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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MICAH COLEN ISENHOUR,
DENNIS MICHAEL KNECHT, and JAMES PHILLIP LUTHER

Appeal 2019-000696
Application 15/471,397
Technology Center 2800

Before KAREN M. HASTINGS, CHRISTOPHER L. OGDEN, and
BRIAN D. RANGE, *Administrative Patent Judges*.

OGDEN, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Appellant² appeals under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1–21. We affirm in part.

¹ The appeal record includes the following: Specification, Mar. 28, 2017 (“Spec.”); Final Office Action, Nov. 27, 2017 (“Final Action”); Appeal Brief, Apr. 27, 2018 (“Appeal Br.”); Examiner’s Answer, Aug. 30, 2018 (“Answer”); and Reply Brief, Oct. 30, 2018 (“Reply Br.”).

² Appellant is Corning Optical Communications LLC, which is the current name of the “applicant” as defined in 37 C.F.R. § 1.42. Appellant also identifies this entity as the real party in interest. *See* Appeal Br. 2.

BACKGROUND

Appellant’s invention “is directed to field-installable fiber optic connectors suitable for use with consumer electronics and related fiber optic cable assemblies.” Spec. ¶ 2. Independent claim 1, which we reproduce below, is representative:

1. A hybrid mechanical splice connector having an electrical portion and an optical portion, comprising:
 - at least one electrical contact;
 - a shell;
 - at least one *body for receiving at least one field optical fiber and securing the electrical contact*, wherein the body includes a *mechanical retention component for securing at least one optical field fiber to the at least one body and at least one lens*.

Appeal Br. 29 (emphases added). Claims 3 and 18 are also independent. *See id.* at 29, 31. Claim 2 depends from claim 1, claims 3–17 and 21 depend directly or indirectly from claim 3, and claims 19 and 20 depend from claim 18. *Id.* at 29–31.

The Examiner rejects all claims under 35 U.S.C. § 102(e)³ as being anticipated by Liao.⁴ Final Action 3–4.

DISCUSSION

Figure 3 of Liao, reproduced below, is an exploded perspective view of the underside of an optical connector:

³ The Examiner’s rejection originally rejected the claims based on § 102(b), but later stated that this was an error. *See* Final Action 3; Answer 2.

⁴ Liao et al., US 2010/0290745 A1 (published Nov. 18, 2010) (“Liao”).

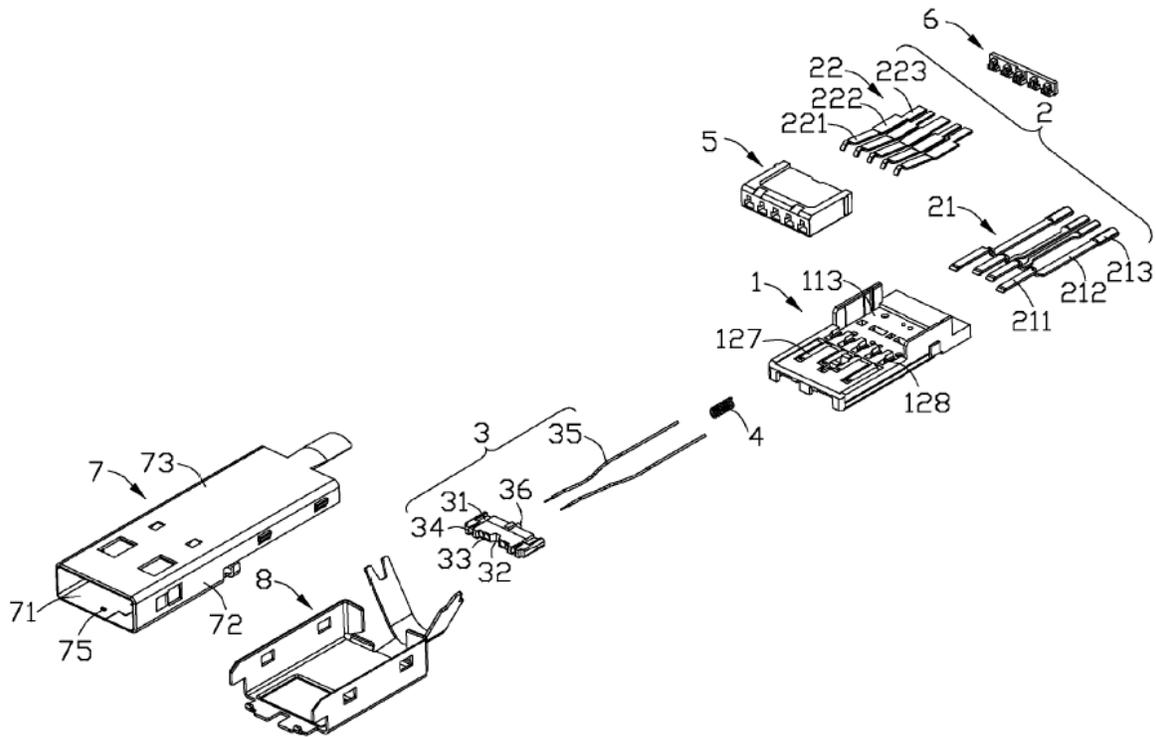


FIG. 3

Liao ¶ 13. Figure 3 depicts insulative housing 1 with a set of contacts 2 which include contacts 21 (with contacting portion 211, which is retained in passageway 127 of housing 1) and 22 (with contacting portion 221, which is received in passageway 128 of housing 1). *Id.* ¶ 24. Figure 3 also depicts metal shells 7 and 8 for shielding insulative housing 1; these shells are surrounded by plastic case 9 (not shown). *Id.* ¶ 22.

Figures 4 and 5 of Liao, reproduced below, provide close-up views of housing 1 in its partially assembled form:

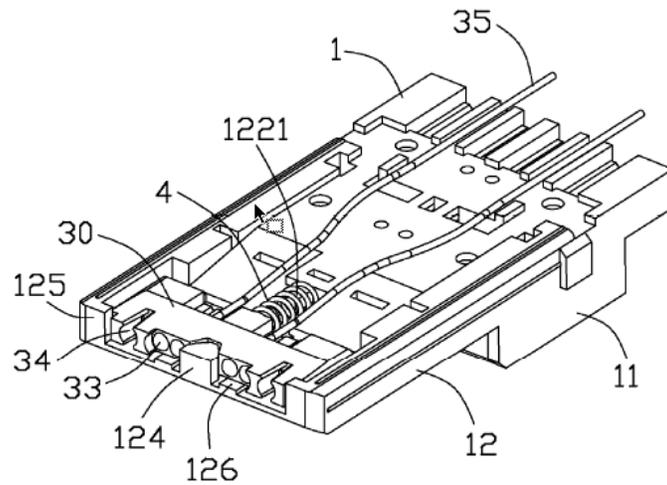


FIG. 4

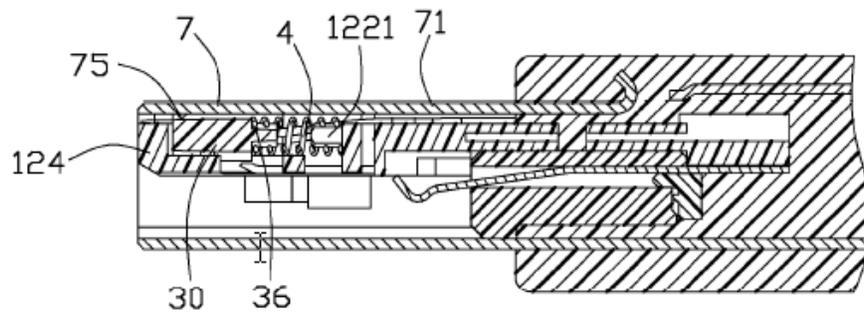


FIG. 5

Liao ¶¶ 14–15. Figure 4 depicts insulative housing 1, including base portion 11 and fiber grooves 111 (not labeled). *Id.* ¶¶ 23. There are “a pair of [optical] fibers 35 attached to the main body 30 and received in the fiber grooves 111.” *Id.* ¶ 25. Main body 30 slides along blocks 123 in a front-to-back direction, but compression coil spring 4 biases main body 30 in the forward direction (also shown in Fig. 5). *Id.* The figure also depicts “a set of lenses 33 attached to the main body 30.” *Id.* Figure 5 depicts metal shell 7 on the top of the assembled connector. *Id.* ¶ 26. Although not labeled, Figure 5 also depicts “plastic case 9 surrounding . . . metal shell 7.” *Id.* ¶ 22.

A. Claims 1 and 2

The Examiner finds that Liao discloses each limitation of claim 1. *See* Final Action 3. This includes electrical contacts 21 and 22, shell 7, and body 9 for receiving field optical fiber 35 and securing the electrical contacts (7 and 1; Figs. 4–5). Final Action 3. According to the Examiner, “the body includes a mechanical retention component (housing case) for securing the fiber and lens (33).” *Id.*

Based at least in part on what Appellant regards as the Examiner’s misinterpretation of the word *securing*, Appellant argues the following: (1) that Liao’s optical fiber 35 is not secured to plastic case 9, and (2) that Liao’s electrical contacts 21 and 22 are not secured to plastic case 9. *See* Appeal Br. 15–24. We address these arguments in turn, below.

1. *Whether Liao discloses “a mechanical retention component for securing at least one optical field fiber to the at least one body”*

Appellant argues that the Examiner erred in finding that Liao discloses “a mechanical retention component for securing at least one optical field fiber to the at least one body” as recited in claim 1. According to Appellant, “[i]t is clear from the teachings of Liao that, contrary to the assertion of the Final Rejection, **the optical fibers 35 are not secured to the plastic case 9.**” Appeal Br. 19. Rather, according to Appellant, “Liao expressly teaches that the optical fibers 35 are attached to the main body 30.” *Id.* However, Appellant points to passages in Liao indicating that main body 30 is floatable relative to case 9. *See id.* at 18–21; *see also* Reply Br. 10. According to Appellant, the term *securing* means that “the at least one optical field fiber is fixed or attached to the at least one body,” and is

incompatible with an apparatus in which “optical fibers **are free to float (i.e., move)** within the connector 100.” *Id.* at 22–23.

During prosecution and on appeal, “claims are given their broadest reasonable interpretation consistent with the specification.” *In re Translogic Tech. Inc.*, 504 F.3d 1249, 1256 (Fed. Cir. 2007) (quoting *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000)). Appellant’s argument is based in part on interpreting the term *securing* in the context of claim 1 as to “[f]ix or attach (something) firmly so that it cannot be moved or lost.” Appeal Br. 23 (citing *Secure, Lexico*, http://www.oxforddictionaries.com/us/definition/american_english/secure). The Examiner agrees with this definition. *See* Answer 3. We accept that definition, for the purpose of this appeal, because it is reasonable and consistent with the Specification.⁵

Based on Appellant’s dictionary definition of *securing*, the Examiner holds that case 9 “secures” optical field fibers 35 by “keep[ing] all components (including those within the metal shells) from becoming loose,” including “a body (30) which optical fibers (35) attach.” Answer 3. According to the Examiner, “components could both be secure and have some movement.” *Id.* at 4. As an analogy, the Examiner states that “one may secure a bicycle to a bicycle rack with a bicycle lock. While the bicycle is secured to the rack with the lock, one would expect that the bicycle cannot be moved or lost.” *Id.* at 6.

⁵ For example, Appellant points out a passage in which a clamping mechanism “*secures the optical waveguides with enough force so they do not move without causing damage to the same.*” Appeal Br. 23 (quoting Spec. ¶ 40). We agree with Appellant that the proposed dictionary definition is consistent with this passage; the clamping mechanism holds the optical waveguide firmly so that it cannot be moved or lost.

We agree with the Examiner that, under the broadest reasonable interpretation of the term *securing*, the limitation “securing at least one optical field fiber to the at least one body” is satisfied when a mechanical retention component participates in holding the optical field fibers and preventing them from being moved or lost. By a preponderance of the evidence of record, case 9 performs that function with respect to fibers 35 and the other components of the connector. Therefore, Appellant’s arguments are not persuasive of reversible error.

In related appeal of Application No. US 13/902,039, we issued a decision reversing the examiner’s rejection. *See Ex parte Isenhour*, No. 2016-002182, 2017 WL 4457665 (Oct. 2, 2017). Appellant argues that this decision supports a finding that optical fiber 35 is not secured to plastic case 9. *See* Appeal Br. 18. We disagree. In the prior appeal, the claims at issue included the limitation “where the mechanical retention component can move between an open position and a clamp position.” *Isenhour* at *1. We held that the Examiner failed to provide a sufficient rationale for why a person of ordinary skill in the art would have combined Liao’s connector with the teachings of Shimotzu to achieve this limitation. *See id.* at *2. Because the present claim 1 does not include this limitation, the reason we reversed the rejection in the prior case is not pertinent to this appeal.

2. *Whether Liao discloses “at least one body for . . . securing the electrical contact”*

Next, Appellant argues that the Examiner erred in finding that electrical contacts 21 and 22 are “secured” to plastic case 9. Appeal Br. 15. According to Appellant, “electrical contacts 21, 22 are secured in respective passageways 127, 128 of the insulative housing 1,” and not by case 9. *Id.* at

16–17. Moreover, Appellant argues that in Liao, “plastic case 9 is disposed over metal shells 7, 8,” which in turn encase electrical contacts 21 and 22. *Id.* at 17.

The Examiner responds that under Appellant’s interpretation of *securing*, which we discuss above, “[t]he plastic case of Liao certainly keeps all components (including those within the metal shells) from becoming loose.” Answer 3.

We agree with the Examiner. Appellant’s argument assumes a construction of *securing* that is narrower than Appellant’s proposed dictionary definition, and narrower than the broadest reasonable interpretation. Appellant has not pointed to anything in claim 1 or the Specification indicating that “securing” requires direct attachment. The preponderance of the evidence on this record indicates that case 9 holds all the components of the connector, including shells 7 and 8, and electrical contacts 21 and 22, together firmly so that they cannot be moved or lost. Thus, Appellant’s argument is not persuasive of reversible error.

For the above reasons, and based on the Examiner’s findings and conclusions as a whole, which we find persuasive, the preponderance of the evidence supports the Examiner’s rejection of claim 1, and Appellant has not shown reversible error. Appellant makes no separate arguments regarding dependent claim 2; therefore, we sustain the Examiner’s rejection of claims 1 and 2.

B. Claims 3–21

Independent claim 3 is similar to claim 1, but recites, among other limitations, “a mechanical retention component rotates about an axis for securing at least one field optical fiber to the at least one body.” Appeal Br.

29. In Appellant's invention, component 40 performs this function by rotating on a hinge to clamp optical fibers 2 to body 12. *See* Spec. 38–41; Appeal Br. 6.

The Examiner finds that spring 4 “rotates and secures internal components by biasing.” Final Action 3. According to the Examiner, “[a] typical spring is by definition a cylindrical component centered about an axis,” and “the spring itself is able to rotate about an axis.” Answer 6. However, in the rejection of claim 3, the Examiner identifies the “mechanical retention component” as case 9, not spring 4. *See* Final Action 3. Moreover, the Examiner has not adequately shown that this interpretation of “rotat[ion] about an axis for securing” is consistent with how a person of ordinary skill in the art would have interpreted the claim language in view of the Specification as a whole. *See Fenner Invs., Ltd. v. Cellco P'ship*, 778 F.3d 1320, 1322–23 (Fed. Cir. 2015) (“The terms used in patent claims are not construed in the abstract, but in the context in which the term was presented and used by the patentee, as it would have been understood by a person of ordinary skill in the field of the invention on reading the patent documents.”). Thus, the Examiner has not established a prima facie case with respect to the rejection of claim 3, and we reverse the rejection. Because claims 4–17 and 21 depend directly or indirectly from claim 3, we reverse the Examiner's rejection with respect to these claims, for the same reason.

Claim 18 contains a limitation referring to a “buffer portion of the field fiber.” Appeal Br. 31. However, the Examiner's rejection of claim 18 and its dependent claims 19 and 20 offers no insight as to this element other than “[c]laims 18–20 relate to the above.” Final Action 4. Moreover, the

Examiner does not specifically address these claims in the Answer. According to Appellant, Liao does not include any buffer clamping structure. See Appeal Br. 21–22, 26. Because the Examiner has not provided a sufficient rationale, we reverse the rejection of claims 18–20. See *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”).

CONCLUSION

The following table summarizes the decision:

Claims Rejected	Basis	Affirmed	Reversed
1–21	§ 102(e) Liao	1, 2	3–21

DECISION

The Examiner’s decision is affirmed as to claims 1 and 2, and reversed as to claims 3–21.

No time period for taking any subsequent action in connection with this appeal may be extended. See 37 C.F.R. §§ 1.136(a)(1)(iv), 41.50(f) (2018).

AFFIRMED-IN-PART