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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHANNES BADER

Appeal 2018-008887
Application 13/515,306
Technology Center 2800

Before JEFFREY T. SMITH, JEFFREY B. ROBERTSON, and
DEBRA L. DENNETT, *Administrative Patent Judges*.

DENNETT, Administrative Patent Judge.

DECISION ON APPEAL¹

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant² appeals from the
Examiner’s decision to reject claims 28–32 and 35–37 of Application

¹ In our Decision, we refer to the Specification (“Spec.”) of the ’306 Application filed June 12, 2012; the Final Office Action dated Oct. 6, 2017 (“Final Act.”); the Appeal Brief filed Mar. 23 2018 (“Appeal Br.”); the Examiner’s Answer dated July 13, 2018 (“Ans.”); and the Reply Brief filed Sept. 13, 2018 (“Reply Br.”).

² We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Giesecke+Devrient Mobile Security GmbH. Appeal Br. 2.

13/515,306.³ We have jurisdiction under 35 U.S.C. § 6(b).

For the reasons set forth below, we AFFIRM.

BACKGROUND

The subject matter of the invention relates to electroconductive connecting of a chip module to a chip card. Spec. ¶ 1. Claim 28 is representative of the subject matter of the invention, and is reproduced below from the Claims Appendix of the Appeal Brief.

28. A chip card comprising:

a chip module, and

a chip-card body,

wherein the chip modules is adhesively connected to the chip-card body by a thermoplastic elastomeric material,

wherein the thermoplastic elastomeric material is electroconductive,

wherein the chip module is electroconductively connected to at least one electrical contact area of the chip-card body, and

wherein the thermoplastic elastomeric material includes a thermoplastic silicone.

Appeal Br. 23.

REFERENCES

The Examiner relies on the following prior art in rejecting the claims on appeal:

Matsuda et al. ("Matsuda")	US 5,666,270	Sept. 9, 1997
Carpier et al.	US 6,568,600 B1	May 27, 2003

³ In the Final Action, the Examiner noted that pending claims 17–27 had been withdrawn. Final Act. 1.

(“Carpier”)		
Fjelstad	US 2004/0169263 A1	Sept. 2, 2004
Seidler et al.	US 2009/0090494 A1	Apr. 9, 2009
(“Seidler”)		

REJECTION

The Examiner maintains the following rejections of the claims under 35 U.S.C. § 103(a)⁴: (1) claims 28, 29, 31, 32, 36, and 37 over Fjelstad in view of Matsuda; (2) claim 30 over Fjelstad in view of Matsuda, and further in view of Carpier; and (3) claim 35 over Fjelstad in view of Matsuda, and further in view of Seidler. Final Act. 3–6.

DISCUSSION

Rejection of claims 28, 29, 31, 32, 36, and 27 as obvious over the combination of Fjelstad and Matsuda

Independent claim 28 and dependent claims 29, 31, 32, 36, and 37 stand rejected over Fjelstad in view of Matsuda. Final Act. 3–5. Appellant argues these claims as a group. Appeal Br. 18. Although claims 30 and 35, also dependent from claim 28, are each rejected over Fjelstad in view of Matsuda and an additional reference, Appellant argues that the additional references (Carpier or Seidler) fail to remedy the deficiencies of Fjelstad and Matsuda. *Id.* at 18–19. Thus, we need only address the rejection of the independent claim, claim 28.

⁴ Because this application was filed before the March 16, 2013, effective date of the America Invents Act, we refer to the pre-AIA version of the statute.

The Examiner finds that Fjelstad discloses a chip card comprising a chip module (101) is adhesively connected to the chip card body (110) by an element (105) made from a conductive elastomer or elastomeric material.

Ans. 3. The conductive elastomeric material is comprised of an elastomer matrix and conductive particles. *Id.* The Examiner finds that silicone elastomers and thermoplastic materials are among the preferred elastomeric matrices. *Id.* (citing Fjelstad ¶ 22). The Examiner finds that Fjelstad does not specifically disclose a conductive thermoplastic elastomeric material made from thermoplastic silicone. *Id.* at 4.

The Examiner finds that Matsuda teaches a multi-chip module comprising bump electrodes (30) electrically connected between the pad (32) of the chip (31) and the pad (42) of the circuit board (41). Ans. 4 (citing Matsuda, Figs. 4–6, col. 2, ll. 44–45, col. 4, ll. 10–12). The Examiner finds that Matsuda’s bump electrode is covered by a protective layer made from a thermoplastic silicone (37), and determines that the thermoplastic silicone (37) is electrically connected to the pad (42) of the circuit board (41) by a conductive film (36) of the bump electrode (30). *Id.*

The Examiner finds that one of ordinary skill in the art would have had to look to a reference other than Fjelstad to determine the proper thermoplastic material to use in the conductive elastomeric matrix of Fjelstad, and Matsuda shows that thermoplastic silicon is a well-known thermoplastic in semiconductor chip assembly. *Id.* at 4–5. The Examiner determines that the thermoplastic silicon of Matsuda would have been an obvious choice as it helps provide long life to electrical connections, and selection of a material based on its intended use is within the ordinary skill in the art. *Id.*

To prevail in an appeal to this Board, Appellant must adequately explain or identify reversible error in the Examiner's rejections. *See* 37 C.F.R. § 41.37(c)(1)(iv). Appellant fails to do so here.

Appellant accurately states that the Examiner is incorrect in determining that Matsuda teaches that thermoplastic silicone (37) is *electrically connected* to the pad of the circuit board. Appeal Br. 16. However, the Examiner's mistake is harmless error in this instance, as the Examiner's findings regarding Fjelstad (teaching a conductive elastomer comprising conductive particles and an elastomer matrix preferably comprising silicone elastomers and thermoplastic materials) and Matsuda (teaching use of thermoplastic silicone is known in the semiconductor industry) are accurate. *See* Ans. 3–5. Moreover, the Examiner provides “articulated reasoning with some rational underpinning” to combine the references and support the legal conclusion of obviousness. *See In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006); *see also In re Fout*, 675 F.2d 297, 301 (CCPA 1982) (“Express suggestion to substitute one equivalent for another need not be present to render such substitution obvious.”) and *In re Beattie*, 974 F.2d 1309, 1312 (Fed. Cir. 1992) (“As long as some motivation or suggestion to combine the references is provided by the prior art taken as a whole, the law does not require that the references be combined for the reasons contemplated by the inventors.”).

In view of the above discussion, we are not persuaded by Appellant's argument that Matsuda would be unworkable if protection film (37) is electrically conductive (Appeal Br. 16), because the Examiner's rejection does not depend upon the position that Matsuda's thermoplastic silicone resin is electrically conductive.

Fjelstad discloses that its conductive elastomeric material typically comprises an elastomer matrix—which the Examiner found could be Matsuda’s thermoplastic silicone resin—and conductive particles. *See* Fjelstad ¶ 22. The rejection does not rely on Matsuda’s thermoplastic silicone resin being electrically conductive. Rather, as discussed above, the rejection relies on Matsuda only for a disclosure that use of thermoplastic silicone is known in the semiconductor industry to support the position that it would have been obvious to one of ordinary skill in the art at the time of the invention to select thermoplastic silicone resin as a preferred silicone elastomer or thermoplastic material for use in Fjelstad’s package. *See* Ans. 4–5. Conductivity for the conductive elastomeric material in Fjelstad is provided by conductive particles. *See* Fjelstad ¶22. It is well established that the obviousness inquiry does not ask “whether the references could be physically combined but whether the claimed inventions are rendered obvious by the teachings of the prior art as a whole.” *In re Etter*, 756 F.2d 852, 859 (Fed. Cir. 1985) (en banc).

We affirm the rejection of claim 28 as obvious over Fjelstad in view of Matsuda. For the same reasons as claim 28, we affirm the rejection of claims 29, 31, 32, 36, and 37 over the same references. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Rejection of claim 30 as obvious over the combination of Fjelstad, Matsuda, and Carpier

Claim 30 depends from claim 28 and is rejected over Fjelstad in view of Matsuda, and further in view of Carpier. *See* Final Act. 5; Appeal Br. 24. The Examiner relies on Carpier only for disclosures relating to the antenna in claim 30.

Appellant merely argues that Carpier fails to remedy the deficiencies of Fjelstad and Matsuda regarding a thermoplastic silicone. Appeal Br. 18–19. Having sustained the rejection of claim 28 over the combination of Fjelstad and Matsuda, we likewise sustain the rejection of claim 30 over the references in combination with Carpier.

Rejection of claim 35 as obvious over the combination of Fjelstad, Matsuda, and Seidler

Claim 35 depends from claim 28 and is rejected over Fjelstad in view of Matsuda, and further in view of Seidler. *See* Final Act. 6; Appeal Br. 24. The Examiner relies on Seidler only for disclosures relating to the thermoplastic elastomeric material including a copolymer of polydimethylsiloxane and urea in claim 35.

Similarly to claim 30, for claim 35 Appellant merely argues that Seidler fails to remedy the deficiencies of Fjelstad and Matsuda regarding a thermoplastic silicone. Appeal Br. 18–19. Therefore, we sustain the rejection of claim 35 over Fjelstad, Matsuda, and Seidler, having found no deficiency in the combination of Fjelstad and Matsuda.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
28, 29, 31, 32, 36, 37	103(a)	Fjelstad, Matsuda	28, 29, 31, 32, 36, 37	
30	103(a)	Fjelstad, Matsuda, Carpier	30	
35	103(a)	Fjelstad, Matsuda, Seidler	35	
Overall Outcome			28–32, 35–37	

Appeal 2018-008887
Application 13/515,306

AFFIRMED