

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte INGO POOCH
and INGO KANEBLEI

Appeal No. 1996-2959
Application 08/399,853

ON BRIEF

Before MCQUADE, NASE, and BAHR, Administrative Patent Judges.
MCQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Ingo Pooch et al. originally took this appeal from the final rejection of claims 1 through 17. As the appellants have since canceled claim 14, the appeal now involves claims 1 through 13 and 15 through 17, all of the claims currently pending in the application.

THE INVENTION

The invention relates to a device for detecting gaseous and vaporous components of a gas mixture. Representative claim 1 reads as follows:

1. A device for detecting gaseous and vaporous components of a gas mixture, comprising: channel means for defining optically perceptible reaction zones, said channel means including channels, each zone being inside a channel; a support for said channels, each channel having a gas inlet and a gas outlet for parallel gas flow, each of said channels having a flow axis following a course of said channel; a scanning device having a scanning section, at least two of said channels being arranged to define an angle, not equal to zero, formed between said flow axis¹ and said scanning section, each of said channels being located in a position with a channel portion covered by said scanning section.

THE PRIOR ART

The references relied on by the examiner as evidence of obviousness are:

May	5,089,232	Feb. 18, 1992
Stark et al. (Stark)	5,397,538	Mar. 14, 1995

THE REJECTIONS

Claim 4 stands rejected under 35 U.S.C. § 112, fourth paragraph, as being an improper dependent claim.

Claims 1 through 13 and 15 through 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over either May or Stark.

Attention is directed to the main and reply briefs (Paper Nos. 15 and 18) and to the answer (Paper No. 16) for the

¹ Although the term "said flow axis" in independent claims 1, 9 and 17 lacks a proper antecedent basis (an informality which should be corrected in the event of further prosecution), its context and the underlying specification indicate that it refers to the respective flow axis of each channel forming the stated angle.

respective positions of the appellants and the examiner with regard to the merits of these rejections.²

DISCUSSION

I. The 35 U.S.C. § 112, fourth paragraph, rejection

Claim 4 depends from independent claim 1 and defines the channels recited in the parent claim to be "arranged in parallel to one another on said support." In the examiner's view, this recitation fails to further limit the subject matter set forth in claim 1, thereby making claim 4 an improper dependent claim under § 112, ¶ 4,³ because "[i]ndependent claim 1 require[s] the channels to have an angle 'not equal to zero'. Claim 4 does not further limit claim 1 because it is directed to parallel channels that would have an angle equal to zero" (answer, page 3).

This criticism rests on a faulty interpretation of parent claim 1 which in actuality requires the angle in question to be formed between the flow axis of each of the at least two

² The examiner entered the above rejections for the first time in the answer to replace the rejections set forth in the final rejection (Paper No. 5).

³ 35 U.S.C. § 112, fourth paragraph, states in pertinent part that "a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed."

channels⁴ and the scanning section, not between the flow axes themselves. Claim 4 further limits the relationship between the channels in a manner which is completely consistent with these angle limitations. Thus, the examiner's concern that claim 4 is an improper dependent claim is unfounded.

Accordingly, we shall not sustain the standing 35 U.S.C. § 112, fourth paragraph, rejection of claim 4.

II. The 35 U.S.C. § 103 rejections

As framed by the appellants, the dispositive issue with respect to the § 103 rejections of independent claims 1, 9 and 17 is whether either May or Stark teaches or would have suggested a device meeting the limitations in these claims pertaining to the relationship between the channels and the scanning section. Independent claim 1 recites a detecting device comprising, inter alia, (1) channels each having a flow axis and (2) a scanning device having a scanning section, with "at least two of said channels being arranged to define an angle, not equal to zero, formed between said flow axis and said scanning section, each of said channels being located in a position with a channel portion covered by said scanning section." Similarly, independent claim 9 recites a detecting device wherein "at least a portion of each

⁴ See n.1, supra.

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of said plurality of channels being disposed between said support and said scanning section, at least some of said plurality of channels being arranged to define an angle, not equal to zero, formed between said flow axis and said scanning section line," and independent claim 17 recites a detecting device wherein

said scanning section being disposed facing said support with at least a portion of each of said plurality of channels being disposed between said support and said scanning section, at least some of said plurality of channels being arranged to define an angle, not equal to zero, formed between said flow axis and said scanning section line.

The appellants' specification (see pages 3 through 5) explains that the foregoing structural relationships are advantageous in that they permit a time efficient and low cost evaluation of a gas mixture.

May and Stark disclose detecting devices generally comparable to that defined by the appealed claims in that each includes a support, channels and a scanning device. In applying these references to reject independent claims 1, 9 and 17, the examiner states that

[t]he cited prior art is silent to the claimed radial arrangement of the channels such that the angle between two adjacent channels is not equal to zero

. . . .

One having ordinary skill in the art would have recognized that it would have been desirable to orient the channels such that an efficient sampling of the gas could occur. The channels of the cited prior art

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contain the sample and are containers for the sample analysis. The court decided [in] In re Dailey ([357 F.2d 669, 672-73,] 149 USPQ [47,] 49 [(CCPA 1966)]) "that the configuration of the container is a mere matter of choice..." and not significant to define over the prior art which is a similar device with a similar function with a different container configuration. The cited prior art and the instant invention perform the identical function of gas analysis. Appellants' have not demonstrated the claimed configuration give[s] results that would not have been expected by the devices of the cited prior art (e.g. no unexpected results because of the claimed configuration have been demonstrated). In the absence of a showing of unexpected results and in view of Dailey above, one having ordinary skill in the art would have concluded that configuration of the channels to contain the gas would have been a mere matter of choice and not sufficient to define over the art of record. It would have been within the skill of the art to modify either May or Stark et al. to configure the channels at angles greater than zero in a radial pattern or perpendicular to each other as a mere matter of choice [answer, pages 4 and 5].

This analysis fails from the outset due to the examiner's inaccurate interpretation of claims 1, 9 and 17 as requiring the recited angle to be formed between the channel flow axes rather than between the channel flow axes and the scanning section. The resulting determinations by the examiner as to what one of ordinary skill in the art would have recognized to be desirable and found to be obvious are irrelevant because they are not directed to the subject matter actually claimed. They also suffer from a complete lack of factual support, a deficiency

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finding no cure in the Dailey case which has little, if any, pertinence to the issues of obviousness presented in this appeal.

Hence, as applied by the examiner, neither May nor Stark establishes a prima facie case of obviousness with respect to the subject matter recited in independent claims 1, 9 and 17.

Therefore, we shall not sustain the standing 35 U.S.C. § 103 rejection of claims 1, 9 and 17, and dependent claims 2 through 8, 10 through 13, 15 and 16, as being unpatentable over either May or Stark.⁵

⁵ Upon return of the application to the technology center, the examiner should reassess the patentability of the appealed claims in light of May's teachings regarding the configuration of the channels and the simultaneous measurement of plural channels by an opto-electronic scanning device (see May, for example, at column 2, lines 14 through 18 and 29 through 33; column 3, lines 13 through 24; and column 5, lines 18 through 23 and 40 through 50).

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SUMMARY

The decision of the examiner to reject claims 1 through 13 and 15 through 17 is reversed.

REVERSED

JOHN P. MCQUADE)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
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)	APPEALS AND
JEFFREY V. NASE)	
Administrative Patent Judge)	INTERFERENCES
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JENNIFER D. BAHR)	
Administrative Patent Judge)	

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