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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROLAND WAGNER, SEBASTIAN MAASS, NARAYAN MUKHERJEE, KARL-HEINZ SOCKEL, and KATHARINA STREICHER [1]

Appeal 2020-001396
Application 14/512,071
Technology Center 1600

Before JEFFREY N. FREDMAN, JOHN G. NEW, and MICHAEL A. VALEK, *Administrative Patent Judges*.

NEW, *Administrative Patent Judge*.

DECISION ON APPEAL

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[1] We use the term "Appellant" to refer to the "applicant" as defined in 37 C.F.R. § 1.142. Appellant identifies Momentive Performance Materials GMBH as the real party-in-interest. App. Br. 4.

SUMMARY

Appellant files this appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claim 1 as unpatentable under 35 U.S.C. §112(a) as lacking written descriptive support.

Claim 1 also stands rejected as unpatentable under 35 U.S.C. § 103 as being obvious over Wagner et al. (US 2012/0289649 A1, November 15, 2012) ("Wagner")[2].

We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

NATURE OF THE CLAIMED INVENTION

Appellant's claimed invention is directed to organofunctional polysiloxanes comprising hydroxyl polyester groups made by reaction of epoxy functional polyorganosiloxanes and oligmeric polyesters based on polyhydroxy carboxylic acids. Abstr.

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[2] Appellant also argues, with respect to claims 17, 18, and 29, that independent claim 1 was amended on September 5, 2018 to incorporate the subject matter of canceled claim 16. Ap. Br. 15. Appellant asserts that claims 17 and 18, which depend from claim 16, were then amended to depend upon claim 1. *Id.* Furthermore, Appellant argues, claim 29, which depends from claim 1, was also added on September 5, 2018. *Id.* at 15–16. Appellant therefore contends that claims 17, 18, and 29 should not be subjected to the original restriction requirement, or withdrawn from consideration. *Id.*

We are unable to address this argument as it is not within the jurisdiction of the Board. Pursuant to 37 C.F.R. § 41.31(a)(1), only claims that have been twice *rejected* (not withdrawn) can be appealed to the Board. We consequently do not reach Appellant's argument.

REPRESENTATIVE CLAIM

Claim 1 is the sole claim on appeal and recites:

1. A polysiloxane compound having the general formula (I):

$[M_aD_bD^*_cT_dQ_e]_f$ (I)

wherein

$M = R^1R^2R^3SiO_{1/2}$;

$D = R^4R^5SiO_{2/2}$;

$D^* = R^6R^7SiO_{2/2}$;

$T = R^8SiO_{3/2}$;

$Q = SiO_{4/2}$;

With

a = l–10

b = 0–1000

c = 0–1000

d = 0–l

e = 0–1

f = 1–10

wherein

R^1, R^2, R^3, R^4, R^5, R^6 and R^8 are each independently selected from the group consisting of monovalent hydrocarbon

groups having from 1 to 8 carbon atoms, and an aryl or alkaryl hydrocarbon group of from 6 to 22 carbon atoms, or R^7;

R^7 is selected from the group consisting of R^9, R^{10} and R^{11};

wherein

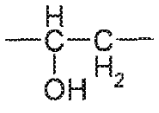
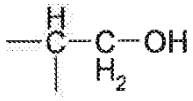
R^9 is selected from the group consisting of $-Z-(A-E^1)_y$, $-Z-E^2$ and $-Z-NH-C(O)-R^{12}$,

wherein

Z is a bivalent or trivalent straight-chained, cyclic or branched, saturated or unsaturated C_2 to C_{20} hydrocarbon residue which can comprise one or more groups selected from

-O-, -NH-,  and can be substituted by one or more OH groups,

A is a bivalent residue selected from the group consisting of

 and 

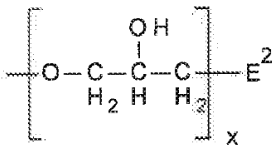
E^1 is selected from the group consisting of E^2 and E^3

wherein

$E^2 = -O-C(O)-R^{12}$

wherein

R^{12} is a branched hydrocarbon residue with up to 100 carbon atoms, which can comprise one or more groups selected from -O-, -C(O)-, and is substituted by one or more OH groups,

$E^3 =$ 

wherein E^2 is defined above, and x = 1–4, y =1 or 2

R^{10} is selected from the group consisting of -Z-(A-E^4)$_y$, -Z-E^5 and -Z-NH-C(O)-R^{13}

wherein

Z and A are defined above,

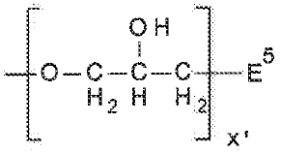
E^4 is selected from the group consisting of E^5 and E^6

wherein

E^5 = -O-C(O)-R^{13},

wherein

R^{13} is a straight-chained, cyclic or branched, saturated or unsaturated hydrocarbon residue with up to 9 carbon atoms, which can comprise one or more groups selected from -O-, -NH-, -NR^{14}-, -C(O)-, and is substituted by one or more OH groups, wherein R^{14} is a straight-chained, cyclic or branched, saturated or unsaturated hydrocarbon residue with up to 6 carbon atoms,

$E^6 =$ 

wherein E^5 is defined above, and x′ = 1–4, y′ = 1 or 2

R^{11} is selected from the group consisting of -Z-(A-E^7)$_y$, -Z-E^8 and -Z-NH-C(O)-R^{12}

wherein

Z and A are defined above,

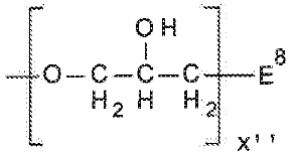
E^7 is selected from the group consisting of E^3 and E^9

wherein

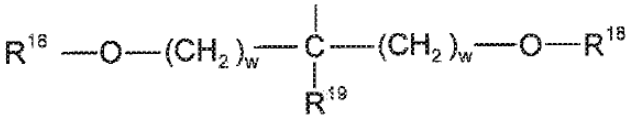
E^8 = -O-C(O)-R^{15}

wherein

R^{15} is a straight-chained, cyclic or branched, saturated or unsaturated hydrocarbon residue with 10 to 50 carbon atoms, which can comprise one or more groups selected from -O-, -NH-, - NR^{16}-, -C(O)-,)-, and is optionally substituted by one or more OH groups, wherein R^{16} is a straight-chained, cyclic or branched, saturated or unsaturated hydrocarbon residue with up to 6 carbon atoms,

E^9 = 

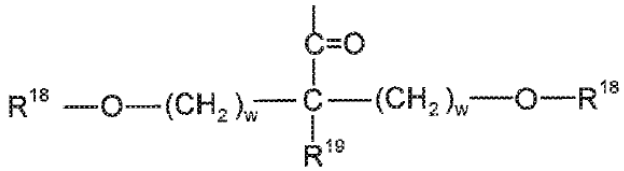
wherein E^8 is defined above, and x″ = 1–4, y″ = 1 or 2, with the proviso that the polysiloxane compound comprises R^9;

wherein R^{12} is 

wherein

$R^{19} = R^{17}$ or H,

R^{17} is C_1 to C_{22}-alkyl, fluoro-substituted C_1 to C_{22}-alkyl or aryl, w = 1–3,

R^{18} = H or 

provided that the total number of carbon atoms in R^{12} is 5 to 70 *and at least one ester bond is present in* R^{12}.

App. Br. 18–21 (emphasis added).

ISSUES AND ANALYSES

We decline to adopt the Examiner's findings, reasoning, and conclusion that the claims on appeal lack written descriptive support or are *prima facie* obvious over the cited prior art. We address the arguments raised by Appellant below.

A. Rejection of claim 1 under 35 U.S.C. § 112(a)

Issue

Appellant argues that the Examiner erred in finding that Appellant's Specification does not support claim 1's recitation of "at least one ester bond is present in R^{12}." App. Br. 10.

Analysis

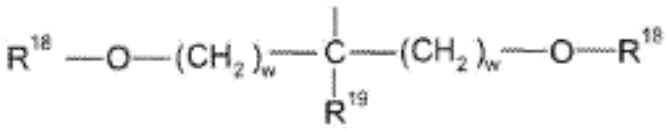
The Examiner notes that claim 1 has been amended to recite "at least one ester bond is present in R^{12}." Final Act. 4. The Examiner finds that

Appellant relies upon paragraph [0034] of the Specification as supporting this new limitation. *Id.*

However, the Examiner finds that there is insufficient guidance in the Specification such that a person of ordinary skill in the art would know if the residue being referred to is R^{12} or the broader residue structure. App. Br. 4–5. Furthermore, the Examiner finds, the only place within R^{12} (unless further substituted) that at least one ester bond could be present would be at the C=O in the second structure of R^{12}. *Id.* at 5. The Examiner notes that R^{18} is defined as H only, and the structure on the same line as R^{18} in claim 1 is a second alternative for R^{12}. *Id.* The Examiner finds that, if the structure were an alternative of R^{18}, then R^{18} would be defined as including R^{18}, which, the Examiner reasons, is not possible. *Id.* The Examiner finds that there are no esters within R^{12} without the inclusion of at least the O-C(O) group of E^2 and, therefore the Specification would require inclusion of E^2 for the ester to be present, and that that constitutes new matter. *Id.*

Appellant argues that, in addition to the ester bond already contained in E^1 or E^2 (i.e., -O-C(O)-R^{12} ester), claim 1 requires the presence of at least another ester bond in R^{12}. App. Br. 11. Appellant points to paragraph [0034] of the Specification In particular, paragraph [0034] as supporting this limitation. Paragraph [0034] discloses:

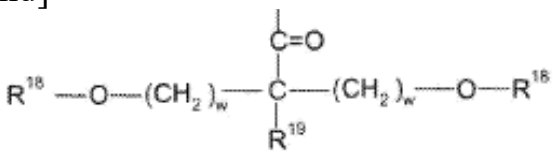
In another preferred embodiment, R^{12} is



wherein

$R^{19} = R^{17}$ or H,

w = 1–3, [and]

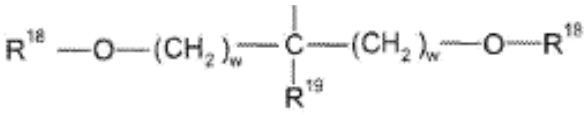
R^{18} = H or 

provided that the total number of carbon aton1s in the dendrimer like residue R^{12} is 5 to 70 and at least one ester bond is present in the residue structure.

Appellant contends that a person of ordinary skill in the art would comprehend that paragraph of [0034] focuses on the definition of R^{12} which is referred to as "a dendrimer like residue" and later as "the residue structure." App. Br. 12. According to Appellant, R^{18} is defined in the claim as being either a hydrogen or R^{12}. *Id.* Appellant asserts that, when one R^{18} residue in the R^{12} structure is substituted hydrogen, the other R^{18} must constitute the alternative R^{12} residue, so as to provide an ester bond linking R^{18} to R^{12}, as required by claim 1 and disclosed by paragraph [0034]. *Id.*

We agree with Appellant's reasoning. The test for the adequacy of the written descriptive support in the Specification is "whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. March 2010).

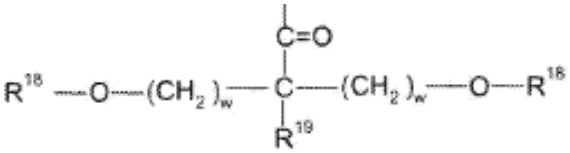
Claim 1 requires that E^2 = -O-C(O)-R^{12}. Consequently, R^{12} is linked by an ester group, i.e., E^2, to the rest of the claimed composition. We agree with the Examiner that this ester bond cannot be considered as a part of R^{12}. Rather, R^{12} is defined in the claim, and also disclosed in paragraph [0034] of the Specification, as being:



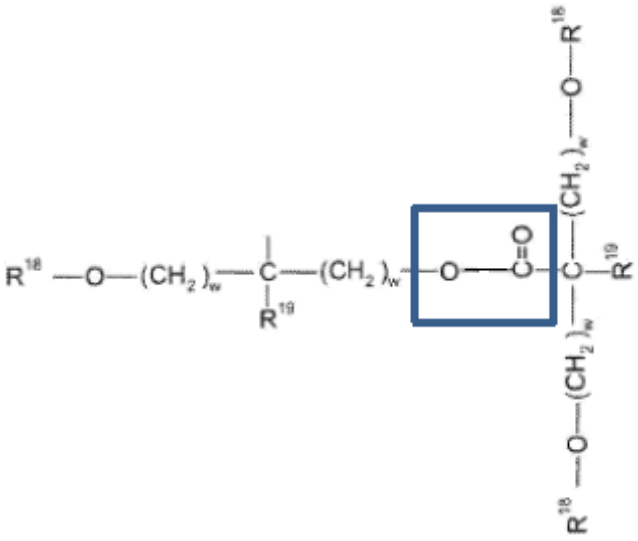
which does not include the ester bond of E^2.

Furthermore, claim 1 recites that R^{19} is either H or "C_1 to C_{22}-alkyl, fluoro-substituted C_1 to C_{22}-alkyl or aryl, w = 1–3." R^{19} thus provides no ester bonding in R^{12}.

R^{18} is defined in both claim 11 and the Specification as being either H or:



Now, if R^{19} is substituted with either of its alternatives, and if *both* R^{18} sites are substituted with H, then there is no ester bond in the resulting R^{12} structure (which includes R^{19} and both R^{18}s). However, if even one of the R^{18} sites is substituted with the non-H alternative R^{18} structure, than the resulting structure, pictured below with R^{12} positioned horizontally and R^{18} positioned vertically at right, becomes:



which necessarily contains an ester bond (in rectangle).

Or, to put it more simply, and as the language of both claim 1 and paragraph [0034] of Appellant's Specification require, as long as *both* R^{18} sites are *not* substituted with H, then at least one ester bond is *necessarily* part of R^{12}, as required by claim 1. One of ordinary skill in the art would find this to be a reasonable interpretation of the text in the Specification and the corresponding language in claim 1.

We therefore conclude that a person of ordinary skill in the art would have understood, at the time of invention, that Appellant was in possession of the claimed invention, and we reverse the Examiner's rejection upon this ground.

B. Rejection of claim 1 under 35 U.S.C. § 103

Issue

Appellant argues that the Examiner erred in finding that Wagner teaches or suggests the R^{12} structure of claim 1. App. Br. 14.

Analysis

The Examiner finds, *inter alia*, that Wagner teaches that E is -O-C(O)-R^2, and that R^2 can be a branched-chained, saturated or unsaturated hydrocarbon resin with up to 50 carbon atoms and is substituted by one or more OH groups. Final Act. 6–7. The Examiner finds that structure R^2 of Wagner includes Appellant's claimed R^{12} (e.g., when R^{12} is defined as w = 2, R^{18} is H, and R^{19} is H, and in which the overarching residue has an ester bond in "E"). *Id.*

The Examiner acknowledges that Wagner, while teaching almost all of the variables and structure of R^{12}, does not directly specify the exact orientation of R^{12}. Final Act. 7. However, the Examiner concludes, it would have been obvious to a person of ordinary skill in the art to utilize a structure within the scope of R^2 of Wagner (such as HO-$(CH_2)_5$-COOH). *Id.* The Examiner further concludes that a skilled artisan would have been motivated to so modify the compositions of Wagner, because Wagner teaches that R^2 can be a branched-chained, saturated or unsaturated hydrocarbon resin with up to 50 carbon atoms, which is substituted by one or more OH groups. *Id.*

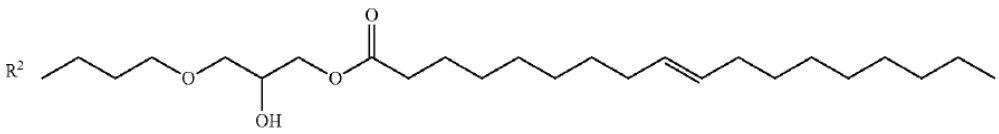
We are not persuaded that the Examiner has established a *prima facie* case that claim 1 is obvious over the teachings and suggestions of Wagner. Wagner teaches that:

> E^2 = -O-(CO)-R^2,
>
> and that:
>
> > R^2=is [sic] a straight-chained, cyclic or branched, saturated or unsaturated hydrocarbon residue with up to 50 hydrocarbon atoms, which can comprise one or more groups selected from -O-, -NH-, -NR^3-, -C(O)-, and is substituted by one or more OH groups, wherein R^3= a straight-chained, cyclic or branched, saturated or unsaturated hydrocarbon residue with up to 6 hydrocarbon atoms.

Wagner ¶¶ 18–19; *see also* claim 21. We agree with the Examiner that R^2 of Wagner thus potentially includes certain species of R^{12} of claim 1. However, "[t]he fact that a claimed compound may be encompassed by a disclosed generic formula does not by itself render the compound obvious." *In re Baird*, 16 F.3d 380, 382 (Fed. Cir. 1994). Here, the language of

Wagner is very broad, and the scope of R^2 of Wagner encompasses a very large genus of possible chemical structures.

Wagner also teaches a single exemplary embodiment of R^2:



Wagner ¶ 315. We note that this embodiment comprises an ester bond, although paragraph [0019] of Wagner does not require one. Nor, with the exception of the ester group, does this embodiment otherwise resemble or correspond to R^{18} of Appellant's claim 1. We further note that R^2 of Wagner, as described in paragraph [0019] has an upper limit of "50 hydrocarbon atoms" [sic], whereas claim 1 recites an upper limit of R^{12} of 70 carbon atoms. Thus, some molecules within the genus of claim 1's R^{12} (i.e., those with greater than 50 carbon atoms) fall outside the boundaries of Wagner's R^2 genus.

Our reviewing court has held that:

> [A] sufficient description of a genus … requires the disclosure of either a representative number of species falling within the scope of the genus or structural features common to the members of the genus so that one of skill in the art can "visualize or recognize" the members of the genus.

Ariad, 598 F.3d at 1350 (Fed. Cir. 2010). We cannot conclude, given the very broad language of paragraph [0019] of Wagner, and the single exemplary embodiment of Wagner's paragraph [0315], that the teachings and suggestions of Wagner are such that a skilled artisan could "visualize or recognize" the members of the genus generally or, specifically, elect to employ claim 1's R^{12} genus out of the vast array of possible compositions claimed within Wagner's R^2. The Examiner has failed to articulate any

substantive reasoning as to why a skilled artisan would find it obvious that the claimed R^{12} genus would fall within the scope of the R^2 genus of Wagner. And because the prior art does not obviously teach or suggest R^{12} as being part of the genus of Wagner's R^2, we conclude that the Examiner has failed to establish a *prima facie* case that claim 1 is obvious over R^2 of Wagner, we reverse the Examiner's rejection of claim 1.

CONCLUSION

The Examiner's rejection of claim 1 under 35 U.S.C. § 112(a) for lack of written description is reversed.

The Examiner's rejection of claim 1 under 35 U.S.C. § 103 is reversed.

REVERSED

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1	112(a)	Written description.		1
1	103	Wagner		1
Overall Outcome				**1**