*.

Id. at 24:14–29 (emphases added). Claim 58 recites, *inter alia*,

a skeleton frame . . . comprising an upper support member adapted to receive a forehead contacting portion, a lower frame member . . . , an annular hole adapted to align with the frame-opening, and two frame members interconnecting the upper support member and the lower frame member and forming an open space between the two frame members and the lower frame member.

Id. at 25:1–10 (emphases added). Claim 65 recites, *inter alia*,

a skeleton frame . . . comprising *an upper support member adapted to receive a forehead contacting portion*, a lower frame member . . . , *two frame members interconnecting the upper support member and the lower frame member and forming an open space between the two frame members and the lower frame member*.

Id. at 25:55–63 (emphases added). Claim 74 recites, *inter alia*,

a second frame . . . including: *an upper member configured to support a forehead contacting portion*, a lower member with a second opening surrounded by a second cylindrical wall and aligned with the first opening so that the first cylindrical wall and the second cylindrical wall at least partially overlap when the

first frame and the second frame are assembled, *two elongate frame members that interconnect the upper member and lower portion; and an open space bounded at least in part by the two elongate frame members and the lower member.*

Id. at 26:42–55 (emphases added).

As such, each of the challenged claims requires: (i) a second frame or skeleton frame having an upper member configured to support the user's forehead; (ii) two frame members that interconnect the upper member and a lower portion/member; and (iii) an open space bounded at least in part by the two frame members and the lower portion/member. Claims 51 and 65 are illustrative of the claimed subject matter, and are reproduced below:

51. A mask assembly for treatment of sleep disorder breathing by delivering a flow of pressurized gas to a patient, the mask assembly comprising:

a first frame with a first opening adapted to fluidly communicate an interior of the first frame with an inlet conduit, the first frame being made of a first material;

a cushion with a side wall and a face contacting portion extending from the side wall, wherein the cushion is over-molded to the first frame to form a cushion/frame sub-assembly and the cushion is adapted to form a seal around a patient's nose and mouth, the cushion being made of a second material that is less rigid than the first material; and

a second frame adapted to removably interlock with the cushion/frame sub-assembly, the second frame including

an upper member configured to provide forehead support;

lower portion with a second opening aligned with the first opening so that the inlet conduit fluidly communicates with a breathing chamber formed by the cushion and the first frame, and with headgear attachment structures on opposed lateral sides of the second opening, the headgear attachment structures being adapted to engage with headgear attachments;

two elongate frame members that interconnect the upper member and lower portion; and

an open space bounded at least in part by the two elongate frame members and the lower portion;
wherein the first frame protrudes at least partially through the open space.

Ex. 1201, 24:1–31.

65. A mask assembly for treatment of sleep disorder breathing by delivering a flow of pressurized gas to a patient, the mask assembly comprising:

a cushion adapted to form a seal by abutting a patient's face around the patient's nose and mouth, the cushion comprising a face contacting portion with a sealing portion that contacts the patient's face around the patient's nose and mouth and comprising a first material;

a frame integrally molded to the cushion, the frame comprising an annular wall surrounding an opening that is adapted to allow fluid communication of the pressurized gas to an interior of the frame and a second wall surrounding the annular wall and connected to the cushion and comprising a second material that is more rigid than the first material;

an inlet conduit in fluid communication with the frame to communicate the pressurized gas to the interior of the frame; and

a skeleton frame adapted to be removably engageable with the frame, the skeleton frame comprising an upper support member adapted to receive a forehead contacting portion, a lower frame member comprising attachment locations adapted to engage with clips for straps, two frame members interconnecting the upper support member and the lower frame member and forming an open space between the two frame members and the lower frame member, wherein

the skeleton frame and the frame are adapted to be releasably engageable to one another at the opening, and

the frame is at least partially accessible through the open space.

Id. at 25:37–67.

D. The Asserted Ground

Petitioner challenges claims 51–80 under 35 U.S.C. § 103, as obvious over Lovell,¹ Gunaratnam,² and Gelinas.³ Pet. 10.

II. ANALYSIS

A. Level of Skill in the Art

Petitioner asserts that a person of ordinary skill in the art at the time of the invention (“POSITA”) “would have at least a bachelor’s degree in mechanical engineering, biomedical engineering or other similar type of engineering degree, combined with at least two years of experience in the field of masks, respiratory therapy, patient interfaces or relevant product design experience.” Pet. 19 (citing Ex. 1205 ¶¶ 24–26). Patent Owner does not dispute the level of skill in the art asserted by Petitioner. Based on the Petition and Preliminary Response, we are persuaded that the level of skill in the art asserted by Petitioner is reasonable, and we adopt it for purposes of this Decision.

B. Claim Construction

In an *inter partes* review, the Board gives claim terms in an unexpired patent their broadest reasonable interpretation in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); see *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). Under that standard, a claim term generally is given its ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. See *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir.

¹ US 6,631,718 B1, iss. Oct. 14, 2003 (Ex. 1202, “Lovell”).

² US 6,796,308 B2, iss. Sept. 28, 2004 (Ex. 1203, “Gunaratnam”).

³ US 2003/0029454 A1, pub. Feb. 13, 2003 (Ex. 1204, “Gelinas”).

2007). While our claim interpretation “cannot be divorced from the specification and the record evidence,” *see Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015) (quoting *In re NTP, Inc.*, 654 F.3d 1279, 1288 (Fed. Cir. 2011)), we must be careful not to import limitations from the specification that are not part of the claim language, *see SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). Any special definition for a claim term must be set forth in the specification with reasonable clarity, deliberateness, and precision. *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

The parties advance competing claim constructions for the term “engage” as used in the phrases “the inlet elbow engages the skeleton frame” and “the inlet elbow engages the second frame,” recited in dependent claims 73 and 80, respectively. *See* Pet. 11–13; Prelim. Resp. 14–19. We determine, however, that no explicit interpretation of the claim term “engage,” or any other claim term, is required for the purposes of this Decision. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

C. Asserted Obviousness

A claim is unpatentable for obviousness under 35 U.S.C. § 103(a) if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). In analyzing the obviousness of a combination of prior art elements, it can be important to identify a reason that would have prompted one of skill in the art to combine the elements in the way the

claimed invention does. *Id.* The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations, if in evidence. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

Petitioner challenges claims 51–80 under 35 U.S.C. § 103 as obvious over Lovell, Gunaratnam, and Gelinas. *See supra* Section I.D. For the reasons discussed below, Petitioner has not shown a reasonable likelihood that it would prevail with respect to any of the challenged claims.

1. Overview of Lovell

Petitioner’s annotated version of Figure 10A of Lovell, reproduced below, depicts nasal mask 201 having retainer 212, which connects to inlet 208 of shell 204. Pet. 22; Ex. 1202, 9:34–39, Fig. 10A.

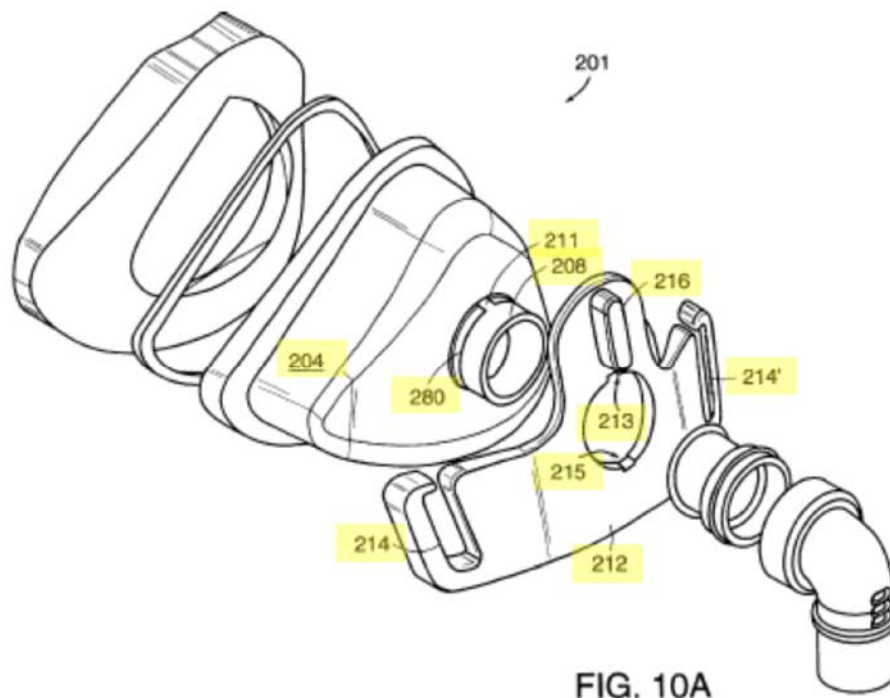


Figure 10A is a schematic exploded perspective view of the components of nasal mask 201. Ex. 1202, 4:3–4, 9:34–36. “The retainer 212 is disposed about the inlet 208 to facilitate retention of the mask 201 on a user.” *Id.* at 9:43–44. “The retainer aperture and the inlet 208 are generally sized in an interference fit so that the retainer 212 is properly retained by the cooperation of the tabs 211, 211', the slots 213, 215, and the depressed annular region 280 when fully seated against the shell 204.” *Id.* at 9:59–64.

2. Overview of Gunaratnam

Gunaratnam discloses nasal masks and full-face masks for delivering breathable gas to a patient. Ex. 1203, Figs. 5a, 5c, 15, 4:19–21, 6:3–4. Petitioner’s annotated versions of Figures 5a and 5c of Gunaratnam, depicting nasal mask frame 160, are reproduced below. Pet. 24; see Ex. 1203, 3:6–7, 3:10–12, 4:19–33.

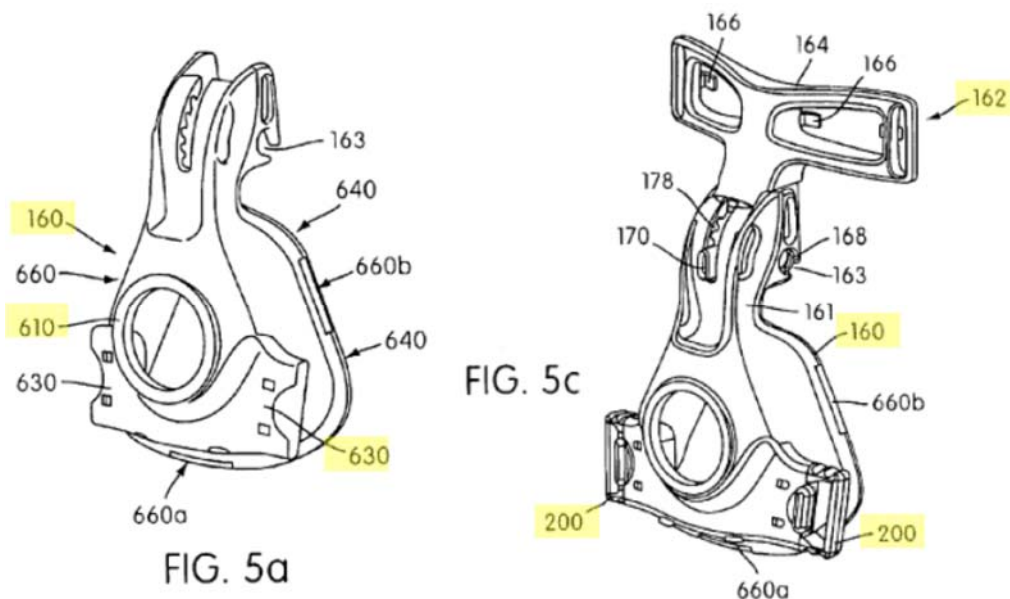


Figure 5a shows a front perspective view of nasal mask frame 160, and Figure 5c shows adjustable forehead support 162 connected to nasal

mask frame 160. Ex. 1203, 3:6–9, 10–12, 4:46–48. Nasal mask frame 160 incorporates gas inlet aperture 610 for connection to a gas-delivery conduit (not shown in the figures above). *Id.* at 4:23–24.

Petitioner’s annotated version of Figure 15 of Gunaratnam, which depicts a full-face mask, is reproduced below. Pet. 25; see Ex. 1203, 4:5–6, 6:3–4.

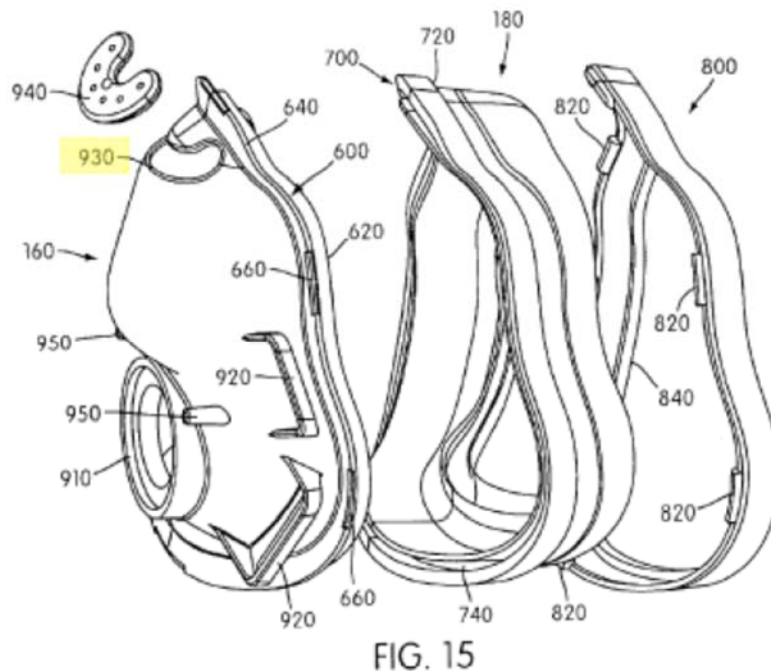
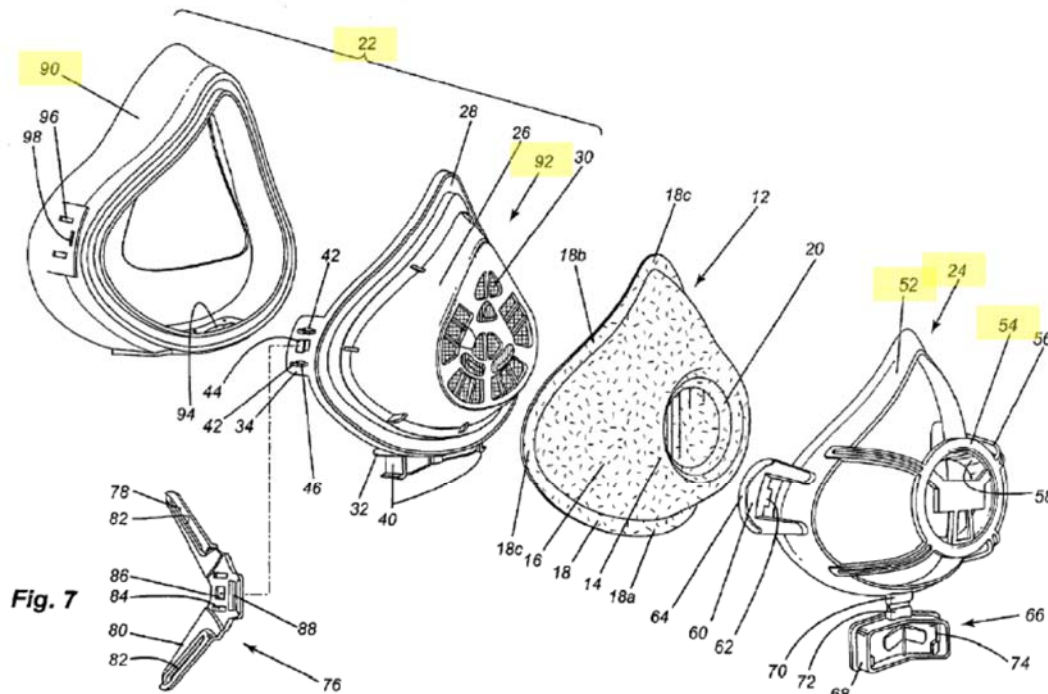


Figure 15 of Gunaratnam depicts full-face mask frame 160, which is adapted to cover both the mouth and nose regions of the patient’s face. Ex. 1203, 6:25–26. As shown in the annotated figure above, mask frame 160 includes aperture 930 for receiving air vent 940. *Id.* at 6:25–29. Figure 15 also shows cushion 180 and clip 800. *Id.* at 6:6–7. Clip 800 overlies cushion 180, completely surrounds frame 160, and includes securing tabs 820, which mate with recesses 660 in frame 160. *Id.* at 6:12–13, 19–25.

3. Overview of Gelinas

Gelinas discloses full-face respirator 10 including face piece 22, filter 12, and cover 24. Ex. 1204 ¶¶ 24, 26, Fig. 7. Petitioner’s annotated version of Figure 7 of Gelinas (*see* Pet. 26) is reproduced below.



As shown in annotated Figure 7 above, cover 24 and face piece 22 define a cup-shaped void area suitable to receive filter 12. *Id.* ¶ 31. “Cover 24 is movable from a first position, in which the void area is opened allowing the installation or removal of filter 12, to a second position, in which cover 24 mates with facepiece 22 and filter 12 is received in the void area.” *Id.* Cover 24 includes peripheral portion 52 and ring 54, connected together by four branches 56. *Id.* ¶ 32.

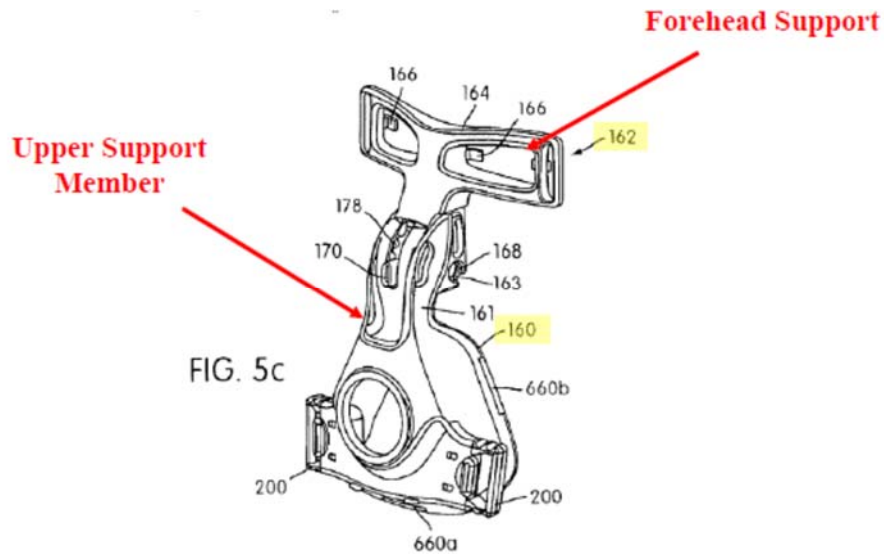
4. Petitioner’s Contentions

Petitioner argues that Lovell teaches nearly all of the limitations of the challenged claims. Pet. 26. With respect to independent claim 51, for

example, Petitioner contends that Lovell teaches a mask assembly having a first frame (shell 204) made from a first material with a first opening (inlet 208); a cushion made from a second material that is less rigid than the first material; and a second frame (retainer 212) including an upper member (216), a lower portion with a second opening (aperture in retainer 212) aligned with the first opening, and headgear attachment structures (214, 214') on opposed lateral sides of the second opening. *Id.* at 26–27. Petitioner concedes, however, that Lovell does not teach three of the claim limitations, which we discuss below.

First, Petitioner concedes that Lovell does not teach a cushion that is adapted to form a seal around the patient's nose and mouth, as required by independent claim 51 (as well as independent claims 58, 65, and 74). *Id.* at 32. Petitioner contends, however, that a POSITA would have been motivated to modify Lovell's nasal mask to form a seal around the patient's nose and mouth, as taught by Gunaratnam and Gelinas, in order to accommodate patients who breathe through their mouth during sleep. *Id.* at 33 (citing Ex. 1205 ¶ 66).

Second, Petitioner concedes that Lovell's alleged upper member (216) is not configured to support the user's forehead, as required by independent claim 51 (as well as independent claims 58, 65, and 74), but argues that Gunaratnam cures that deficiency. Pet. 38–39; *see supra* Section I.C. Petitioner provides an annotated version of Gunaratnam's Figure 5c, reproduced below, to illustrate its argument. *Id.* at 39.

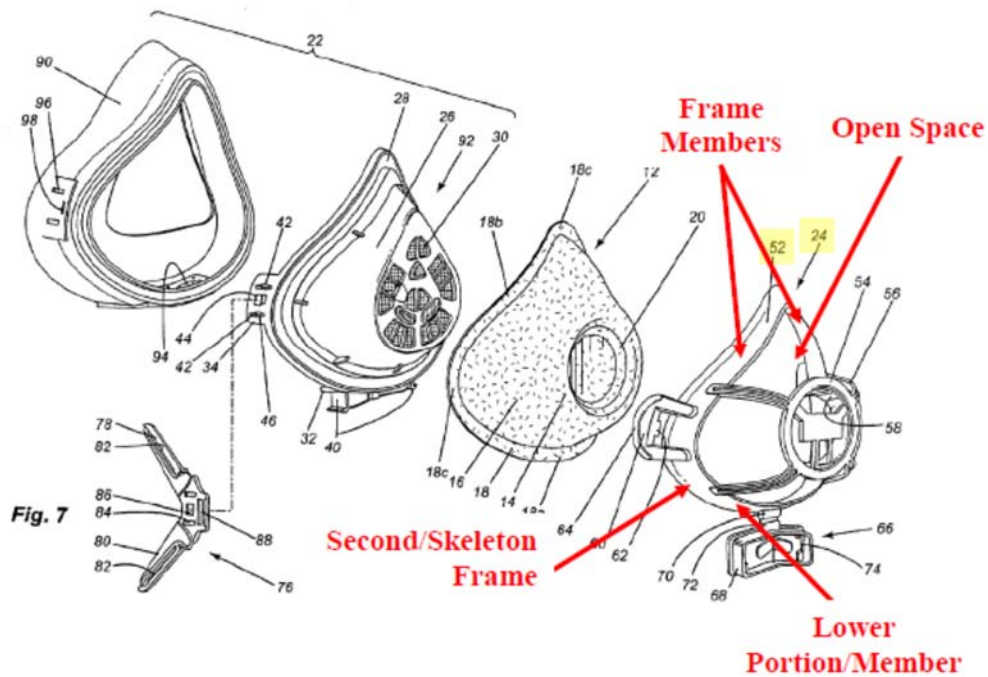


As indicated in annotated Figure 5c above, Petitioner contends that “Gunaratnam describes a frame with an upper support member 161 that supports a forehead support 162, and the forehead support 162 provides direct support to the forehead.” *Id.* at 38–39 (citing Ex. 1203, 4:47–52; Ex. 1205 ¶ 81). Petitioner argues that a POSITA would have been motivated to incorporate Gunaratnam’s forehead support into Lovell’s second/skeleton frame 212 “to provide additional support in the forehead area and to keep the mask positioned properly on the face.” *Id.* at 39 (citing Ex. 1205 ¶ 83).

Third, Petitioner concedes that Lovell does not teach either (i) a second/skeleton frame having two frame members that interconnect the upper member and a lower portion/member (the “frame members” requirement), or (ii) an open space bounded at least in part by two frame members and the lower portion/member (the “open space” requirement), as required by independent claim 51 (as well as independent claims 58, 65, and 74). *See id.* at 42; *supra* Section I.C. Petitioner contends, however, that Gelinas cures those deficiencies. *Id.* at 40–45.

With respect to the “frame members” requirement, Petitioner argues that “Gelinas describes a second/skeleton frame 24 with frame members 52 interconnecting the upper member and lower portion.” *Id.* at 40 (citing Ex. 1204 ¶¶ 26, 32; 1205 ¶ 86). Petitioner asserts that “the frame members 52 contact the first frame 92 and prevent rotation of the first frame 92 with respect to the second/skeleton frame 24.” *Id.* at 41 (citing Ex. 1205 ¶ 86). Petitioner argues that “[a] person of skill would have known to incorporate such connecting members on the second/skeleton frame to support the upper portion of the second/skeleton frame above the second opening,” and that “[f]rame members would allow for an opening and provide engagement features for the upper portion of the second/skeleton frame, without the need for additional members or structures on the second/skeleton frame.” *Id.* (citing Ex. 1205 ¶¶ 86–88).

With respect to the “open space” requirement, Petitioner asserts that “Gelinas discloses a second/skeleton frame 24 with an open space between frame members 52 and [the lower portion/member] of the second/skeleton frame 24.” *Id.* at 43 (citing Ex. 1204 ¶¶ 26–32). Petitioner provides an annotated version of Gelinas’s Figure 7, reproduced below, illustrating its position. *Id.*



As shown in annotated Figure 7 above, Petitioner asserts that Gelinas teaches the required open space bounded at least in part by two frame members and the lower portion/member. Petitioner argues that, in converting Lovell from a nasal mask to a full-face mask, “a person of skill would have recognized that the full-face mask would require a gas washout vent to enable CO₂ washout and vent the breathing chamber upon [over-pressurization].” *Id.* at 44 (citing Ex. 1202, 5:36–41; Ex. 1205 ¶¶ 94–96). Petitioner further argues that Gunaratnam teaches providing the vent in the nasal bridge region of the mask assembly, and a POSITA would have included an open space bounded by two frame members in Lovell’s modified second/skeleton frame to provide access to the vent:

A person of skill in the art would have recognized that providing a vent on the first frame of a two-frame mask system would require access to the vent through the second/skeleton frame. Ex. 1205 ¶ 96. As such, a person of skill would have been motivated to modify the second/skeleton frame to include

an open space between or bounded by the frame members and the lower portion of the second/skeleton frame, as taught by Gelinas, to provide access to a vent in the nasal bridge region of the first frame. *Id.* ¶¶ 95–96.

Id. at 45. Additionally, Petitioner argues that open space between the frame members would allow the first frame to protrude through the second/skeleton frame, providing a better connection between the frames and using less material:

Additionally, a person of skill in the art would have recognized that providing a first frame that protrudes at least partially through an open space in the second/skeleton frame, as in Gelinas, would facilitate a more secure connection between the frame members of the second/skeleton frame and the first frame, while also minimizing the amount of material in the second/skeleton frame. [Ex. 1205] ¶ 96.

Id.

5. Obviousness Analysis

a. “frame members”

Petitioner has not persuaded us that the combination of Lovell, Gunaratnam, and Gelinas teaches the “frame members” requirement, i.e., a second/skeleton frame having two frame members that interconnect the upper member and a lower portion/member. In particular, we are not persuaded by Petitioner’s argument that “Gelinas describes a second/skeleton frame 24 with frame members 52 *interconnecting the upper member and lower portion.*” *See id.* at 40 (emphasis added, citing Ex. 1204 ¶¶ 26, 32; 1205 ¶ 86). Nowhere does Petitioner identify the structure in Gelinas that allegedly corresponds to the upper member, much less explain how frame members 52 interconnect the alleged upper member and the alleged lower portion/member. Further, in arguing that Gelinas teaches the

“frame members” requirement (*see id.* at 39–41), Petitioner entirely ignores its reliance on Gunaratnam and Lovell for an upper support member configured to support the user’s forehead (*see id.* at 38–39 (citing Ex. 1202, 10:1–12), Fig. 9; Ex. 1203, 4:47–52, Fig. 5c; Ex. 1205 ¶ 81)). As the “frame members” requirement specifies a relationship between two frame members (allegedly taught by Gelinas) and an upper support member (allegedly taught by Gunaratnam and Lovell), Petitioner’s failure to provide some articulated reasoning with some rational underpinning to support combining the teachings of Gelinas with those of Lovell and Gunaratnam is fatal to Petitioner’s obviousness analysis. *See In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[T]here must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”). Petitioner’s mere conclusory statements are insufficient to show that a POSITA would have combined the teachings of Lovell, Gunaratnam, and Gelinas to achieve the “frame members” requirement.

b. “open space”

Petitioner also has not persuaded us that the combination of Lovell, Gunaratnam, and Gelinas teaches the “open space” requirement, i.e., an open space bounded at least in part by two frame members and the lower portion/member. As a threshold matter, Petitioner has not persuaded us that adding a gas washout vent to Lovell’s first frame (shell 204) would have required “*access to the vent through the second/skeleton frame*” (retainer 212). Pet 45 (quoting Ex. 1205 ¶ 96)). Patent Owner provides an annotated version of Lovell’s Figure 9, reproduced below, that persuasively rebuts Petitioner’s contention. Prelim. Resp. 38.

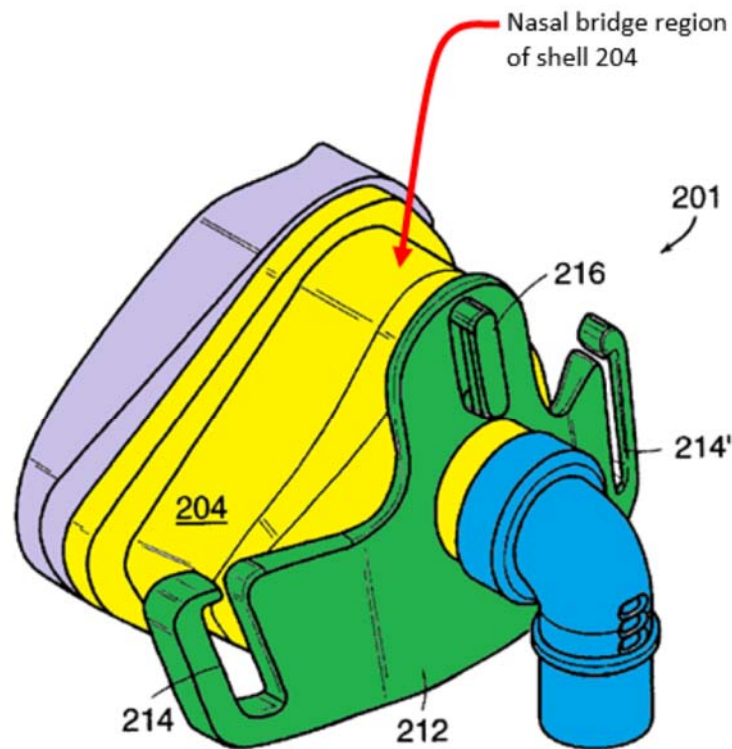


FIG. 9

As shown in annotated Figure 9 above, the nasal bridge region of Lovell's shell 204 is not covered by retainer 212. *See id.* Referring to this figure, Patent Owner persuasively argues:

Despite the illustration of Lovell's shell (above) having its nasal bridge region plainly uncovered by a frame and Petitioner's alleged reliance on Gunaratnam's vent location (upwardly-facing and proximate a user's face), the Petition takes an unreasoned leap and wrongly assumes that adding a vent to Lovell's nasal bridge region "would require access to the vent through the second/skeleton frame."

Id.

Further, even assuming that adding a gas washout vent to Lovell's first frame (shell 204) would have required "access to the vent through the second/skeleton frame" (retainer 212), as Petitioner contends, Petitioner has not persuaded us that the combination of Lovell, Gunaratnam, and Gelinas

teaches modifying Lovell's retainer 212 to include an open space bounded at least in part by two frame members and the lower portion/member. *See* Pet. 45 (citing Ex. 1205 ¶¶ 95–96). In particular, Gunaratnam discloses a mask frame that includes *an aperture for receiving an air vent*. *See* Ex. 1203, 6:25–29, Fig. 15. Petitioner has not explained sufficiently why a POSITA would have modified Lovell's retainer to create an open space bounded at least in part by two frame members and the lower portion/member, rather than include an aperture in the retainer for receiving the vent, as taught by Gunaratnam.

Finally, Petitioner's argument that open space between the frame members would allow the first frame to protrude through the second/skeleton frame, providing a better connection between the frames and using less material, is conclusory and unpersuasive. *See* Pet. 45 (citing Ex. 1205 ¶ 96). Petitioner does not explain sufficiently why allowing the first frame to protrude through the second/skeleton frame would provide a better connection or use less material. *See* Prelim. Resp. 39–42.

c. Conclusion

After considering the Petition and the Preliminary Response, and for the reasons discussed above, we are not persuaded that Petitioner has established a reasonable likelihood of prevailing on its contention that independent claims 51, 58, 65, and 74 would have been obvious over Lovell, Gunaratnam, and Gelinas. We reach the same conclusion with respect to dependent claims 52–57, 59–64, 66–73, 75–80, for the same reasons.

III. CONCLUSION

For the reasons given, Petitioner has not shown a reasonable likelihood that it would prevail in establishing unpatentability of any of challenged claims 51–80.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that that Petitioner's Petition for an *inter partes* review of claims 51–80 is denied.

IPR2017-00635
Patent 8,944,061 B2

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