

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARSHALL L. LAJOIE, PEDRO FERNANDEZ
and CHARLES D. FORAN, JR.

Appeal No. 2003-2069
Application 09/414,867

HEARD: FEBRUARY 19, 2004

Before JERRY SMITH, BARRY and SAADAT, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1-35, which constitute all the claims in the application. An amendment after final rejection was filed on July 22, 2002 but was denied entry by the examiner.

The disclosed invention pertains to a fuel flowmeter for providing accurate and reliable flow measurement.

Representative claim 1 is reproduced as follows:

1. Fuel flowmeter apparatus comprising a first flowmeter, partially cylindrical housings, rotating impellers having meshed lobes rotatable in the partially cylindrical housings joined in a case having an inlet at one side and an outlet at an opposite side, fuel moving in the inlet and filling voids between the lobes in the impellers and moving cylindrically around opposite partially cylindrical walls and turning the impellers until reaching the outlet, the inlet and the outlet having flow conditioners for smoothing flow, reducing turbulence and promoting lamellar flow into and out of the case, a magnetic marker on at least one of the impellers, a transmitter mounted on the case, the transmitter having a Hall effect sensor for sensing passage of the marker as a pulse, a first signal conditioning software connected to the Hall effect sensor for adjusting transmitted information according to measured pulse rate and a standard flow, the transmitter having a temperature sensor, and a second signal conditioning software connected to the temperature sensor for adjusting transmitted flow rate signals according to a difference between sensed temperature and standard temperature.

The examiner relies on the following references:

Colonnello	4,612,804	Sep. 23, 1986
Lagergren et al. (Lagergren)	4,798,092	Jan. 17, 1989

Claims 1-35 stand rejected under 35 U.S.C. § 103(a). As evidence of obviousness the examiner offers Lagergren in view of Colonnello.

Rather than repeat the arguments of appellants or the examiner, we make reference to the briefs and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 23-27 and 35. We reach the opposite conclusion with respect to claims 1-22 and 28-34. Accordingly, we affirm-in-part.

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

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having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 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 Hosp. Sys., Inc. v. Montefiore Hosp., 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. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments

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actually made by appellants have been considered in this decision. Arguments which appellants could have made but chose not to make in the brief have not been considered and are deemed to be waived by appellants [see 37 CFR § 1.192(a)].

The examiner has indicated how he finds the claimed invention to be obvious over the teachings of the applied prior art [answer, pages 3-4]. The examiner essentially finds that Lagergren teaches all the claimed features except for the meshable rotors, the junction box and the third through sixth signal cables connected to the junction box. The examiner cites Colonnello as teaching each of these claimed features. The examiner finds that it would have been obvious to the artisan to include these features of Colonnello in the fuel flowmeter of Lagergren.

With respect to independent claim 1, appellants argue that Lagergren does not teach impellers with intermeshed lobes [brief, page 8], however, the examiner relied on Colonnello for this teaching. Appellants then quote a major portion of claim 1 and simply assert that neither Lagergren nor Colonnello teaches the recited features although appellants offer no explanation for this position and do not specifically respond to the examiner's findings [id., pages 8-9]. With respect to Colonnello,

appellants argue that there is no showing as to where the Colonnello additional cables with the junction box are to be provided in Lagergren when Lagergren lacks any motivation for the proposed modification [id., page 10]. Although appellants offer no explanation for this position, this argument has no merit with respect to independent claim 1 because claim 1 recites no junction box or signal cables.

The examiner responds to appellants' arguments with respect to claim 1 by identifying the sensors and transducers of Lagergren which allegedly teach the recitations of claim 1 [answer, page 4]. The examiner also proceeds to explain why the artisan would have been motivated to combine the teachings of Colonnello with the fuel flowmeter of Lagergren [id., pages 5-7]. Appellants simply respond that there is no motivation for combining the references in the manner proposed by the examiner [reply brief].

Although many of appellants' arguments are nothing more than general rebuttals of the examiner's rejection, we will not sustain the examiner's rejection of independent claim 1 or of claims 2-11 which depend therefrom because the examiner has not made sufficient findings to establish a prima facie case of obviousness. As noted above, the burden does not shift to

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appellants until the examiner has presented a prima facie case of obviousness. We agree with appellants that there are several features of the invention recited in claim 1 which have not been specifically addressed by the examiner.

The examiner has found that Lagergren teaches all the features of claim 1 except for the rotating impellers having meshed lobes. The examiner noted that Colonnello teaches the use of intermeshing lobes in a fuel flowmeter and that it would have been obvious to the artisan to use such intermeshing lobes in the flowmeter of Lagergren. We have reviewed Colonnello, and we cannot find any support for this finding. Colonnello teaches the use of two elliptical rotors, but there is no indication that these rotors use rotating impellers having meshed lobes as claimed. The examiner has made this finding without any supporting analysis. Claim 1 also recites that the fluid fills the voids between the lobes and moves cylindrically around opposite partially cylindrical walls. The examiner has not offered any analysis as to how the rotors of Colonnello or Lagergren can possibly meet this claimed feature. Since the applied prior art does not provide support for the examiner's factual findings, we find that the examiner has failed to establish a prima facie case of obviousness.

Since independent claim 12 has the same recitations of claim 1 just discussed, the examiner has also failed to establish a prima facie case of obviousness with respect to claim 12 for reasons discussed above. Therefore, we do not sustain the examiner's rejection of independent claim 12 or of claims 13-22 which depend therefrom.

Independent claim 23 does not recite any of the features of claim 1 discussed above. With respect to claim 23, appellants argue that "Lagergren does not describe, teach or suggest the flowmeter with rotors/impellers having intermeshing lobes, sensors and markers as provided in the claimed invention" [brief, page 12]. We note, however, that claim 23 does not recite any rotors/impellers or any markers. With respect to Colonnello, appellants argue that "there is no showing as to where the Colonnello additional cables with the junction box are to be provided in Lagergren" [id., page 13]. We note, however, that claim 23 does not recite any additional cables or a junction box. Thus, appellants make arguments which are not relevant to the invention as recited in claim 23.

Claim 23 recites a housing, rotors, a pulse-creating member, a transmitter, a temperature sensor, a pulse sensor, first and second signal conditioners, a microprocessor and

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compensation software. The examiner has specifically identified where the applied prior art teaches all of these elements except for the first and second signal conditioners connected between the outputs of the temperature sensor and the pulse sensor and the input of the microcomputer. The artisan would have understood, however, that the outputs from the temperature sensor and the pulse sensor in the applied prior art cannot be applied directly to a microcomputer without modification of the signal. Therefore, we find that the examiner has established a prima facie case of the obviousness of claim 23. Since appellants have made no persuasive arguments with respect to claim 23 for reasons discussed above, we sustain the examiner's rejection of independent claim 23.

With respect to the dependent claims on appeal, appellants essentially argue that the examiner made no findings with respect to these claims and, therefore, the examiner failed to establish a prima facie case of the obviousness of the dependent claims. As such, appellants argue that they were under no duty to respond to the examiner's rejection of these claims [brief, pages 18-21]. Although the examiner did not mention each claim specifically as noted above, the examiner did identify the features of the dependent claims which were not taught by

Lagergren. These features included the junction box [claim 24] and the third through sixth cables [claims 25 and 27]. The examiner addressed these features and explained why it would have been obvious to the artisan to incorporate these features from Colonnello into the flowmeter of Lagergren. Therefore, we do not agree with appellants' argument that the examiner failed to establish a prima facie case of obviousness. Thus, appellants were required to persuasively rebut the examiner's rejection.

Although appellants do not specifically address any of the dependent claims on appeal, they point to features of the claimed invention which are only recited in some of the dependent claims. These features relate to the junction box and the additional cables attached to the junction box. The examiner has addressed these features and explained why it would have been obvious to the artisan to add these features to the flowmeter of Lagergren [answer, pages 4-7]. Appellants again simply assert that there is no teaching of a junction box nor of these additional cables, but appellants do not address the examiner's findings nor explain why the examiner's findings are erroneous. Since we find that the examiner has at least established a prima facie case of obviousness, and since appellants' arguments do not persuade us of error in the rejection, we also sustain the

examiner's rejection of dependent claims 24-27.

With respect to independent claim 28, appellants make the same arguments discussed above with respect to claim 23. We reach a different result with respect to claim 28, however, because these arguments are actually relevant to claim 28. Claim 28 does recite the junction box and the manner in which the junction box and plural serial connectors are interconnected to each other. Appellants argue that there has been no showing why the artisan would have been motivated to provide the connections to the junction box as claimed. We agree with appellants that the examiner has failed to address the specific limitations of independent claim 28. The examiner has, therefore, failed to establish a prima facie case of the obviousness of claim 28. Therefore, we do not sustain the examiner's rejection of independent claim 28 or of claims 29-34 which depend therefrom.

With respect to independent claim 35, appellants argue that "Lagergren does not describe, teach or suggest the flowmeter with rotors/impellers having intermeshing lobes, sensors and markers as provided in the claimed invention" [brief, page 16]. We note, however, that claim 35 does not recite any rotors/impellers or any markers. With respect to Colonnello, appellants argue that "there is no showing as to where the

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Colonnello additional cables with the junction box are to be provided in Lagergren" [id.]. We note, however, that claim 35 does not recite any additional cables or a junction box.

Appellants also argue the non-obviousness of the partially cylindrical housings, but this limitation is not present in claim 35. Thus, appellants make arguments which are not relevant to the invention as recited in claim 35. Claim 35 appears to be fairly commensurate with claim 23 discussed above. We find that the examiner has established a prima facie case of the obviousness of claim 35 for the same reasons discussed above with respect to claim 23. Since appellants arguments with respect to claim 35 do not persuade us of error in the rejection, we sustain the examiner's rejection of claim 35.

In summary, we have sustained the examiner's rejection of claims 23-27 and 35, but we have not sustained the rejection of claims 1-22 and 28-34. Therefore, the decision of the examiner rejecting claims 1-35 is affirmed-in-part.

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

AFFIRMED-IN-PART

JERRY SMITH)	
Administrative Patent Judge)	
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LANCE LEONARD BARRY)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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