

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHAKKA SUDHAKAR, FRANK DOLFINGER, JR.,
and MAX R. CESAR

Appeal No. 1997-3632
Application No. 08/248,565

ON BRIEF

Before OWENS, KRATZ, and TIMM, Administrative Patent Judges.
KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 2-4, 16 and 17, which are all of the claims pending in this application.

BACKGROUND

Appellants' invention relates to a catalytic method of hydrotreating hydrocarbons to remove nitrogen and sulfur therefrom. Appellants indicate (brief, page 4) that dependent

claims 2-4 and 16 stand or fall with claim 17, the sole independent claim on appeal. See page 4 of the brief. Claim 17 is reproduced below.

17. A process for treating a charge hydrocarbon characterized by an initial boiling point of from about 70°F to 700°F, and containing undesired nitrogen and sulfur which comprises maintaining a bed of sulfided carbon-supported catalyst containing:

(i) at least one metal selected from 10-40 wt% tungsten or 5-18wt% molybdenum; and

(ii) 3-12 wt% of a non-noble Group VIII metal; and

(iii) 1-10 wt% chromium,

(iv) wherein the metals are loaded onto the carbon support from aqueous solutions of salts of the elements, and

(v) wherein the carbon support has a B.E.T. surface area in the range of 600 m²/g to 2000 m²/g, a total pore volume for nitrogen of at least 0.4 cc/g, and an average pore diameter by nitrogen absorption, defined as Average Pore Diameter (Angstroms):

= 40,000 X Pore Volume for Nitrogen in cc/g.

Nitrogen BET Surface Area in m²/g. of between 16 and 50 Angstroms,

passing said charge hydrocarbon in the presence of hydrogen, at a hydrogen feed rate of 200-5000 SCFB into contact with said sulfided catalyst defined above at hydrotreating conditions, including a temperature of 570°F-720°F and a pressure of 400-1500 psig, thereby effecting hydrodenitrogenation and hydrodesulfurization of said charge hydrocarbon containing undesired nitrogen and sulfur and forming a product stream of hydrocarbon containing a lesser quantity of undesired nitrogen and sulfur, and recovering said product

Appeal No. 1997-3632
Application No. 08/248,565

Page 3

stream of hydrocarbon containing a lesser
quality of undesired nitrogen and sulfur.

The sole prior art reference of record relied upon by the examiner in rejecting the appealed claims is:

Wennerberg et al. (Wennerberg) 3,812,028 May 21,
1974

Claims 2-4, 16 and 17 stand rejected under 35 U.S.C. §
103 as being unpatentable over Wennerberg.

OPINION

We have carefully reviewed the respective positions presented by appellants and the examiner. In so doing, we find our- selves in agreement with appellants that the applied prior art fails to establish a prima facie case of obviousness of the claimed subject matter. Accordingly, we will not sustain the examiner's rejection for essentially those reasons advanced by appellants, and we add the following primarily for emphasis.

The examiner asserts, in effect, that it would have been obvious to select a catalyst as claimed in light of the more general teachings of Wennerberg and optimize the process of the patent to arrive at the pressure conditions and amounts of metals used in appellants' catalyst. This is so in the examiner's view "since it is well known in the art to adjust

temperatures and pressures in hydrotreating processes to affect the conversions of hydrocarbons and to affect the degree of contaminant removal" (answer, page 6). While the examiner correctly recognizes that the catalyst utilized in the herein claimed process is not disclosed in Wennerberg, the examiner expresses the opinion that "one of ordinary skill in the art would be directed by Wennerberg to use a chromium-containing catalyst . . ." (answer, page 7) that would correspond to appellant's catalyst and employ Group VI and VIII metals and a carbon support with characteristics as claimed herein.

Our review of the reference relied upon by the examiner leads us to the determination that the examiner's rejection is founded on an inadequate evidentiary basis to establish the obviousness of the claimed process within the meaning of 35 U.S.C. § 103. For example, notwithstanding the examiner's opinion, Wennerberg does not suggest using a pressure within the herein claimed range of 400-1500 p.s.i.g. and a particular catalyst as defined in the appealed claims in practicing their process of catalytically treating polynuclear aromatic containing feeds with hydrogen to obtain lower boiling

products. Rather, Wennerberg teaches the use of pressures above 2200 p.s.i.g. (2200-4000 p.s.i.g. of hydrogen partial pressure) are necessary to avoid rapid catalyst deactivation (column 1, lines 48-67).

While Wennerberg does disclose the use of various catalysts including Group VI and/or Group VIII metal(s) with activated carbon; there is no specific suggestion in the patent to pick out: one metal from tungsten or molybdenum; a non-noble Group VIII metal and chromium in amounts within the claimed ranges for these catalyst components together with a carbon support with the properties recited in the appealed claims from the general teachings of Wennerberg regarding catalyst preparation and use so as to lead one of ordinary skill in the art to the herein claimed process catalyst. Hence, on this record, we do not agree with the examiner's position regarding the obviousness of the proposed modifications of Wennerberg.

We note that the mere fact that the prior art could be modified as proposed by the examiner is not sufficient to establish a prima facie case. See In re Fritsch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). The determination of obviousness must be based on facts, and not on unsupported generalities. See In re Freed, 425 F.2d 785, 787, 165 USPQ 570, 571 (CCPA 1970). Moreover, there must be

some basis in the references for concluding that the claimed subject matter would have been obvious.

In our view, the motivation for the examiner's stated rejection appears to come solely from the description of appellants' invention in their specification. Thus, the record indicates that the examiner used impermissible hindsight when rejecting the claims. See W.L. Gore & Associates v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984); In re Rothermel, 276 F.2d 393, 396, 125 USPQ 328, 331 (CCPA 1960). Accordingly, we will not sustain the examiner's rejection for the reasons set forth above and as developed in appellants' brief.

CONCLUSION

The decision of the examiner to reject claims 2-4, 16 and 17 under 35 U.S.C. § 103 as being unpatentable over Wennerberg is reversed.

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

REVERSED

TERRY J. OWENS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
PETER F. KRATZ)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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)	
CATHARINE TIMM)	
Administrative Patent Judge)	

Appeal No. 1997-0589
Application No. 08/109,842

Page 10

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Appeal No. 1997-0589
Application No. 08/109,842

Page 11

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