THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 32

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOE S. O'CONNER

Appeal No. 97-0425
Application 08/330,335[1]

ON BRIEF

Before HAIRSTON, JERRY SMITH and RUGGIERO, 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 final rejection of claims 1-33. An

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[1] Application for patent filed February 5, 1993. According to appellant, the application is a continuation of Application 07/793,023, filed November 15, 1991, now abandoned.

amendment after final rejection was filed on August 28, 1995 and was entered by the examiner. This amendment cancelled claims 31-33. Therefore, this appeal is directed to the rejection of claims 1-30 which constitute all the claims remaining in the application.

The disclosed invention pertains to a method and apparatus for evaluating signals of a Doppler signal transceiver in order to monitor the relative positions and velocities of two vehicles which are travelling one behind the other.

Representative claim 17 is reproduced as follows:

17. An apparatus for producing velocity signals in accordance with the relative velocity between a first and second unit, while both are moving relative to a surface, comprising a Doppler module which is attached to the first unit and targets the second unit, the Doppler module having means for transmitting an unmodulated continuous wave signal, for receiving the continuous wave signal returning from the targeted second unit with Doppler shift and for providing phase related Doppler signals from the Doppler module, a signal processor for receiving Doppler signals from the Doppler module, wherein the signal processor contains Fourier transform means for producing and storing the frequency spectrum of the Doppler signals without intermediate frequency processing, and means for supplying a signal dependent upon the velocity of the first unit moving relative to the surface, and wherein the signal processor further contains direction-sensitive means for producing output signals indicative of whether the targeted second unit approaches or moves away from the first unit.

The examiner relies on the following references:

Merlo et al. (Merlo)	3,176,294	Mar. 30, 1965
Flannery et al. (Flannery)	3,778,826	Dec. 11, 1973
Gabbitas	4,200,870	Apr. 29, 1980
Fritzlen et al. (Fritzlen)	4,231,039	Oct. 28, 1980

Raudonat et al. (Raudonat), "Multiple-Target FM-CW Radar For Unambiguous Determination Of Distance and Speed" [translation], Nachrichtentech. Z., Vol. 30, No. 3, March 1977, pages 255-260.

The following rejections have been made:

1. Claims 17-25 stand rejected under 35 U.S.C. § 103 as being unpatentable over Flannery in view of Raudonat and Merlo.

2. Claims 11-14 and 26-30 stand rejected under 35 U.S.C. § 103 as being unpatentable over Flannery in view of Merlo.

3. Claims 15 and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Flannery in view of Merlo and further in view of Fritzlen.

4. Claims 1-3 and 6-9 stand rejected under 35 U.S.C. § 103 as being unpatentable over Gabbitas in view of Flannery and Merlo.

5. Claims 4 and 5 stand rejected under 35 U.S.C. § 103 as being unpatentable over Gabbitas in view of Flannery and

Merlo and further in view of Raudonat.

6. Claim 10 stands rejected under 35 U.S.C. § 103 as being unpatentable over Gabbitas in view of Flannery and Merlo and further in view of Fritzlen.

Rather than repeat the arguments of appellant 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 rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's arguments set forth in the briefs along with the examiner's rationale in support of the rejections 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 1-30. Accordingly, we affirm.

Appellant has nominally indicated that the claims on appeal do not stand or fall together [brief, page 4]. However, appellant has made no separate arguments with respect to the claims within each separate rejection. The extent of appellant's arguments is to simply repeat what is recited in each of the claims. Simply pointing out what a claim requires with no attempt to point out how the claims patentably distinguish over

the prior art does not amount to a separate argument for patentability. In re Nielson, 816 F.2d 1567, 1572, 2 USPQ2d 1525, 1528 (Fed. Cir. 1987). Since appellant has failed to appropriately argue the separate patentability of the claims within each rejection, all contested claims within each rejection will stand or fall together. See In re King, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986); In re Sernaker, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983). Accordingly, we will consider the rejection against a single claim from each ground of rejection as representative of all

the claims on appeal subject to that rejection.

As a general proposition in an appeal involving a rejection under 35 U.S.C. § 103, an examiner is under a burden to make out a prima facie case of obviousness. If that burden is met, the burden of going forward 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 In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); 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 actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief have not been considered [see 37 CFR § 1.192(a)].

1. The rejection of claims 17-25 as

unpatentable over Flannery in view of Raudonat and Merlo.

The examiner cites Flannery as teaching a Doppler radar system that transmits an unmodulated continuous wave signal and provides dual channel phase related Doppler signals. Flannery does not suggest that Fourier transform means are used in the processing of the signals, and the examiner cites Raudonat to teach the obviousness of processing Doppler radar signals using the Fourier transform. Merlo teaches the desirability of using a vehicle's own velocity to control a filter which determines the range of Doppler frequencies which will be considered. The examiner observes that it would have been obvious to the artisan to replace the Flannery low pass filters with programmable filters as taught by Merlo and to use Fourier transform processing as taught by Raudonat [Final Rejection, pages 2-3].

In our view, the examiner's analysis is sufficiently reasonable that we find that the examiner has satisfied the burden of presenting a prima facie case of obviousness. That is, the examiner's analysis, if left unrebutted, would be sufficient to support a rejection under 35 U.S.C. § 103. The

burden is, therefore, upon appellant to come forward with evidence or arguments which persuasively rebut the examiner's prima facie case of obviousness. Appellant has presented several substantive arguments in response to the examiner's rejection. Therefore, we consider obviousness based upon the totality of the evidence and the relative persuasiveness of the arguments.

Appellant's arguments with respect to this rejection are contained within pages 11-15 of the brief. We will consider these arguments with respect to representative, independent claim 17. As we noted above, appellant's restatement of the claim language of each of the claims subject to this rejection is not sufficient to have the claims considered separately for patentability.

Appellant argues that Flannery does not remove ground speed from his system. We note that Claim 17 does not recite that ground speed is removed from the system. Claim 17 only

recites that the velocity of the first vehicle is supplied. We also note that Merlo, not Flannery, was cited as the teaching of using a vehicle's ground speed to adjust the

frequency range of a Doppler filter. Thus, appellant's argument is not commensurate in scope with the claimed invention and individually challenges references which have been used in combination. Appellant also argues that Flannery operates under a flawed principle, but we are unable to find the relevance of this argument to the invention as broadly recited in claim 17.

Appellant argues that Flannery does not include the Fourier transform or direction sensitive means [brief, page 14]. With respect to the former argument, Raudonat was cited to teach the Fourier transform. With respect to the latter argument, we disagree with appellant. Flannery clearly determines whether the vehicles are approaching each other or are moving away from each other [column 4, lines 47-52]. Therefore, these arguments are not persuasive of error in the examiner's rejection.

Appellant argues that Merlo depends on single channel operation while Flannery depends on two-channel operation. It is appellant's position that there would be no motivation to combine the Merlo single channel device with either the Flannery or Raudonat two-channel devices. We do not agree.

Neither the examiner nor we propose to substitute Merlo's single channel device for Flannery's two-channel device. Rather, Merlo suggests that a Doppler filter should be adjusted as a function of the velocity of the vehicle upon which it is attached. This teaching is relevant regardless of whether a single channel or two-channel device is used to calculate Doppler frequencies.

In summary, we find each of appellant's arguments set forth in the brief to be more limited than the claimed invention or to point out deficiencies in a reference which were recognized by the examiner and overcome with the citation of additional references. Accordingly, none of appellant's arguments, taken singly or in combination, is persuasive that the rejection as formulated by the examiner is in error. Therefore, we sustain the rejection of claims 17-25.

2. <u>The rejection of claims 11-14 and 26-30 as unpatentable over Flannery in view of Merlo</u>.

Representative, independent claim 11 is similar to claim 17 except that the signal processor of claim 17 is specifically recited as containing parallel programmable filtering means for each channel which are controlled by the

velocity of the vehicle having the Doppler equipment. The examiner cites Flannery for the same reasons discussed above, and the examiner observes that Merlo teaches controlling a Doppler filter based upon a vehicle's own velocity [Final Rejection, pages 3-4]. The examiner's rationale for combining the teachings of Flannery with those of Merlo is sufficient to establish a prima facie case of obviousness.

Appellant argues that the filters in Flannery are fixed and not programmable as claimed. The examiner has recognized this fact and has proposed modifying the Flannery filters to be programmable as suggested by Merlo. Appellant does not present any arguments which point to the nonobviousness of this modification. Instead, appellant's arguments attack deficiencies in the references individually even though the deficiencies have been acknowledged by the examiner and have been overcome by the application of additional teachings. Appellant's arguments related to features of cost, size and differences in operation are not relevant to the invention as broadly recited in claim 11. Since appellant has presented no persuasive arguments of error in the examiner's rejection, we sustain the rejection of

claims 11-14 and 26-30 as proposed by the examiner.

3. The rejection of claims 15 and 16 as unpatentable over Flannery in view of Merlo and further in view of Fritzlen.

Representative claim 15 depends from claim 11 and recites that there are a plurality of frequency comparison means made up of phase locked loops. The examiner cites Flannery and Merlo for the same reasons discussed above, and the examiner observes that Fritzlen teaches monitoring a plurality of Doppler frequencies using phase locked loops [Final Rejection, page 4]. The examiner's rationale for combining the teachings of Flannery and Merlo with those of Fritzlen is sufficient to establish a prima facie case of obviousness.

Appellant argues that Fritzlen does not suggest using a phase locked loop for controlling a programmable filter [brief, pages 21-22]. Fritzlen is cited, however, only to show that Doppler velocities can be computed using phase locked loops. It is Merlo who teaches that the programmable filters should be controlled by the velocity of the vehicle. Thus, the modification proposed by the examiner is to compute

Merlo's Doppler velocities using phase locked loops as suggested by Fritzlen. Appellant's argument does not address the examiner's rationale for combination at all. Therefore, we sustain the rejection of claims 15 and 16.

4. The rejection of claims 1-3 and 6-9 as unpatentable over Gabbitas in view of Flannery and Merlo.

Representative, independent claim 1 is similar to claim 11 and additionally recites details of a dual sensing channel Doppler module. The examiner cites Flannery and Merlo for the same reasons discussed above, and the examiner observes that Gabbitas teaches a Doppler module of the type claimed [Final Rejection, page 5]. The examiner's rationale for combining the teachings of Flannery and Merlo with those of Gabbitas is sufficient to establish a prima facie case of obviousness.

Appellant's arguments are directed to the same alleged deficiencies in Flannery and Merlo which have been discussed above. Appellant's arguments again do not address the examiner's rationale for making the proposed combination. Therefore, we sustain the rejection of claims 1-3 and 6-9.

5. The rejection of claims 4 and 5 as

unpatentable over Gabbitas in view of Flannery and Merlo and further in view of Raudonat.

Claim 4 depends from claim 1 and recites that the signal processor contains Fourier transform means and frequency discrimination means. The examiner adds Raudonat to the combination just discussed because Raudonat teaches the use of the Fourier transform in processing Doppler signals. The examiner's rationale for adding the teachings of Raudonat to the

teachings of Flannery, Merlo and Gabbitas is sufficient to establish a prima facie case of obviousness.

Appellant makes the same arguments discussed above and argues that the modification of the applied references would destroy the intended functions of each of the references [brief, page 26]. We do not agree with this argument of appellant. The rejection does not propose that the teachings of the references should be poured into a pot and the contents stirred. Rather, the rejection looks at Flannery as the principle reference teaching a dual channel Doppler frequency detector. Gabbitas is cited only to teach the obviousness of

using a Schottky barrier mixer cavity for the Doppler detector in Flannery. Raudonat is cited only to teach the obviousness of performing the Flannery processing using Fourier transforms. Finally, Merlo is cited only to teach the obviousness of modifying the Flannery fixed low pass filters to programmable filters which are controlled by the vehicle's own velocity. None of these modifications destroys the basic nature of the Flannery device which is to determine the relative velocity between two vehicles. Since no other arguments are presented by appellant, we sustain the rejection of claims 4 and 5.

6. The rejection of claim 10 as unpatentable over Gabbitas in view of Flannery and Merlo and further in view of Fritzlen.

Claim 10 depends from claim 9 and adds the recitation that the frequency comparison means are phase locked loops. The examiner cites Fritzlen to teach this feature and indicates why the invention of claim 10 would have been obvious within the meaning of 35 U.S.C. § 103 [Final Rejection, pages 6-7].

Appellant makes the same arguments considered above. Appellant also asserts that “the prior art references lead away from the simplicity of the present invention and from the low cost, low part count and high reliability which goes with the low parts and the widely available primary components” [brief, pages 29-30]. None of these considerations is relevant to the invention as recited in the appealed claims. The claim language does not preclude large and complex devices. Therefore, we sustain the rejection of claim 10.

In summary, we have sustained each of the examiner’s rejections of the claims under 35 U.S.C. § 103. Accordingly, the decision of the examiner rejecting claims 1-30 is affirmed.

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

AFFIRMED

KENNETH W. HAIRSTON Administrative Patent Judge	)	
JERRY SMITH Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JOSEPH F. RUGGIERO Administrative Patent Judge	)	

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