

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* MARTIN JOURDAN

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Appeal 2008-1122  
Application 10/398,351  
Technology Center 2800

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Decided: September 10, 2008

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Before JOHN A. JEFFERY, MARC S. HOFF, and KEVIN F. TURNER,  
*Administrative Patent Judges.*

TURNER, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from the Final Rejection of claims 7-12. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

Appellant's claimed invention relates to a contact element for an electrical plug connection, where the contact element has at least stop

limiting the axial mobility of a center section of the contact element, inside of which the contacting by a mating contact of a connector takes place. (Spec. 2:1-8).

Independent claim 7 is the only pending independent claim, is illustrative of the invention and reads as follows:

7. A contact element for an electrical plug connection, comprising:

a contact outer part;

a contact inner part at least partially covered by the contact outer part, the contact inner part being axially aligned with an insertion direction, the contact inner part having a connecting section at one end and a contact section for a mating contact of a mating connector at another end, the contact inner part further having a center section, the center section having an axially flexible design and being situated between the connecting section and the contact section; and

at least one stop limiting an axial mobility of the center section to within a predetermined travel range;

wherein the at least one stop is configured to limit the axial mobility of the center section to such a degree that the contact element remains below a Woehler curve when exposed to vibration stresses.

The Examiner relies on the following prior art references to show unpatentability:

Huhnen	US 3,964,736	Jun. 22, 1976
Hotea	US 5,362,262	Nov. 8, 1994

Claims 7-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hotea.

Rather than reiterate the arguments of Appellant and the Examiner, reference is made to the Briefs and Answer for the respective details. Only those arguments actually made by Appellant have been considered in this decision. Arguments which Appellant could have made but chose not to make in the Briefs have not been considered and are deemed to be waived [see 37 C.F.R. § 41.37(c)(1)(vii)].

### ISSUE

Under 35 U.S.C. § 103(a), with respect to appealed claims 7-12, does Hotea teach or suggest all of the elements of those claim to render them unpatentable?

### FINDINGS OF FACT

1. The Specification details a contact element for an electrical plug connection, having contact outer and inner parts, with the contact inner part having a center section. The contact also has at least one stop which limits the axial mobility of the center section to within a predetermined travel range. (Spec. 3:2-8, 3:18-22; Figs. 1 and 3, elements 12, 13, 22 and 32).

2. The stop also limits the axial mobility of the center section to such a degree that the contact element remains below a Woehler curve when exposed to vibration stresses. (Spec. 2:10-14).

3. Hotea describes an electrical receptacle terminal, having inner and outer spring members, where the inner spring member is axially movable within the outer spring member to compensate for vibration. (Abstract; Col. 2, ll. 5-14; Fig. 1, elements 2, 10 and 12).

4. Hotea details that the contact structure includes tab portions which fix the outer spring member to the inner contact. The Examiner has identified that the center section has restricted axial mobility between projections 122 and 125. (Col. 2, l. 64 – col. 3, l. 4; Figs. 1 and 2, elements 120, 122, and 125), (Ans. 3).

5. Huhnen is relied upon to teach that a Woehler curve is defined by the number of cycles to failure in terms of the stress applied. The Examiner cites the teachings of Huhnen to show that the maintenance of a flexible element to remain below a Woehler curve is known. We note that the rejection of the claims does not directly rely on Huhnen, but that Huhnen was separately cited to support the Examiner's findings. (Col. 5, ll. 30-41); (Ans. 6-7).

#### PRINCIPLES OF LAW

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). “[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Furthermore,

“ . . . there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness’ . . . [H]owever, the 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.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

During examination, the claims must be interpreted as broadly as their terms reasonably allow. *In re Am. Acad. of Sci. Tech Center*, 367 F.3d 1359, 1369 (Fed. Cir. 2004). When the specification states the meaning that a term in the claim is intended to have, the claim is examined using that meaning, in order to achieve a complete exploration of the applicant's invention and its relation to the prior art. *In re Zletz*, 893 F.2d 319, 321-22 (Fed. Cir. 1989).

#### ANALYSIS

Appellant argues that Hotea does not disclose or suggest at least one stop limiting an axial mobility of a center section to within a predetermined travel range. (App. Br. 5). Appellant argues that the tab portions in Hotea, elements 120 and 122, provide no play in the connector and provide for no travel range since they are disclosed as being crimped together. (App. Br. 5-6). The Examiner finds that even if the outer member is completely fixed to the inner contact, the stops 120 and 122 still limit axial mobility of at least a part of the center section to within a predetermined range. (Ans. 6). We agree with the Examiner.

As is recited in a portion of claim 7, the axial mobility is limited “to within a predetermined travel range,” where that range is not explicitly recited in that claim. While Appellant would have us accept that “Hotea could in no clearer words state that a predetermined travel range is not present,” (App. Br. 5), we do not find any support in Hotea that the crimping of tab portions would result in no play in the connection. As such, we do not

find the fact that the tab portions are crimped to necessarily require that there is neither play nor any axial mobility limitations in the center section of the connector in Hotea.

Appellant also argues that even if Hotea allows for some axial mobility, a specific predetermined travel range is not disclosed. (App. Br. 6). However, the section of claim 7 upon which Appellant relies does not define the range. Also, we find that any construction based on Hotea that allowed for some axial mobility would have to provide some travel range, based on that construction and the materials used. Additionally, while claim 7 also recites that “the contact element remains below a Woehler curve when exposed to vibration stresses,” and Hotea does not disclose this limitation, we agree with the Examiner that it would have been obvious to form the center section of the contact element to remain below a Woehler curve since the contact element is for use in high vibration atmospheres. (Ans. 3).

Appellant also argues that Hotea does not disclose the incorporation of a travel range to increase fatigue resistance and would provide no motivation to one of ordinary skill in the art to incorporate such a predetermined travel range. (App. Br. 6). Appellant continues that one of ordinary skill in the art would rather have been motivated to provide a strong and secure crimp between elements to prevent relative movement. (App. Br. 6). The Examiner counters that it is generally known that limiting mobility of a flexible element to remain below a Woehler curve is known, as evidenced by Huhnen. (Ans. 9). We agree with the Examiner that a given amount of travel would be provided by the construction in Hotea, as discussed *supra*, and that limiting that travel in view of the known vibrational effects would have been obvious. Additionally, we disagree that

Hotea necessarily teaches a connection between elements to prevent relative movement, as crimping is known to allow for play between parts, as opposed to other connection methods, that would allow for little to no play between parts.

Appellant argues that the “combination of Hotea and Huhnen does not disclose, or even suggest, loosening a connection between two parts normally crimped together,” (App. Br. 6), but independent claim 7 does not recite the loosening of any connection. Additionally, we note that the Examiner’s rejection does not proffer an actual combination of Hotea and Huhnen, but rather suggest modification of Hotea in view of known relationships, as evidenced by Huhnen.

Appellant also argues that any motivation to allow for a predetermined travel is improperly derived from the present application and would constitute improper hindsight reasoning and that none of the patents relied upon mention or refer to a motivation for allowing for a predetermined travel. (App. Br. 7). However, we agree with the Examiner, (Ans. 10), that only the teachings of what was within the level of ordinary skill at the time the invention was made are necessary to sustain the rejection, namely to maintain a flexibility movable member below the Woehler curve to prevent the element from failing or breaking. As such, we do not find Appellant’s argument to be compelling.

Appellant further argues that the Examiner is oversimplifying the claimed invention and that it is the design of both the inner and outer parts of the connector and their designed interaction that improves fatigue life. (App. Br. 8). However, we find, as the Examiner does, that such design is not specifically claimed, only that the axial mobility is limited to within a

predetermined travel range such that the contact element remains below a Woehler curve when exposed to vibration stresses. (Ans. 10). While the Specification provides more detail on what Appellant argues, we cannot read limitations from the Specification into the claims.

In addition, Appellant argues that the motivation to modify Hotea relies on an “obvious to try” basis and is unsupported by the cited references. (App. Br. 9-12). However, “the fact that a combination was obvious to try might show that it was obvious under § 103.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742 (2007). In the instant case, we find that the rejection is based on sound motivation to modify the connector of Hotea such that the claims would read thereupon and is fully supported by cited references. As such, we do not find Appellant’s arguments to be compelling.

Appellant also argues, separately, that elements of claim 10 are not taught or suggested by Hotea. (App. Br. 13). Appellant argues that element 125 of Hotea is perpendicular to the longitudinal axis of the connector and not parallel as required by claim 10. Appellant does not make a similar argument about elements 120 and 122, but continues to argue that those elements are not stop elements, as argued above. Given that the Examiner has not relied upon element 125 of Hotea, (Ans. 12-13), and we find that the elements 120 and 122 functionally act as stops, *supra*, we do not find Appellant’s arguments with respect to claim 10 to be compelling. Appellant also raise a related point with respect to claim 8, (Reply Br. 2), which we also do not find to be compelling for the same reason.

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### CONCLUSION

In summary, we have affirmed the Examiner's rejection of claims 7-12 under 35 U.S.C. § 103(a) as unpatentable over Hotea.

### DECISION

The Examiner's rejection of claims 7-12 before us on appeal is affirmed.

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

AFFIRMED

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