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The opinion in support of the decision entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN E. B. TUTTLE

Appeal No. 1998-1251
Application 08/521,393¹

ON BRIEF

Before LEE, GARDNER-LANE, and MEDLEY, Administrative Patent Judges.

LEE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's rejection of appellant's claims 1-15. No claim has been allowed.

References relied on by the Examiner

Daniel	4,142,143	Feb. 27, 1979
Tuttle ('375)	5,189,375	Feb. 23, 1993
Tuttle ('991)	5,391,991	Feb. 21, 1995

¹ Application for patent filed August 29, 1995.

The Rejection on Appeal

Claims 1-15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Tuttle '375 and Daniel.

The Invention

The claimed invention is directed to a cable shield fault locator and a method for detecting cable shield faults with a cable shield fault detector. The only independent claims are claims 1 and 11 which are reproduced below:

1. A cable shield fault locator for use with a shielded electrical pathway having an axial dimension extending between first and second locations, comprising:

a coupler driver generating an electrical signal current;

an inductive coupler, fixed in place circumjacent the shielded electrical pathway near the first location, adapted to couple the electrical signal current to the shields;

an inductive sensor array, circumjacent the shielded electrical pathway and axially movable between the inductive coupler and the second location, adapted to sense an electrical signal current passing along the shield; and

means for detecting a disturbance in the electrical signal current passing along the shield.

11. The method of detecting cable shield faults with a cable shield fault locator, comprising:

generating an electrical signal current in a coupler driver;

inductively coupling the electrical signal current to flow axially along an elongated cable shield at a first location and generate a magnetic field about the shield;

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inductively sensing the presence of the magnetic field about the shield at a second location displaced along the axis of the shield and separated from the first location;

detecting a disturbance in the magnetic field at the second location by comparison with the source electrical signal current; and

indicating the existence of said magnetic field disturbance.

Opinion

The rejection of claims 1-15 cannot be sustained. We reverse.

A reversal of any rejection on appeal should not be construed as an affirmative indication that the appellant's claims are patentable over prior art. We address only the sufficiency of the findings and rationale as set forth by the examiner and on which the examiner's rejection is based.

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, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one with ordinary skill in the art would have been led to modify or combine prior art references to arrive at the claimed invention. Such reasons must stem from some teaching, suggestion, or implication in the prior art as a whole or knowledge generally possessed by one with ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5

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USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. See, e.g., In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

The mere fact that the prior art may be modified in the manner suggested by the examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992); In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Obviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor. Para-Ordnance Mfg. Inc. v. SGS Importers Int'l Inc., 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995), cert. denied, 117 S.Ct. 80 (1996).

As is stated by the Court of Customs and Patent Appeals in In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967):

A rejection based on section 103 clearly must rest on a factual basis, and these facts must be interpreted without hindsight reconstruction of the invention from the prior art. In making this evaluation, all facts must be considered. The Patent Office [examiner] has the initial duty of supplying the

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factual basis for its rejection. It may not, because it may

doubt that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis. (Emphasis in original).

In re Freed, 425 F.2d 785, 788, 165 USPQ 570, 572 (CCPA 1970); In re Lunsford, 357 F.2d 385, 392, 148 USPQ 721, 726 (CCPA 1966).

The problem with the examiner's rejection in this case is that the alleged differences between the appellant's claimed invention and Tuttle '375 have not been sufficiently addressed. One of the factual inquiries the examiner must specifically determine under Graham v. John Deere is the differences between the claimed invention and the prior art. Here, it is not at all clear what the examiner regards as the differences between the appellant's claimed invention and the disclosure of Tuttle '375.

In the Grounds of Rejection section of the examiner's answer, the examiner states the following with respect to Tuttle '375:

The '375 reference, when compared to representative claim 1, shows: cable shield under test 10; a coupler driver 300; an inductive coupler 100 surrounding the shield and receiving a signal from the driver; an inductive sensor array (200, Fig. 8) movable along the shield and a disturbance detector 50.

The examiner's statement does not set forth just what it is that Tuttle '375 does not disclose with regard to the appellant's claimed invention. Without that information, it is also uncertain for just what feature the examiner is relying on Daniel in a proposed

combination with Tuttle '375, and how that proposed combination would be made. With regard to Daniel, the examiner identifies one difference with respect to the claimed invention. Specifically, the examiner stated "Daniel uses harmonic rather than pulsed signals" (answer at 3). As is, the rationale of the examiner in combining Tuttle '375 and Daniel to arrive at the appellant's claimed invention is both disjointed and incomplete. It is not known what teachings of Daniel are combined with what teachings of Tuttle '375, and for what reason. The examiner's conclusion on page 3 of the answer that Daniel's teachings are immediately applicable to the structures of Tuttle '375 is not adequately explained.

Furthermore, at least with regard to apparatus claims 1-10, the appellant in his appeal brief specifically identifies several alleged differences between the claimed invention and Daniel which have not been addressed by the examiner. The examiner has failed to find either (1) that the claims do not require such features; (2) that Daniel does disclose such features; or (3) that the deficiency of Daniel is harmless because Tuttle '375 teaches the subject features. These alleged differences have been ignored. On page 11 of the appeal brief, the appellant states:

Daniel's uses detection of magnitude and phase shift in order to measure the resistive and reactive components of a solid conductor lightning ground system whereas Applicant uses detection of magnitude and pulse risetime in order to detect flaws in cable shields and conduit.

There are other differences between applicant's [sic]

invention and Daniel's, e.g., Daniel's looks for faults in a solid conductor lightning protection system whereas applicant's device can locate the position of faults in the outer shield of cables by detecting the current produced by a magnetic field that is 90 degrees from the magnetic field measured by the Daniel's reference.

The examiner can either refute the existence of these differences or account for them meaningfully in a proper obviousness analysis. But the examiner may not simply ignore them. Because of the provisions in 35 U.S.C. § 112, sixth paragraph, the claimed detecting means in the appellant's claim 1 may be the source of the various features as have been argued by the appellant. That is an issue the examiner must explore, as a part of the examination process, in light of the arguments made by the appellant.

The appellant also argues that a big difference between his claimed invention and both Tuttle '375 and Daniel is that while his claimed invention actually locates the position of the fault on the cable, neither Tuttle '375 nor Daniel teaches that aspect of the appellant's claimed invention. In response, the examiner states (answer at 4, lines 1-2):

The '375 patent does teach the use of the exploring coil to locate faults (col. 4, line 23).

However, a plain reading of column 4, line 23 of Tuttle '375 does not reveal that Tuttle '375's cable resistance tester operates to identify the specific location of any fault on the cable. In column 4, lines 22-26, Tuttle '375 simply states:

The desired values of shield resistance, including flaws, are determined by measurements of pulse droop obtained from visual display of shield current response waveforms.

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What the above-quoted text indicates is that the resistance of the shield including whatever faults it may have, is determined. It does not disclose that the precise position of any fault on the cable is determined. On this record, the examiner has not provided any evidence that either Tuttle '375 or Daniel teaches determining the location of a fault on the cable being tested. The appellant's argument stands unrebutted that while Daniel determines that a conductor has a flaw or is degraded, the appellant's claimed invention locates the position of the flaw.

For all of the foregoing reasons, we reverse the rejection of claims 1-15.

Conclusion

The rejection of claims 1-15 under 35 U.S.C. § 103 as being unpatentable over Tuttle '375 and Daniels is reversed.

REVERSED

JAMESON LEE)	
Administrative Patent Judge)	
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)	
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