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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JEROME STUBLER and ERIK MELLIER

Appeal 2015-002219
Application 13/026,152
Technology Center 3600

Before MICHAEL L. HOELTER, LYNNE H. BROWNE, and PAUL J. KORNICZKY, *Administrative Patent Judges*.

BROWNE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Jerome Stubler and Erik Mellier (Appellants) appeal under 35 U.S.C. § 134 from the rejection of claims 1–6, 8–24, and 27–36 under 35 U.S.C. § 103(a) as unpatentable over Kumezawa (US 3,128,858, iss. Apr. 14, 1964) and Lecinq (US 2007/0061982 A1, pub. Mar. 22, 2007). We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

CLAIMED SUBJECT MATTER

Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. Method of damping the vibrations of at least one pair of stay cables of a stay cable array of a civil engineering structure, in which the stay cable array provides support and stability to the structure, and in which the stay cables of said pair are linked by a damper to damp vibrations between the at least pair of stay cables, the damper having a first stiffness in response to tensile stress and a second stiffness in response to compressive stress due to movement of one stay cable relative to another stay cable of the pair of stay cables of the stay cable array, the first stiffness being greater than the second stiffness, and in which the first stiffness is at least 1.2 times greater than the second stiffness.

DISCUSSION

Claims 1–6, 10–21, 24, and 27–36

Appellants do not present separate arguments for the patentability of claims 2–6, 10–14, and 33–36, which depend from independent claim 1. Br. 23. Accordingly, claims 2–6, 10–14, and 33–36 stand or fall with claim 1. In addition, Appellants rely on the arguments presented for claim 1 to contest the rejection of independent claim 15 and its dependent claims 16–21, 24, and 27–32. *See id.* at 23–24. Accordingly, these claims also stand or fall with claim 1.

Quoting the test for determining when a reference qualifies as analogous art, Appellants contend that Kumezawa does not qualify as prior art. Br. 17. In support of this contention, Appellants argue that "[u]nder the first prong of the test, there is no doubt that cable-stayed bridges are not from the same field of endeavor as current collection trolley wire systems for high speed electric cars or trains" and that "Kumezawa explicitly states

that it is designed to address the problem of contact break phenomena." *Id.* at 18.

Responding to these arguments the Examiner notes that "the claims are directed to a method and system for damping vibrations in a cable array of a civil engineering structure. Wherein a cable stayed bridge is only one non-limiting example of the present invention as disclosed on page 1, lns. 10–11 [of the Specification]." Ans. 9. The Examiner finds that Kumezawa is "directed to damping vibrations in cable arrays of civil engineering structure[]." *Id.*

The Specification states, "[t]he present invention relates to damping the vibrations of at least two stay cables of a civil engineering structure." Spec. 1:8–9. Thus, the Examiner is correct that the field of endeavor in this instance is devices, methods, or systems which damp vibrations in civil engineering structures, and that the field of endeavor is not limited to cable stayed bridges.

As Kumezawa's method and system damp vibrations in a composed catenary overhead contact wire system, which is a civil engineering structure, the Examiner is correct that Kumezawa is in the same field of endeavor as the instant invention. Further, a problem which the inventors are concerned is damping of vibrations of stay cables. *See, e.g.,* Spec. 8–9. Kumezawa is reasonably pertinent to this problem. *See, e.g.,* Kumezawa 3:39–45. Thus, Kumezawa also qualifies as prior art under the first and second tests for analogous art. Accordingly, Appellants' argument is unconvincing.

Next, Appellants argue that the prior art provides no motivation, teaching, or suggestion for the proposed combination. *See* Br. 19–20. This

argument is foreclosed by *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), in which the Court rejected the rigid requirement of a teaching, suggestion, or motivation to combine known elements in order to show obviousness. *KSR*, 550 U.S. at 415. The Court noted that an obviousness analysis "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *Id.* at 418. To the extent that Appellants are arguing that "[t]he Examiner fails to provide any rationale why one would be motivated to combine disparate teachings from disparate systems to arrive at a claimed embodiment" (Br. 20), Appellants' argument does not address the rationale articulated by the Examiner on pages 3–4 of the Final Action. Thus, Appellants do not apprise us of error.

Then, Appellants argue that "the Examiner fails to explain why a person of ordinary skill in the relevant art would be motivated to combine Lecinq with Kumezawa when such a modification is completely counter to Lecinq's explicitly stated intended purpose and principle of operation." Br. 21. Appellants explain that "Lecinq's explicitly stated intended purpose is to provide a damper that does not introduce a permanent normal force." *Id.* (citing Lecinq ¶ 43). Paragraph 43 of Lecinq states:

> Contrary to the known interconnection cables which have to be pretensioned in order to prevent detensions or shocks, the piston dampers 6 do not have a permanent normal force, the piston 63 adjusting itself to the distance at rest between the first and second stays 4a, 4b, without exerting any force. This characteristic of the piston dampers 6 is advantageous with regard to the interconnection cables which deflect the stays downwards due to their preloading, thus reducing the effectiveness of the stays, thereby often making it necessary to

> add additional strands in these stays. Furthermore, it is possible to place the piston dampers 6 between two stays or more, but without connecting these stays to the deck 3, thus economizing on the anchorages on the deck. Moreover, in contrast to a conventional interconnection cable, the piston damper 6 is capable of transmitting tensile and compression forces, but also bending forces.

Lecinq ¶ 43 (emphasis omitted).

Although the quoted paragraph states that the piston dampers do not have a permanent normal force, there is no indication that elimination of a permanent normal force is Lecinq's intended purpose or principle of operation. Rather, elimination of a permanent normal force appears to be one of the advantages of using Lecinq's piston dampers. A given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate any or all reasons to combine teachings. *See Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n. 8 (Fed. Cir. 2000) ("The fact that the motivating benefit comes at the expense of another benefit, however, should not nullify its use as a basis to modify the disclosure of one reference with the teachings of another. Instead, the benefits, both lost and gained, should be weighed against one another."). Appellants do not explain why the alleged disadvantage of needing a permanent normal force outweighs the advantages provided by Kumezawa's dampers. Neither do Appellants explain why substituting Kumezawa's dampers for Lecinq's dampers would render Lecinq's device unsatisfactory for its intended purpose of damping vibrations of a guy-cable array for an engineering construction. Lecinq, Title. Moreover, to the extent that Appellants are arguing that "the Examiner has engaged in impermissible hindsight" (Br. 22), Appellants do not identify any knowledge relied upon by the Examiner

that was gleaned only from Appellants' disclosure and that was not otherwise within the level of ordinary skill at the time of the invention, thereby obviating Appellants' assertion of hindsight. *See In re McLaughlin*, 443 F.2d 1392 (CCPA 1971). Thus, Appellants do not apprise us of error.

For these reasons, we sustain the Examiner's decision rejecting claim 1, and claims 2–6, 10–21, 24, and 27–36, which fall therewith.

Claims 8 and 22

Claims 8 and 22 require a "second stiffness [that] is almost zero." Br. 27, 29. The Examiner determines that it would have been obvious "to provide the method of Kumezawa with the step of providing a vibration damper having 1st and 2nd stiffness's [sic] in response to tensile and compressive stress as taught by Lecinq et al. in order to providing tuned resistance to compressive and tensile vibration forces specific to a particular bridge/environment." Final Act. 4.

Appellants argue that "[t]he Examiner has failed to provide any rationale why a person of ordinary skill in the relevant art would be motivated to provide dampers having such features when both references are completely silent in this regard." Br. 22. We agree that the Examiner's rejection does not explain why it would have been obvious to use a second stiffness that is almost zero.

For this reason, we do not sustain the Examiner's decision rejecting claims 8 and 22.

Claims 9 and 23

Claims 9 and 23 require "at least one of the stay cables of said pair of stay cables is moreover linked to a fixed element of the civil engineering

structure by means of a damper." Br. 27, 29. The Examiner determines that "[a]lthough Kumezawa does not disclose positioning a damper between a stay cable and an anchor/tower/abutment of the bridge, it would be obvious . . . to connect a damper (10) as disclosed above, to any bridge cable, needing vibration damping." Final Act. 5. The Examiner reasons that "doing so would only require routine skill in the art because connecting the damper to a cable and to an anchor/tower/abutment would be similar to connecting the damper between two cables." *Id.*

Appellants contend that "[t]he Examiner provides no objective evidence for the assertion that connecting a damper to an anchor/tower/abutment is the same as connecting the damper between two cables." Br. 23. Although Appellants are correct that the Examiner cites no evidence in support of the articulated rationale, this is not necessarily indicative of error. Here, the Examiner relies upon common sense reasoning. Common sense does not require a "specific hint or suggestion in a particular reference," only a reasoned explanation that avoids conclusory generalizations. *Dystar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1366 (Fed. Cir. 2006); *see also In re Kahn*, 441 F.3d 977, 987 (Fed. Cir. 2006) (requiring "some rationale, articulation, or reasoned basis to explain why the conclusion of obviousness is correct"). Appellants do not explain why the Examiner's common sense reasoning is incorrect, and thus, do not apprise us of error.

Accordingly, we sustain the Examiner's decision rejecting claims 9 and 23.

DECISION

The Examiner's rejection of claims 1–6, 9–21, 23, 24, and 27–36 is AFFIRMED.

The Examiner's rejection of claims 8 and 22 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). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART