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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* THOMAS G. CLOFT

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Appeal 2012-005061  
Application 12/016,234  
Technology Center 3600

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Before: JOHN C. KERINS, MICHAEL L. HOELTER, and  
ANNETTE R. REIMERS, *Administrative Patent Judges*.

HOELTER, *Administrative Patent Judge*.

DECISION ON APPEAL  
STATEMENT OF THE CASE

This is a decision on appeal, under 35 U.S.C. § 134(a), from the Examiner's final rejection of claims 1–8 and 12–20. App. Br. 2. Claims 9–11 are objected to as containing allowable subject matter. Ans. 3. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

### THE CLAIMED SUBJECT MATTER

The disclosed subject matter “relates to a mounting arrangement for a gas turbine engine and, more particularly, to a mounting arrangement that includes front and rear engine mount beams that are integrally formed with respective pylon mount structures.” Spec. para. 1. Independent claim 1 is illustrative of the claims on appeal and is reproduced below:

1. A mounting arrangement for a gas turbine engine comprising:
  - a pylon mount structure having a first mount portion and a second mount portion positioned aft of said first mount portion, said first and said second mount portions comprising separate components to be independently attached to a pylon;
  - a first engine mount beam integrally formed with said first mount portion as a single-piece component, said first engine mount beam being attachable to an engine case structure at a fore attachment interface; and
  - a second engine mount beam integrally formed with said second mount portion as a single-piece component, said second engine mount beam being attachable to the engine case structure at an aft attachment interface.

### REFERENCES RELIED ON BY THE EXAMINER

Seaquist	US 6,126,110	Oct. 3, 2000
Rozzak	US 6,601,796 B2	Aug. 5, 2003
Marche	US 2005/0194493 A1	Sep. 8, 2005

### THE REJECTIONS ON APPEAL

Claims 1–5, 7, 8, 12, 13, and 15–20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Marche and Seaquist. Ans. 5.

Claims 6 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Marche, Seaquist, and Rozzak. Ans. 8.

## ANALYSIS

*The rejection of claims 1–5, 7, 8, 12, 13, and 15–20  
as being unpatentable over Marche and Seaquist*

Appellant argues claims 1, 4, 5, 8, and 15 together (App. Br. 5–7); claims 2, 3, 12, and 13 together (App. Br. 7–8); and, Appellant also separately argues claims 7, 16, 17, 18, 19 and 20 (App. Br. 8–10). We select independent apparatus claims 1 and 2 for separate review and we also address claims 7, 16, 17, 18, 19 and 20. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2011).

### Claim 1

The Examiner primarily relies on Marche for disclosing the limitations of claim 1 including the identification of Marche’s item 4 as the claimed “pylon,” items 14/16 as the claimed “first mount portion,” and item 18 as the claimed “second mount portion.” Ans. 5, 9; *see also* Ans. 12. The Examiner relies on Seaquist for teaching “that engine mount beam components may be constructed as a single piece or as multiple pieces (col 4, lines 14–20).” Ans. 5. The Examiner concludes that it would have been obvious “to have modified Marche to use single-piece mount beams as taught by Seaquist as these are art-recognized functionally equivalent methods for forming engine mount components in a predictable manner.” Ans. 5; *see also* Ans. 9. The Examiner also references *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893) for holding “that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art.” Ans. 5.

Appellant contends that because Marche’s “element 14 is already part of the rigid structure 4” (i.e., Marche’s corresponding pylon), “it is not clear

how element 14 is independently attachable to a pylon as claimed.” App. Br. 5–6. To be clear, Marche discloses that “rigid structure **4** is globally made by the assembly of lower stringers **12** and upper stringers **10** connected to each other.” Marche para. 76. This same paragraph also discloses that “a forward part of this rigid structure **4** is composed of a pyramid **14**.” Marche para. 76. Hence, Appellants’ argument is understood that as item 14 is already part of item 4, then it is not clear how this item 14 can also be independently attached to item 4. The Examiner clarifies “that integration (combining multiple into one) is a form of ‘attachment.’ The claims do not specify the *type* of attachment to be obtained.” Ans. 9. The Examiner further finds that as Marche’s corresponding first and second portions 14/16 and 18, “are distinct components joined to the pylon at separate locations (fore and aft of pylon 4),” that “they are ‘separate components’ to be ‘independently’ attached *from each other* (i.e., one’s joining does not depend on the other) to the pylon.” Ans. 9. Appellant disagrees, contending that “[p]yramid 14 is the pylon itself” and references Marche paragraph [0076] for support (Reply Br. 2), but as stated above, this paragraph only states that pyramid 14 is a “forward part” of “rigid structure **4**” which itself is described as being an “assembly” made from different stringers 10 and 12 that are “connected to each other.” Hence, there is no indication in Marche that the construction of rigid structure/pylon 4 is monolithic but instead, Marche describes item 4 as an assembly of multiple components connected together. Marche para. 76. Consequently, Appellant’s contention that Marche’s item 14 is not “independently attachable to a pylon as claimed” is not persuasive. App. Br. 6. Furthermore, Appellant’s contention that Marche’s first and second mount

portions, i.e., 14/16 and 18, are not “separate components” as claimed is likewise not persuasive. Reply Br. 2.

Appellant also contends that “[t]here is nothing in Seaquist to suggest that the yokes can be integrally formed with other structures” and further that there is no teaching in Seaquist of integrally forming the structures “at fore and aft attachment interfaces as claimed.” App. Br. 6; *see also* Reply Br. 3. In making these contentions, Appellant is arguing Seaquist separate from the teachings of Marche; and it is Marche the Examiner relies upon for disclosing the various structures involved, but not their being “formed as single-piece components” as is taught by Seaquist. Ans. 5. We thus agree with the Examiner that “one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.” Ans. 9. Furthermore, Appellant does not dispute that Seaquist teaches construction “from a single piece of material” as well as construction “from more than one piece of material.” App. Br. 6, *referencing* Seaquist 4:14–20; *see also* Ans. 5. The Examiner clearly relies on Seaquist for disclosing such “art-recognized functionally equivalent methods” of construction (Ans. 5, 9), not the location or “arrangement” of “attachment interfaces” as Appellant contends (App. Br. 6, 7; *see also* Reply Br. 3). Accordingly, Appellants’ contentions concerning the location of Seaquist’s components are not persuasive.

In view of the record presented, we sustain the Examiner’s rejection of claims 1, 4, 5, 8, and 15.

### Claim 2

Appellant initially relies on the allowability of claim 2 “for the same reasons claim[] 1 is allowable.” App. Br. 7; *see also* Reply Br. 4. This

reliance by Appellant is not persuasive for the reasons set forth *supra*. Appellant also contends that Marche fails to disclose the specifically recited structure disclosed in claim 2. App. Br. 7–8. Claim 2 recites “a first mount portion” that comprises “a pyramid structure having a convergent portion with a divergent portion extending outwardly away from said convergent portion, said divergent portion to be attached to the pylon.” Claims App’x. 3, App. Br. 7. Again, Appellant contends that “it is not clear how the divergent portion of [Marche’s] portion 14 is independently attached to a pylon as claimed.” App. Br. 7. This argument by Appellant was previously addressed *supra* and found wanting. *See also* Ans. 6. The Examiner also identifies Marche paragraph [0076] where item 14 is described as a “pyramid” which is illustrated in Marche figure 1 as having both a “convergent portion” and a “divergent portion” and wherein the “divergent portion” is “attached to the pylon” 4 as claimed. Hence, Appellants’ contention that “it is not clear,” is not persuasive of Examiner error.

Appellant further reiterates the contention that “[t]he pyramid structure in Marche is the pylon itself.” Reply Br. 4. This contention is not persuasive for the reasons previously stated.

Appellant also repeats the contention regarding Seaquist’s teaching of a mounting location (App. Br. 7) when the Examiner did not rely on Seaquist for any such location disclosure (*see* Ans. 5). In summary, Appellants’ contention that neither Marche or Seaquist “suggest that a fore engine mount beam [*see* Marche 14/16] be integrally formed [*see* Seaquist] with a convergent portion of a pyramid structure [*see* Marche figure 1] where a divergent portion of the pyramid structure [*see* Marche figure 1] is to be attached to a pylon [*see* Marche item 4]” is not persuasive of Examiner

error. App. Br. 7–8; *see also* Reply Br. 4–5. Accordingly, we sustain the Examiner’s rejection of claims 2, 3, 12, and 13.

#### Claim 7

Claim 7 depends from claim 1 and includes the additional limitation that said second engine mount beam “includes attachment structure to pivotally support a linkage assembly.” The Examiner deems this limitation to pertain to an intended use of the claimed invention. Ans. 11. The Examiner further finds that “Marche discloses pin fittings in the mount at 18” and that Marche’s structure “is capable of pivotally supporting a linkage assembly” as claimed. *Id.* at 11; *see also Id.* at 7. Appellant reiterates Marche’s disclosure that aft mount 18 “resists forces along the Y and Z directions and resists the moment applied about the X direction.” App. Br. 8; Reply Br. 5 *both referencing* Marche para. 80. Marche is silent regarding any teaching of a pivotal support and we have recently been instructed that indicating that a prior device could perform as claimed without also indicating “whether it was obvious to modify” the prior device to do so, is indicative that the Examiner has not “met his initial burden of establishing a case of prima facie obviousness.” *In re Giannelli*, 739 F.3d 1375, 1380 (Fed. Cir. 2014). Here, the Examiner identifies “pins” that “may be fitted with attachments to linkages instead” (Ans. 7; *see also* Ans. 11) but provides no basis as to why it might be obvious to modify Marche in the manner suggested. We do not sustain the Examiner’s rejection claim 7.

#### Claims 16-20

For each of these dependent claims, Appellant relies on the allowability of their respective parent claim. App. Br. 8–10; Reply Br. 5–6.



Appellant also repeats previous arguments to the effect that (a) Seaquist refers to a different engine support arrangement/location; (b) Marche's components 14 and 18 are not "separate from each other," and (c) "it is not clear" how items 14 and 18 "comprise discrete components to be independently attached to a pylon." App. Br. 8–9. These contentions have previously been addressed and found wanting. We sustain the Examiner's rejection of claims 16–20.

*The rejection of claims 6 and 14  
as being unpatentable over Marche, Seaquist, and Roszak*

Appellant argues dependent claims 6 and 14 together. App. Br. 10. We select claim 6 for review with claim 14 standing or falling with claim 6.

Claim 6 includes the additional limitation of an attachment structure that "includes at least one pivot mount." The Examiner relies on Marche and Seaquist as indicated *supra* and further relies on the additional reference to Roszak as disclosing "an engine mount [] having a pivot attachment to the engine case (via swivel hinge pins 26a and 26c)." Ans. 8. The Examiner concludes that it would have been obvious to modify "Marche to use pivot attachments as taught by Roszak for the predictable advantage of accommodating loads in flight by allowing relative movement." *Id.*

Appellant contends that "Marche teaches away from a pivot attachment" (App. Br. 10; Reply Br. 6–7) but Appellant does not indicate where Marche actually criticizes, discredits, or otherwise discourages investigation into the claimed solution. *See In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). Appellant also contends that Roszak "is not capable of achieving" the requirements set forth in Marche regarding resisting forces along the X, Y, and Z directions. Reply Br. 7. However, the Examiner is

not applying Roszak to achieve the same results as taught by Marche, but instead is applying Roszak so as to take “advantage of accommodating loads in flight by allowing relative movement.” Ans. 8. The Examiner further finds that Roszak teaches a pivotal attachment “‘fixed’ (attached)” “to resist lateral and vertical forces,” the same as taught by Marche and hence, “Roszak teaches an engine mount to perform the force resistance disclosed by Marche.” *Id.* at 13. In summary, the Examiner finds that “[o]ne of ordinary skill would thus look to Roszak as a known means to resist loads in the X and Y direction as desired by Marche.” *Id.* Appellant’s contentions to the contrary (e.g., Reply Br. 7) are not persuasive and furthermore, Appellant does not indicate how the Examiner’s findings, as well as the Examiner’s stated reason to combine, lack articulated reasoning with rational underpinning to support the legal conclusion of obviousness. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

Appellant also contends that the Examiner’s proposed modification would render “the prior art unsatisfactory for its intended purpose” as well as “change the principle of operation of a reference.” Reply Br. 7. However, the stated principle of operation of Marche, Seaquist and Roszak is to securely mount an engine to a wing of an aircraft. *See* Marche Title, Seaquist Title, and Roszak 1:8–10. Hence, Appellants’ contention that the Examiner’s suggested combination would be unsatisfactory for its intended purpose or otherwise change a principle of operation is not persuasive as Appellant does not indicate how the suggested combination would fail at mounting an engine to a wing of an aircraft.

In view of the record presented, we sustain the Examiner’s rejection of claims 6 and 14.

Appeal 2012-005061  
Application 12/016,234

DECISION

The Examiner's rejections of claims 1–6, 8 and 12–20 are affirmed.

The Examiner's rejection of claim 7 is reversed.

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-IN-PART

rvb