

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte ZHIMIN HAO, ALAIN CLAUDE ROCHAT
and NANCY SCHLODER-TEBALDI

Appeal No. 2001-0934
Application No. 09/294,483

ON BRIEF

Before WINTERS, SCHEINER, and ADAMS, Administrative Patent Judges.

ADAMS, Administrative Patent Judge.

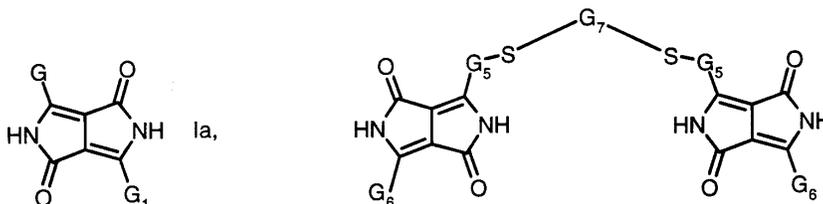
DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-7. Claims 1-16 are pending, however, claims 8-16 have been withdrawn from consideration as a result of a restriction requirement.

Claim 1 is illustrative of the subject matter on appeal and is reproduced

below:

1. A process for preparing an alkylthio-and/or arylthio-substituted diketo-diaryl-pyrrolopyrrole (DPP) of the formula Ia or a dithio-bridged bis-diketo-diaryl-pyrrolopyrrole (bis-DDP) of the formula Ib



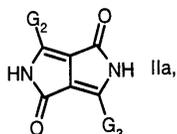
in which in formula Ia

G is phenyl substituted by at least one arylthio or alkylthio group,
and

G₁ is G or a carbocyclic or heterocyclic radical, by reacting a
haloaryl with a thiol or thiolate, and in formula Ib

G₅ is a phenylene, G₆ is G₁ but not G, and G₇ is alkylene,
cycloalkylene or phenylene, by reacting two haloaryls with a dithiol or dithiolate,
which comprises

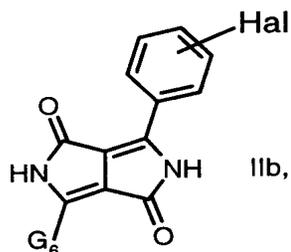
reacting a thiol or thiolate with a halo-diketo-diaryl-pyrrolopyrrole
("halo-DPP") of the formula IIa



in which

G₂ is a halogenated phenyl group and G₃ is G₂ or G₁, or

reacting a dithiol or dithiolate with two halo-diketo-diaryl-
pyrrolopyrroles ("halo-DPPs") of the formula IIb



in which Hal is halogen.

The references relied upon by the examiner are:

Iqbal et al. (Iqbal)	4,490,542	Dec. 25, 1984
Pfenninger et al. (Pfenninger)	4,778,899	Oct. 18, 1988

(March), ADVANCED ORGANIC CHEMISTRY: REACTIONS, MECHANISMS, AND STRUCTURE, pp. 360, 589 and 590 (Jerry March ed., Third Ed., John Wiley & Sons) (1985)

GROUND OF REJECTION

Claims 1-7 stand rejected under 35 U.S.C. § 103 as being unpatentable over Iqbal in view of March and Pfenninger.

We reverse.

DISCUSSION

According to the examiner (Answer, page 4), Iqbal “teach a process for preparing alkylthio- and/or arylthio-substituted diketo-diaryl-pyrrolopyrrole ... similar to the process instantly claimed.” In addition, the examiner finds (id.), Iqbal “indicate that the substituents on the phenyl ring can be subsequently introduced or obtained by conversion of other substituents, such as halogens [however, Iqbal] do[es] not stipulate the use of thiol or thiolate in the conversion process.”

To make up for this deficiency, the examiner relies (id.) on March to teach that the replacement of a halogen with an alkylthio group or arylthio group was well within the skill of the art at the time the invention was made. In addition, the examiner relies on Pfenninger to teach (id.), “alkylthio- and/or arylthio-substituted diketo-diaryl-pyrrolopyrroles are of some interest in the dye art.”

Based on this evidence the examiner finds (Answer, page 5), “one skilled in the art would have been motivated to utilize the process as suggested by Iqbal et al., especially in view of the teachings in March and Pfenninger et al., to arrive at the instant claimed process with the expectation of producing an alkylthio- and/or arylthio-substituted diketo-diaryl-pyrrolopyrrole.”

Initially, we note as set forth in Ecolochem Inc. v. Southern California Edison, 227, F.3d 1361, 1375, 56 USPQ2d 1065, 1075-76 (CAFC 2000) the:

“[S]uggestion to combine may be found in explicit or implicit teachings within the references themselves, from the ordinary knowledge of those skilled in the art, or from the nature of the problem to be solved.” ... However, there still must be evidence that “a skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.” ... “[A] rejection cannot be predicated on the mere identification ... of individual components of claimed limitations. Rather particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.”.... [Citations omitted].

In this regard, we agree with appellants (Brief, page 7) that contrary to the examiner’s position¹ “[t]he mere fact that a reaction scheme is known does not

¹ According to the examiner (Answer, bridging paragraph, pages 4-5), “[o]nce the general reaction has been shown to be old, the burden is on [a]ppellants to present reasons or authority for believing that a group on the starting material would take part in or affect the basic reaction and thus alter the nature of the product or the operability of the process.”

alone make a process employing the reaction scheme obvious.” As appellants correctly explain (id.), with reference to In re Brouwer, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996), “the fact that the starting materials disclosed in the reaction scheme may be modified or substituted so as to produce a product recited in the claim does not make a claimed process obvious unless the prior art suggests the desirability of such a modification or substitution.” Stated differently, there are no per se rules of obviousness. In re Ochiai, 71 F.3d 1565, 1572, 37 USPQ2d 1127, 1133 (Fed. Cir. 1995) (“reliance on per se rules of obviousness is legally incorrect.”). Accord, Brouwer.

As appellants point out (id.), neither Iqbal or March “suggest the desirability of reacting a thiol or thiolate with a halogen-DPP to produce the desired products.” To make up for this deficiency the examiner relies on Pfenninger. However, as appellants explain (Brief, page 8), “Pfenninger does not provide any motivation for a person skilled in the art could [sic] to modify Iqbal to use a (di)thiol or (di)thiolate with a halo-DPP to produce alkylthio- and/or arylthio-substituted DPP pigment products.” Therefore, appellants conclude (id.), “the [e]xaminer has connected the various references through hindsight reconstruction of the invention.” We agree.

As set forth in In re Kotzab, 217 F.3d 1365, 1369-70, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000):

A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. ... Close adherence to this methodology is especially important in cases where the very ease with which the invention

can be understood may prompt one “to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher.”

...
Most if not all inventions arise from a combination of old elements. ... Thus, every element of a claimed invention may often be found in the prior art. ... However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. ... Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. [citations omitted]

In other words, “there still must be evidence that ‘a skilled artisan, ... with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.’” Ecolochem, 227 F.3d at 1375, 56 USPQ2d at 1075-76.

At best, the statement of the rejection establishes that individual parts of the claimed invention were known in the prior art. Prima facie obviousness based on a combination of references, however, requires that the prior art provide “a reason, suggestion, or motivation to lead an inventor to combine those references.” Pro-Mold and Tool Co. v. Great Lakes Plastics Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1629 (Fed. Cir. 1996).

[E]vidence of a suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved. . . . The range of sources available, however, does not diminish the requirement for actual evidence. That is, the showing must be clear and particular.

In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) (citations omitted). The suggestion to combine prior art references must come from the cited references, not from the application’s disclosure. See In re Dow

Chemical Co., 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988).

In our opinion, the evidence relied upon by the examiner fails to suggest to a person of ordinary skill in the art that the references should be combined in the manner necessary to arrive at appellants' claimed invention. The only suggestion to combine the references in the manner suggested by examiner comes from appellants' specification. In this regard, we note as set forth in W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), that "to imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher."

Accordingly we reverse the rejection of claims 1-7 under 35 U.S.C. § 103 as being unpatentable over Iqbal in view of March and Pfenninger.

REVERSED

Sherman D. Winters)	
Administrative Patent Judge)	
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)	
)	BOARD OF PATENT
Toni R. Scheiner)	
Administrative Patent Judge)	APPEALS AND
)	
)	INTERFERENCES
)	
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Administrative Patent Judge)	

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