

Date	January 28, 2009	Court	Intellectual Property High Court, Third Division
Case number	2008 (Gyo-Ke) 10096		
– A case in which the court ruled that, in order to make a determination that a person ordinarily skilled in the art could have easily conceived of the relevant invention from the prior art, it is insufficient that it can be presumed that such person would have made an attempt by which he/she could reach the characteristics of the invention, but it is necessary that there is an implication or the like suggesting that he/she must have made such an attempt with the intention of reaching the characteristics of the invention.			

References:

Article 29, paragraph (2) of the Patent Act

The plaintiff, with regard to its patent application concerning the invention relating to a circuit connecting member, made a request to the Japan Patent Office (JPO) for a trial against the examiner's decision that refused said application, but was given the decision to dismiss the request. Dissatisfied with this, the plaintiff filed a suit with this court against the JPO Commissioner to seek rescission of the JPO decision.

Concerning the requirements under Article 29, paragraph (2) of the Patent Act, the court held as follows: "In order to make a determination that a person ordinarily skilled in the art could have easily conceived of the relevant invention, it is insufficient, in the course of examining the prior art, that it can be presumed that such person would have made an attempt by which he/she could reach the characteristics of the invention, but it is necessary that there is an implication or the like suggesting that he/she must have made such an attempt with the intention of reaching the characteristics of the invention." From this viewpoint, the court determined that a person ordinarily skilled in the art could not have easily conceived of the plaintiff's invention from the prior art, and rescinded the JPO decision that determined to the contrary.

Judgment rendered on January 28, 2009

2008 (Gyo-Ke) 10096 Case of Seeking Rescission of a JPO Decision

Date of conclusion of oral argument: December 11, 2008

Judgment

Plaintiff: Hitachi Chemical Co., Ltd.

Counsel patent attorney: HASEGAWA Yoshiki

Same as above: SHIMIZU Yoshinori

Sub-counsel patent attorney: IKEDA Masato

Same as above: KIDO Hiroji

Defendant: JPO Commissioner

Designated representative: OKAMOTO Masanao

Same as above: SANO Jun

Same as above: NAKATA Toshiko

Same as above: TOSHIMA Yui

Same as above: KOBAYASHI Kazuo

Main text of the judgment

1. The JPO decision rendered on January 29, 2008 regarding Trial against Examiner's Decision of Refusal No. 2005-12671, shall be rescinded.
2. The defendant shall bear the court costs.

Facts and reasons

No. 1 Claims

The same as the main text of this judgment

No. 2 Facts undisputed by the parties

1. Progress of procedures at the JPO

The plaintiff filed a patent application for an invention titled "circuit-connecting member" on May 16, 1995 and filed an amendment of proceedings (Exhibit Ko No. 2) dated April 27, 2004 in connection with the detailed explanation of the invention in the description. However, having received an examiner's decision of refusal dated May 27,

2005, the plaintiff requested a trial against said decision (Trial against Examiner's Decision of Refusal No. 2005-12671) on July 4, 2005 and made an amendment of proceedings by filing a written amendment of proceedings (Exhibit Ko No. 3) dated August 3, 2005 ("Amendment").

On January 29, 2008, the JPO dismissed the Amendment and made a decision to the effect that "the request for the trial in question is to be dismissed" ("JPO Decision"). A certified copy of the JPO Decision was served to the plaintiff on February 12, 2008.

2. Scope of claims as of the filing of the application

In the description as of the time of application filing ("Description"; Exhibit Ko No. 1), Claim 1 stated in the document concerning the scope of claims is as follows (the invention stated in Claim 1 as of the time of application filing is hereinafter referred to as the "claimed invention").

"a circuit-connecting member comprising conductive particles and an adhesive composition containing the following (1) to (3) as essential components:

(1) bisphenol F-type phenoxy resin;

(2) bisphenol type epoxy resin; and

(3) potential hardening agent."

3. Scope of claims after the Amendment

The statement of Claim 1 presented in the document concerning the scope of claims after the Amendment is as follows (the invention claimed in Claim 1 after the Amendment shall be hereinafter referred to as the "claimed amended invention"; The amended parts are underlined; Exhibit Ko No. 3)

"[Claim 1]

A circuit-connecting member that is formed in a film shape, comprising an adhesive composition containing components (1) to (3) below as essential components, and conductive particles in an amount of 0.1 to 10 volume% against the whole volume of the adhesive composition:

(1) bisphenol F-type phenoxy resin

(2) bisphenol type epoxy resin, and

(3) potential hardening agent."

4. Grounds for the JPO Decision

The grounds for the JPO Decision are stated in the attached copy of the written JPO Decision. In sum, the claimed amended invention could have easily been made by any person ordinarily skilled in the art based on the invention ("cited invention") presented

in the Publication of Unexamined Patent Application No. 1994-256746 ("cited reference"; Exhibit Ko No. 4). Under Article 29, paragraph (2) of the Patent Act, the claimed amended invention cannot be independently patented when the patent application is filed. Therefore, the Amendment violates Article 126, paragraph (5) of the Patent Act that was in effect prior to the revision by the Act No. 55 of 2006, which is applied mutatis mutandis under Article 17-2, paragraph (5) of said Act. The Amendment should be dismissed under Article 53, paragraph (1) of said Act, which is applied mutatis mutandis under Article 159, paragraph (1) of said Act. Furthermore, the claimed invention could have easily been made by any person ordinarily skilled in the art based on the cited invention and therefore cannot be patented under Article 29, paragraph (2) of the Patent Act.

The details of the cited invention, the common features and differences between the claimed amended invention and the cited invention are as follows:

(1) Details of the cited invention (Exhibit Ko No. 4)

"A connecting film that is formed in a film shape, comprising an adhesive composition containing the components (1) to (4) below as essential components, and conductive particles in an amount of 0 to 30 volume% compared to the whole volume of the adhesive composition:

- (1) acrylic resin
- (2) phenoxy resin
- (3) bisphenol type epoxy resin
- (4) potential hardening agent."

(2) Common features and differences between the claimed amended invention and the cited reference

(Common features)

"a circuit-connecting member that is formed in a film shape, comprising an adhesive composition containing bisphenol type epoxy resin and a potential hardening agent as essential components, and conductive particles in an amount of 0.1 to 10 volume% compared to the whole volume of the adhesive composition:

(Differences)

The claimed amended invention contains a "bisphenol F-type phenoxy resin" as an essential component of the adhesive composition, while the invention presented in the cited reference contains "acrylic resin" and "phenoxy resin."

No. 3 Allegations of the parties

1. Plaintiff's allegation concerning the reasons for rescission of the JPO Decision

There are two reasons to rescind the JPO Decision, i.e., (1) the error in the recognition of the cited invention and the overlooked difference (Reason for Rescission 1) and (2) the error in the determination on whether any person ordinarily skilled in the art could have easily conceived of the difference (Reason for Rescission 2).

(1) Reason for Rescission 1 (the error in the recognition of the cited invention and the overlooked difference)

In the JPO Decision, the JPO recognized the difference between the claimed amended invention and the cited invention by pointing out, as a difference in formality, the facts that the "acrylic resin," which is one of the components comprising the adhesive composition of the cited invention, is a mere acrylic resin (the last line of page 4 of the written JPO Decision) and that the cited invention uses acrylic resin (lines from 16 to 17 of page 5 of the written JPO Decision), and found that it may not be considered as a substantive difference (lines from 25 to 26 of page 5 of the written JPO Decision).

However, the acrylic resin stated in the cited reference is not a mere "acrylic resin," but the specified "acrylic resin" ("specified acrylic resin") having "at least one functional group selected from among a carboxyl group, hydroxyl group, or epoxy group." Therefore, the JPO Decision contains an error in terms of the aforementioned recognition.

A. [Claim 1] of the cited reference states that the "acrylic resin" is the "specified acrylic resin." In the [Detailed explanation of the invention] of the cited reference states that "the acrylic resin used in the invention should preferably be an acrylic resin having at least one functional group selected from among a carboxyl group, hydroxyl group, and epoxy group, and may be, for example, a copolymer containing acrylic acid ester and acrylonitrile as major components and having at least 0.2 pts.wt. of at least one type of component including compounds such as acrylic acid, methacrylic acid, hydroxyethyl acrylate, glycidyl acrylate, or glycidyl methacrylate" (Paragraph [0005] of Exhibit Ko No. 4). The roles and function of the functional groups acrylic resin and phenoxy resin, are, thanks to the function of the hydroxyl group and carboxy group, to be absorbed and formed on the surface of circuits comprising metals and oxidized metals and exist on the surface at a high concentration level in an inclined fashion. For this reason, the highly concentrated areas such as the island-shaped areas and slope members of the curable acrylic resin and phenoxy resin are easily swollen or dissolved with an all-purpose solvent, or swelling or dissolution of hardened materials is triggered, making repairs possible." (Paragraph [0017] of Exhibit Ko No. 4). It is explained that the acrylic resin mentioned in the cited reference is, thanks to the function of the specified functional groups, absorbed and formed on the surface of circuits and exists

on the surface at a high concentration level in an inclined fashion. Therefore, the acrylic resin can be easily swollen or dissolved with an all-purpose solvent, and this will increase the connection reliability and repairability. [Table 1] (Paragraph [0021] of Exhibit Ko No. 4), which shows the results of the working examples and comparative examples presented in the cited reference, and [Table 2] (Paragraph [0024] of Exhibit Ko No. 4) present the results of [Comparative Example 1], etc., where the acrylic resin presented in Working Examples B to K, where "AA"(acrylic resin) and "MAA"(methacrylic acid), both having a carboxyl group, "GMA"(glycidyl methacrylate), having an epoxy group, "HEMA" (hydroxyethyl methacrylate), having a hydroxyl group, were used, and a regular acrylic resin, "Acrylic Resin A," which does not have any of the aforementioned specified functional groups, were used. According to these results, Acrylic Resins B to K shown in the working examples that have the aforementioned specified functional groups are excellent in terms of "connection reliability," "reparability," and "adhesiveness." On the other hand, "Comparative Example 1" using regular "Acrylic Resin A," which does not have any of the aforementioned specified functional groups, is inferior with the reparability being "100≤second" (in other words, 100 seconds or more) and the reliability being "200Ω." Evaluation and research has shown that "acrylic resin is inferior in terms of reparability and reliability due to the lack of a functional group component" (Paragraph [0025] of Exhibit Ko No. 4) and it has been explained that the regular, mere "acrylic resin" is inappropriate.

Despite the aforementioned statement in the cited reference, the JPO Decision erred in finding that the "acrylic resin," which is one of the adhesive composition components of the cited invention, is a mere acrylic resin and that there is no substantive difference from the acrylic resin of the claimed amended invention.

B. It is obvious to any person ordinarily skilled in the art who comes across the Description that the component that could be contained in addition to the three essential components of the claimed amended invention is "bisphenol A-type phenoxy resin." This is clear from the fact that the Description states that "(omitted) is particularly preferable (omitted) as a coupling agent" (Paragraph [0009] of Exhibit Ko No. 1) and explains that "bisphenol A-type phenoxy resin may be used for adjustment, etc. of melt viscosity" (Paragraph [0005] of Exhibit Ko No. 1) and the fact that bisphenol A-type phenoxy resin is also used in working examples (Working Examples 9 to 11; Paragraph [0030] [Table 1] of Exhibit Ko No. 1). It is also obvious that any special component that could change the means to solve the problem to be solved by the claimed amended invention or otherwise change the nature of the claimed amended invention, like the

"specified acrylic resin" as mentioned in the cited reference, which improves the reparability, etc. thanks to the function of the specified functional groups, would be excluded.

As explained above, if a comparison is made between the claimed amended invention having "bisphenol F-type phenoxy resin" as a structural component and the cited invention having the specified acrylic resin as a structural component, while those components function as a means to solve the problem to be solved by the invention, such comparison will show that there is a substantive difference between the two inventions from the perspective of the difference in terms of the means to solve the problem adopted by the invention and the technical idea embodied in the invention since the fact that the acrylic resin of the cited invention has "at least one functional group selected from among a carboxyl group, hydroxyl group, or epoxy group" is an important factor concerning the two inventions and may be regarded as a substantive difference. Therefore, the JPO Decision erred in determining that the fact that the cited invention contains "acrylic resin" may not be considered as a substantive difference.

C. Regarding this point, the defendant counter-argued that the Publication of Unexamined Patent Application No. 1993-182515 (Exhibit Otsu No. 1) has made it well-known that, in the case of the adhesive system containing epoxy resin and potential hardening agent, a thermoplastic resin has an advantageous effect on the reparability of the connecting member and that, since "bisphenol F-type phenoxy resin" of the claimed invention and "acrylic resin" of the cited invention are both thermoplastic resins, the fact that the cited reference contains "acrylic resin" may not be considered as a substantive difference.

However, according to Exhibit Otsu No. 1, "thermoplastic resin" is a specific thermoplastic resin whose molecules contains a functional group that reacts with a cross-linker thanks to the existence of a cross-linking reaction catalyst. Moreover, said "cross-linking reaction catalyst" is a specific cross-linking reaction catalyst that is coated with a hot melt resin that melts at a prescribed temperature. The function of said hot melt resin that forms the coating has such effects as improving flexibility, lowering elasticity, and enhancing thermal shock resistance. In this sense, it is different from a regular "potential hardening agent."

Therefore, although the defendant referred to Exhibit Otsu No. 1 and alleged that it is well-known that "when it comes to the adhesive system containing epoxy resin and a potential hardening agent, a thermoplastic resin has an advantageous effect on the reparability of the connecting member" and that the fact that the cited invention contains "acrylic resin," which is also a thermoplastic resin, does not constitute a substantive

difference, such defendant's allegation is groundless.

(2) Reason for Rescission 2 (error in the determination of whether any person ordinarily skilled in the art could have easily conceived of the invention)

In the JPO Decision, the JPO determined that the claimed invention may have been easily made by any person ordinarily skilled in the art based on the cited invention, but the JPO made an error in making a determination as follows.

A. "PKHA" stated in the cited reference

In the JPO Decision, on the grounds that the "PKHA (phenoxy resin; molecular weight: 25000; hydroxyl group: 6%; the name of a product manufactured by Union Carbide Corporation)" is stated as a working example in the cited reference, the JPO determined that any person ordinarily skilled in the art could have easily conceived of the idea of using bisphenol F-type phenoxy resin as the phenoxy resin of the cited invention.

However, there is an error in the aforementioned determination presented in the JPO judgment as follows.

"PKHA" cited in the JPO Decision (Paragraph [0022] of Exhibit Ko No. 4) is not bisphenol F-type phenoxy resin, but bisphenol A-type phenoxy resin. Exhibits Ko No. 5-1 and No. 5-2 state "PKHA (phenoxy resin derived from bisphenol A (omitted))" (Paragraph [0086] of Exhibit Ko No. 5-1) and also state that "these resins may be commercially obtained from Union Carbide Corporation as PKHA (omitted) Bakelite phenoxy resin (omitted) and may be expressed as thermoplastic high polymer, which may be derived from bisphenol A and epichlorohydrin" (lines 44 to 48, Section 4, Exhibit Ko No. 5-2). These statements indicate that "PKHA" is not bisphenol F-type phenoxy resin, but rather bisphenol A-type phenoxy resin.

As explained above, in view of the fact that the cited reference mentions "PKHA," which is bisphenol A-type phenoxy resin, in the working example of a more preferable manner of working (Paragraph [0022] of Exhibit Ko No. 4), the statements in the cited reference would not provide a motive for using bisphenol F-type phenoxy resin.

B. Compatibility

In the JPO judgment, the JPO determined that any person ordinarily skilled in the art could have easily conceived of the idea of using bisphenol F-type phenoxy resin in order to further improve compatibility (lines 6 to 8, page 6 of the written JPO Decision).

However, there is an error in the aforementioned determination presented in the JPO judgment.

The resin compatibility is merely one of many factors, including heat resistance, insulation, stiffness, and viscosity, to be examined when a resin composition of a circuit-connecting member is prepared. When it comes to resin compositions, various

resin compositions are formed for different purposes by mixing multiple resins of different kinds in a manner that takes advantage of the characteristics of each resin. Regarding the compatibility of phenoxy resin and epoxy resin, as stated in the cited reference that "Phenoxy resin is compatible with epoxy resin (omitted) thanks to the similarity in structure" (Paragraph [0007] of Exhibit Ko No. 4), since the similarity between phenoxy resin and epoxy resin in terms of the basic structural framework has already ensured more than a certain level of compatibility, the two are not considered to have any problem in terms of compatibility. Therefore, there is no motive for using a mixture of A-type phenoxy resin and A-type epoxy resin or a mixture of F-type phenoxy resin and F-type epoxy resin due to paying special attention to compatibility, which is merely one of many factors to be examined when preparing a resin composition.

While the cited reference states that phenoxy resin is compatible with epoxy resin (Paragraph [0007] of Exhibit Ko No. 4), this statement does not mean that the level of compatibility and reparability would improve by using a mixture of F-type phenoxy resin and F-type epoxy resin. Actually, according to the [Comparative Example 1] of [Table 1] of the Description (Paragraph [0030] of Exhibit Ko No. 1), a mixture of bisphenol A-type phenoxy resin and bisphenol A-type epoxy resin shows that its reparability is "90 seconds," which is the worst result in the [Table 1]. As described above, even if it is presumed that, when preparing a composition from phenoxy resin and epoxy resin, the compatibility would improve if both have the same resin type (A-type or F-type, etc.), it does not necessarily mean that the reparability would be enhanced as well.

C. Adhesiveness

In the JPO judgment, the JPO determined that, regarding the relationship between bisphenol F-type phenoxy resin and adhesiveness, any person ordinarily skilled in the art could have easily conceived of the idea of using bisphenol F-type phenoxy resin in order to further improve adhesiveness (lines 6 to 8, page 6 of the written JPO Decision).

However, there is also an error in the aforementioned determination presented in the JPO Decision.

The cited reference doesn't have any statement that the use of bisphenol F-type phenoxy resin as a phenoxy resin would enhance adhesiveness. Meanwhile, it is well-known that bisphenol F-type phenoxy resin is inferior to bisphenol A-type phenoxy resin in terms of heat resistance. For instance, as shown in Exhibit Ko No. 6, the glass-transition temperature of bisphenol F-type phenoxy resin (corresponding to Polymer No. 2 presented in Table I on page 2138 of Exhibit Ko No. 6 in terms of chemical structure) is 80°C, while the glass-transition temperature of bisphenol A-type

phenoxy resin (corresponding to Polymer No. 3 presented in Table II on page 2139 of Exhibit Ko No. 6 in terms of chemical structure) is 100°C. Therefore, it may be said that there would be no motive for using bisphenol F-type phenoxy resin, which is lower in heat resistance, in place of bisphenol A-type phenoxy resin (PKHA) (Paragraph [0022] of Exhibit Ko No. 4), which is specifically stated in the cited reference and is also used in working examples, as a phenoxy resin to be used for a circuit-connecting member, which requires a high level of heat resistance.

D. Reparability (the function and effect of the claimed amended invention)

In the JPO Decision, the JPO determined that the level of "reparability" as the function and effect of the claimed amended invention is not particularly superior to the level of "reparability" of the invention stated in the cited reference (lines 9 to 11, page 6 of the written JPO Decision).

However, there is an error in the aforementioned determination stated in the JPO Decision as explained below.

First of all, due to the difference between the claimed amended invention and the cited invention in terms of the structure for solving the problem, any person ordinarily skilled in the art could not have easily made the invention based on cited invention. Therefore, it may not be said that any person originally skilled in the art could have easily conceived of the claimed amended invention based on the cited invention on the grounds of the effect of reparability.

Furthermore, when it comes to the measurements of "reparability," in order to make a comparison of the level of reparability, it is necessary for the Description and the cited reference to adopt the same conditions and method for measurement of reparability. However, the same conditions and method were not adopted by the Description and the cited reference. For example, there are the following differences between the Description and the cited reference: [i] the difference between "Epikote 828" and "Epikote YL-983U" used as epoxy resin, both of which were products of Yuka Shell Epoxy Kabushiki Kaisha, [ii] the difference between "toluene/ethyl acetate" and "toluene/butyl acetate" used as a solvent, [iii] the difference between "Novacure 3941" and "Novacure 3742" used as potential hardening agent, [iv] the difference between "average particle diameter 5 µm" and "average particle diameter 2 µm" used as microcapsule hardening agent, [v] regarding the hardening agent, the difference between "compounded to achieve the solid component weight ratio of resin component 100 to the potential hardening agent 20" and "mixed to achieve the solid content ratio of 30%," [vi] the difference between "3 volume%" and "2 pts. vol." in terms of conductive particles, [vii] the difference between "10 µm" and "5 µm" in terms of the average

particle diameter of conductive particles, [viii] the difference between "particles with polystyrene nuclei" and "styrene-divinylbenzene copolymer resin sphere" in terms of conductive particles, [ix] the difference between "75°C" and "100°C" in terms of drying temperature, [x] the difference between "25 μm" and "20 μm" in terms of the thickness of the adhesive layer, [xi] the difference between "50 μm" and "40 μm" in terms of the width of the line, [xii] the difference between "100 μm" and "80 μm" in terms of pitch, [xiii] the difference concerning the thickness of the film between "80 μm" as stated in the Description and no corresponding information presented in the cited reference, [xiv] the difference between "160°C" and "170°C" in terms of heating temperature, and [xv] the difference between "10 seconds" and "20 seconds" in terms of the heating and pressuring time.

Although there are no commonalities between the Description and the cited reference in terms of the conditions and method for measuring reparability, the JPO erred in making a simplistic comparison between the two and finding that the claimed invention is not particularly superior to the cited invention in terms of "reparability."

Even if it is presumed that a comparison of the reparability is possible, the reparability of the claimed amended invention may not be considered not to be particularly superior for the following reasons. As shown in the aforementioned [Table 1] of the Description, the "reparability" of the working examples where bisphenol F-type phenoxy resin was used as a phenoxy resin ranges from 28 seconds (Working Examples 3 and 8) to 65 seconds (Working Example 10), while, in the aforementioned [Table 2] of the cited reference, the "reparability" of the "Comparative Example 2" where the bisphenol A-type phenoxy resin (PKHA) was used as a phenoxy resin without "acrylic resin" was "100≤second" (in other words, 100 seconds or more), which indicates that the effect of the claimed amended invention was superior when bisphenol F-type phenoxy resin was used as a phenoxy resin.

2. Counterargument of the defendant

(1) Reason for Rescission 1 (the error in the recognition of the cited invention and the overlooked difference)

A. It has to be recognized that the JPO Decision failed to present the cited reference sufficiently.

However, when recognizing the cited invention, the recognition should not be limited to the scope of claims presented in the cited reference. It is naturally permitted to include the statements presented in the detailed explanation of the invention. The section [Working Examples] in the cited reference states, in addition to the Working

Examples 1 to 24 of film-type adhesive using Acrylic Resins B to K, which are "acrylic resins having at least one functional group selected from among a carboxyl group, hydroxyl group, or epoxy group," Comparative Example 1, which uses Acrylic Resin A without such functional group, Comparative Example 2, which does not use any acrylic resin, and Comparative Example 3, which does not use any phenoxy resin. The section [Working Examples] evaluates and analyzes each of these examples (please refer to Tables 1 and 2, Paragraphs [0019] to [0028] of Exhibit Ko No. 4). Therefore, even if the JPO Decision is insufficient in the sense that, when indicating Paragraph [0005] of the cited reference, it failed to indicate "having at least one functional group selected from among a carboxyl group, hydroxyl group, or epoxy group," this may not be regarded as the grounds for finding that the JPO erred in recognizing the cited invention. Even if the acrylic resin mentioned in the cited reference is limited to the "specified acrylic resin," since it would not change the fact that it is an acrylic resin, there is no error in the JPO Decision in recognizing said acrylic resin as a mere acrylic resin.

B. As explained below, there is no error in the JPO Decision in determining that the fact that the cited invention contains "acrylic resin" does not make any substantive difference on the presumption that the claimed amended invention does not exclude any components other than the three components.

In other words, in the case of a circuit-connecting member, enhancement in reparability is an important issue for persons ordinarily skilled in the art. Moreover, it is common knowledge to persons ordinarily skilled in the art that, when it comes to the adhesive system containing epoxy resin and a potential hardening agent, a thermoplastic resin would have an advantageous effect on the reparability of a connecting member. The "bisphenol F-type phenoxy resin" of the claimed amended invention as well as the "acrylic resin" and "phenoxy resin" of the cited invention are both thermoplastic resins. The claimed amended invention states that "bisphenol A-type phenoxy resin may be compounded, if necessary, for the purpose of adjustment, etc. of melt viscosity." Furthermore, since [Table 1] states that Working Examples 9 to 11 contain bisphenol A-type phenoxy resin as a component, it may be interpreted that the claimed amended invention does not exclude any components other than the three components. As explained above, it cannot be said that the claimed amended invention and the cited invention are different in terms of the means to solve the problem and are fundamentally different from the perspective of the technical idea embodied in the invention. Therefore, there is no error in determining that the fact that the cited invention contains "acrylic resin" does not constitute a substantive difference.

Regarding this point, the plaintiff alleged that, the claimed amended invention does

not exclude any components other than bisphenol F-type phenoxy resin, bisphenol A-type epoxy resin, and a potential hardening agent, but that any possible additional components are expected to be additional regular additives stated in the Description or "bisphenol A-type phenoxy resin" and not expected to be any special component such as the "specified acrylic resin" that could change the means to solve the problem to be solved by the claimed amended invention or otherwise change the nature of the claimed amended invention.

However, as it is not interpreted that the claimed amended invention should be limited to the working examples that have been evaluated and confirmed by experiments, there are no reasons to limit other possible additional components to additional regular additives stated in the Description or to "bisphenol A-type phenoxy resin." Since the Description does not contain any statement to the effect that the "specified acrylic resin" should be excluded, the aforementioned allegation by the plaintiff is groundless.

(2) Reason for Rescission 2 (error in the determination of whether any person ordinarily skilled in the art could have easily conceived of the invention)

A. "PKHA" stated in the cited reference

The "PKHA" stated in the cited reference (Paragraph [0022] of Exhibit Ko No. 4) is indicated as a mere example of phenoxy resin. The cited reference does not contain any statement to preclude the selection of bisphenol F-type phenoxy resin as a phenoxy resin. Meanwhile, it has been well known that, in the case where bisphenol A-type phenoxy resin is used, bisphenol F-type phenoxy resin may also be used as a component for various adhesives to be used for circuit boards, etc.

The cited reference states that "phenoxy resin is a high-molecular-weight epoxy resin with the molecular weight of 10000 or more. Phenoxy resin is compatible with epoxy resin due to the structural similarity between the two and has good adhesiveness (Paragraph [0007] of Exhibit Ko No. 4). The cited reference not only states that "the structural similarity" enhances "compatibility" and "adhesiveness" but also states that "among epoxy resins, bisphenol type epoxy resin is preferable because different grades of bisphenol type epoxy resin with varying molecular weight are widely available and also because it is possible to freely adjust adhesiveness, reactivity, etc. Bisphenol F-type epoxy resin, which has very low viscosity, is especially preferable because it is possible to set the fluidity by combining it with phenoxy resin at any desired level within a wide range and also to easily obtain viscosity due to its fluidity (Paragraph [0009] of Exhibit Ko No. 4)." As working examples, the cited reference states "PKHA" (phenoxy resin; molecular weight: 25000; hydroxyl group: 6%; the name of a product manufactured by

Union Carbide Corporation) and Epikote YL-983U (bisphenol F-type highly pure liquid epoxy resin) (Paragraph [0022] of Exhibit Ko No. 4).

In view of these facts, the cited reference should be considered to offer a motive for using bisphenol F-type epoxy resin and, in order to "further enhance the compatibility and adhesiveness," also use bisphenol F-type phenoxy resin.

B. Compatibility and adhesiveness

The plaintiff alleged that [i] since more than a certain level of compatibility is ensured in the cited reference, the two are not considered to have any problem in terms of compatibility. Therefore, there is no motive for using a mixture of A-type phenoxy resin and A-type epoxy resin or a mixture of F-type phenoxy resin and F-type epoxy resin by paying special attention to compatibility, and [ii] there is no evidence to prove that the use of F-type phenoxy resin together with F-type epoxy resin would further enhance the compatibility and repairability.

However, the cited reference (Exhibit Ko No. 4) states that "phenoxy resin is a high-molecular-weight epoxy resin with the molecular weight of 10000 or more. Phenoxy resin is compatible with epoxy resin due to the structural similarity between the two and has good adhesiveness (Paragraph [0007] of Exhibit Ko No. 4)." Any person ordinarily skilled in the art could have easily conceived of the idea that the compatibility and adhesiveness would be enhanced when using resins whose structures are similar. It may not be considered to be difficult to try to mix bisphenol F-type phenoxy resin and bisphenol F-type epoxy resin in order to further improve compatibility.

The plaintiff alleged that there is no motive for daring to use bisphenol F-type phenoxy resin, which has lower heat resistance, in place of bisphenol A-type phenoxy resin (PKHA).

However, the aforementioned plaintiff's allegation is groundless because there was a motivation to improve the compatibility and adhesiveness, and the fact that bisphenol F-type phenoxy resin has a sufficient level of heat resistance as an adhesive composition for a circuit-connecting member may be considered to be a technical matter that has been well known among persons ordinarily skilled in the art.

As described above, there is no error in the JPO Decision in determining that any person ordinarily skilled in the art could have easily conceived of the idea of using bisphenol F-type phenoxy resin in consideration of the compatibility and adhesiveness.

C. Reparability

The claimed amended invention and the cited invention both belong to the same technical field, i.e., adhesive, and are used for bonding circuit boards. The reparability is

measured by the time required to wipe out, by a cotton swab soaked in acetone, the adhesive remaining on a certain area of the ITO (indium oxide) glass (20×2 mm) after detaching the FPC (flexible circuit board) of the connection part from the ITO glass (Paragraphs [0025] and [0028] of Exhibit Ko No. 1 and Paragraphs [0023] and [0025] of Exhibit Ko No. 4).

When it comes to the evaluation of reparability, the range that is evaluated as excellent is 28 to 65 seconds in the case of [Table 1] presented in the Description and 15 to 30 seconds in the case of [Table 2] presented in the cited reference (Exhibit Ko No. 4). Several dozen seconds are evaluated as excellent in both cases, and there is no significant difference between the two. While it is common to conduct an evaluation experiment by mimicking various conditions under which the invention is actually worked, the various differences between [Table 1] presented in the Description and [Table 2] presented in the cited reference in terms of the conditions and method for measurement may be considered to have arisen from the differences in the set conditions under which the invention is actually worked. These differences are not so significant as to make it unreasonable to use the results indicated in [Table 1] of the Description and [Table 2] of the cited reference.

The claimed amended invention and the cited invention are the same in terms of the problem to be solved by the invention such as improvement of its reparability. Moreover, the two inventions may not be considered to be different in terms of the means of solving the problem. Therefore, it would not be difficult for any person ordinarily skilled in the art to conceive of the structure of the claimed amended invention. For this reason, there is no error in the JPO Decision stating to that effect.

No. 4 Decision of this court

This court found that there is an error in the JPO Decision in determining that, with regard to the phenoxy resin of the cited invention, any person ordinarily skilled in the art could have easily conceived of the idea of using bisphenol F-type phenoxy resin in order to further enhance the compatibility and adhesiveness, regardless of whether there is an error of overlooking differences.

The reasons are stated below.

1. Statements in the Description and in the cited reference

The Description and the cited reference contain the following statements

(1) Statements in the Description and in the written amendments of proceedings (Exhibits Ko No. 1 and No. 2)

The Description and the written amendments of proceedings (Exhibits Ko No. 1 and

No. 2) contain the following statements.

"[0001] [Industrially applicable field] This invention pertains to a circuit-connecting member using adhesive compositions and conductive particles.

[0002] [Prior art] It has been known that thermoplastic materials such as styrene-based materials and polyester-based materials as well as thermoset materials such as epoxy-based materials and silicone-based materials may be used as an adhesive to bond two circuit boards, while gaining electric continuity between these electrodes. In this case, there are two types of adhesives. The first type of adhesive contains conductive particles and gains electric connection in the depth-wise direction of the adhesive through pressurization (for example, Publication of Unexamined Patent Application No. 1980-104007). The second type contains no conductive particles and gains electric connection through pressurization upon connection of the contact surface of the microscopic asperities on the electrodes (for example, Publication of Unexamined Patent Application No. 1985-262430).

Meanwhile, in the case of connection achieved by these adhesives, if the electric connection is poor or if any electronic part or circuit becomes defective after such connection, the non-defective part will be connected again with an adhesive after detaching circuits from the other side of circuits and removing the adhesive by a solvent, etc.

In this case, it is important to be able to easily and efficiently remove the adhesive on microscopic circuits and electrodes by using an all-purpose solvent (e.g., acetone, methyl ethyl ketone, toluene, ligroin, tetrahydrofuran, alcohol, etc.) without having any negative effect on the non-defective part of the surrounding area. If the adhesive is a thermoset material, so-called epoxy remover comprising methylene chloride and acid, etc. is often used as a solvent.

[0003] [Problem to be solved by the invention] In the case of a thermoset adhesive, which has been commonly used, repairs used to be made by using, for example, the so-called epoxy remover comprising methylene chloride and acid, etc. as a solvent. However, this method has a negative effect on the circuits on the board.

This invention provides a reliable connection and a circuit-connecting member that can be easily and quickly repaired by using an all-purpose solvent."

"[0005] Bisphenol F-type phenoxy resin used in this invention is explained below.

Bisphenol F-type phenoxy resin is a high-molecular-weight epoxy resin with the average molecular weight of 10000 or more measured with high-performance liquid chromatography (HPLC). It is compatible with epoxy resin due to structural similarity and has good adhesiveness. The higher the molecular weight is, the easier it is to obtain

a film shape and the wider range would be possible for setting the level of melt viscosity, which will affect the fluidity at the time of connection. (omitted) For the purpose of adjustment of the level of melt viscosity, etc., it is possible to mix bisphenol A-type phenoxy resin, if necessary."

"[0012] [Function] In the case of this invention, the adhesive composition with which bisphenol F-type phenoxy resin has been mixed can ensure a high level of reliability after the connection of microscopic circuits and allow the use of an all-purpose solvent for repairs. Another characteristic of this adhesive composition is quick reparability. It may be presumed that such characteristics contribute to improving the efficiency of connecting circuits. (omitted)

The circuit-connecting member of this invention involves an adhesive containing bisphenol F-type phenoxy resin, bisphenol type epoxy resin, and a potential hardening agent. Since it dries below the activating temperature of the potential hardening agent by due to the designation of the type and boiling point of the solvent, it will not suffer from the deterioration of the hardening agent and will be able to exhibit stable preservability.

[0013] [Working examples] The detailed explanation of this invention is provided below based on the workings examples. The compounding ratio of each example is shown in Table 1.

Working Example 1

Fifty gram of bisphenol F-type phenoxy resin (average molecular weight: 20000) was made from bisphenol F and epichlorohydrin by an ordinary method and was dissolved with a combined solvent made of toluene (boiling point: 110.6°C; SP: 8.90)/ethyl acetate (boiling point: 77.1°C; SP: 9.10) at a 50/50 ratio by weight, and made into a solution with 40 percent solid content.

Fifty grams of bisphenol type liquid epoxy resin (bisphenol A-type epoxy resin; a product of Yuka Shell Epoxy Kabushiki Kaisha; product name: Epikote 828, epoxy equivalent: 184) was dissolved with a combined solvent made of toluene/ethyl acetate at a 50/50 ratio by weight and was turned into a solution with 40 percent solid content.

The component used as a potential hardening agent was Novacure 3941 (master batch-type hardening agent obtained by dispersing among liquid bisphenol F-type epoxy resin a hardening agent in the form of microcapsules that have modified imidazole nuclei coated with polyurethane and an average particle diameter of 5 μm ; activating temperature: 125°C; the name of a product of Asahi Chemical Industry Co., Ltd.).

Conductive particles with an average particle diameter of 10 μm and specific gravity

of 2.0 were obtained by creating particles with polystyrene nuclei coated with a 0.2 μm -thick nickel layer covered by a 0.02 μm -thick gold layer.

A connecting member with a 25 μm -thick adhesive layer was obtained by mixing a resin component with a potential hardening agent at the solid component weight ratio of 100 to 20, compounding and dispersing conductive particles at a rate of 3 volume% and coating a 80 μm -thick fluorine resin film with it by using a coating device, and drying it by heated air for ten minutes.

The film-shape adhesive obtained as described above has sufficient flexibility at room temperature and shows almost no change in the film qualities after being left at 40°C for 240 hours."

"[0023] Comparative Example 1: Except for the fact that bisphenol A-type phenoxy resin (PKHC) was used in place of bisphenol F-type phenoxy resin, a circuit-connecting member was obtained in the same manner as that of Working Example 1."

"[0025] (Connection of circuits)

The circuit-connecting members obtained in Working Examples 1 to 16 and Comparative Examples 1 to 2 were used to connect, over the width of 2 mm, two sets of flexible printed circuits (FPC) each having 500 copper circuits of line width of 50 μm , pitch of 100 μm , and thickness of 18 μm , by heating them to 170°C, and subjecting them to pressure of 2 MPa for 20 seconds. At that time, the adhesive side of the circuit-connecting member was bonded to either set of FPC in advance, and heated to 70°C and subjected to pressure of 0.5 MPa for 5 seconds for temporary connection. Subsequently, after removing the fluorine resin film, the FPC was connected to the other set of FPC.

The aforementioned FPC was connected, over the width of 2 mm, with the glass (surface resistance: $20\Omega/\square$) coated with a thin layer of indium oxide (ITO) by heating them at 160°C and subjecting them to pressure of 2 MPa for 10 seconds. Like the aforementioned case, the FPC was temporarily connected onto the ITO glass.

[0026] (Measurement of connection resistance)

After connecting the circuits, the resistance value between the opposing circuits of the FPC, including the aforementioned connection part, was measured with a multi-meter at the initial point in time and also after leaving them in a hot, humid chamber, more specifically, at 85°C and 85%RH, for 500 hours. The resistance value was expressed as the average of 150 resistance points between the opposing circuits ($\bar{x}+3\sigma$).

[0027] These results are shown in Table 1. The adhesive composition obtained in Working Example 1 showed excellent short-time connectivity. It also exhibited high

durability, showing low initial connection resistance and only a slight increase in the resistance even after the test in a hot, humid environment. In the case of Working Examples 2 to 4, the levels of connectivity and heat and humidity resistance did not change very much even after making a change in the molecular weight of bisphenol F-type phenoxy resin. Those levels have remained high in all examples. The film-shape adhesive made in Working Examples 5 to 8 varied in terms of tackiness, depending on the compounded amounts of bisphenol F-type phenoxy resin and bisphenol type epoxy resin, while its connectivity, durability, and preservability were excellent. In the case of Working Example 16, in which a hardening agent was changed from modified imidazole microcapsules to aromatic sulfonium salt, the adhesive exhibited not only a high level of connectivity, preservability, etc., but also the ability to harden more quickly than conventional types.

In contrast, in Comparative Example 1, in which bisphenol F-type phenoxy resin was replaced with bisphenol A-type phenoxy resin, connection resistance increased sharply because the adhesive components hardened before sufficient flow, which resulted in the connection width expanding to a level greater than the particle diameter of conductive particles. (omitted)

[0028] (Circuit reparability after connection)

The reparability is measured by the time required to wipe out, by a cotton swab soaked in acetone, the adhesive remaining on a certain area of the ITO glass (20×2 mm) after detaching the connection part, FPC, from the ITO glass.

The results are shown in Table 1. In Working Examples 1 to 16, excluding working Examples 9 to 11, the removal of the adhesive was completed within 28 to 41 seconds. This is attributable to the unique reparability of bisphenol F-type phenoxy resin. In Working Examples 9 to 11, the compounding of bisphenol A-type phenoxy resin resulted in a slightly lower level of reparability. Comparative Example 1, in which bisphenol F-type phenoxy resin was not used, exhibited the longest repair time, 90 seconds."

"[0030] [Table 1] (Notes in the judgments are stated in the attached Table 1.)

[0031] [Effect of the invention] As described in detail above, this invention allows the provision of circuit-connecting member that has a high level of connection reliability and can be easily and very quickly repaired by using an all-purpose solvent."

(2) Statements in the cited reference (Exhibit Ko No. 4)

On the other hand, the cited reference (Exhibit Ko No. 4) has the following statements concerning "phenoxy resin" used for the cited invention.

"[0007] The following is an explanation concerning phenoxy resin. Phenoxy resin is a

high-molecular-weight epoxy resin with the molecular weight of 10000 or more. Phenoxy resin is compatible with epoxy resin due to the structural similarity between the two and has good adhesiveness. The higher the molecular weight is, the easier it is to obtain a film shape and the wider the possible range for setting the level of melt viscosity, which will affect the fluidity at the time of connection. A molecular weight of 15000 or more is preferable. If these resins contain a polar group such as a hydroxyl group and a carboxyl group, it would be preferable in the sense that the improved compatibility with epoxy resin would allow the formation of a film with a consistent appearance and attributes and would shorten the time required for hardening by facilitating hardening reaction."

"[0017] [Function] This invention uses an adhesive composition containing acrylic resin, phenoxy resin, epoxy resin, and a potential hardening agent as essential components and thereby provides a highly reliable connection part and allows easy repairs by using an all-purpose solvent. This was made possible thanks to the fact that acrylic resin, phenoxy resin, and epoxy resin can all be easily bonded to circuits comprising metals and oxidized metals and that the hardening material has excellent heat resistance. (omitted)

[0018] This invention can achieve both high reparability by the use of a solvent and high reliability of the connection part by adjusting the proportion of the total amount of thermoplastic components consisting of the aforementioned phenoxy resin and acrylic resin contained in the composition, as well as a tackifier, which is used as necessary. In consideration of the facts that phenoxy resin and acrylic resin, which have a molecular weight of at least 10000 and 100000 respectively, are high in terms of molecular weight and the amount of tackifier, which is used as necessary, is small, the connection reliability may be maintained at a high level."

"[0020] Working Examples 1 to 10 and Comparative Example 1

(1) Acrylic resin (omitted)"

"[0022] (2) Preparation of a composition

PKHA (phenoxy resin; molecular weight: 25000; hydroxyl group: 6%; the name of a product manufactured by Union Carbide Corporation) and Epikote YL-983U (bisphenol F-type highly-pure epoxy resin; hydrolysable chlorine ion: 110 ppm; the name of a product of Yuka Shell Epoxy Kabushiki Kaisha; the name is abbreviated as 983U) were compounded at the ratio of 50g/50g, and dissolved into a combined solvent containing toluene/butyl acetate at a 50/50 ratio by weight, and turned into a solution with 40% solid content. This solution was compounded with the aforementioned liquid acrylic resin at the solid content ratio for the combinations shown in Table 2. As a potential

hardening agent, Novacure 3742 (hardening agent in the form of microcapsules that have modified imidazole nuclei coated with polyurethane, having an average particle diameter of 2 μm ; activating temperature: 124°C; the name of a product of Asahi Chemical Industry Co., Ltd.; the product name is abbreviated as 3742) was compounded to achieve the solid content ratio of 30%. To 100 pts.wt. of the solid content of the aforementioned compound liquid, 0.5 pts.wt. of epoxy-type silane coupling agent and 2 pts.vol. of conductive particles (styrene-divinylbenzene copolymer resin sphere, having an average particle diameter of 5 μm and coated with a thin layer of metal; it is abbreviated as pla.) were added and mixed. The mixed material was applied to the surface of polytetrafluoroethylene film (separator) by using a roll coater and dried at 100°C for ten minutes. Consequently, a film shape with a 20 μm adhesive layer was obtained."

"[0024] [Table 2] (Notes in the judgment are stated in the attached Table 2.)

[0025] In Table 2, the reparability is measured by the time required to wipe out, by a cotton swab soaked in acetone, the adhesive remaining on a certain area of the ITO glass (20×2 mm) after detaching the aforementioned connection part, FPC, from the ITO. The reliability means the connection resistance value after 85°C, 85%RH-500h and was expressed as $x+3\sigma$ of the 200 resistance points between the opposing circuits of the FPC. Table 2 shows that all of the Working Examples 1 to 10 exhibited excellent reparability and reliability. On the other hand, Comparative Example 1 shows that acrylic resin is inferior in terms of reparability and reliability due to the lack of a functional group component.

[0026] Working Examples 11 to 14 and Comparative Examples 2 to 3

As is the case with Working Example 6, as shown in Table 2, the compounding ratio of acrylic resin and phenoxy resin was changed. As a part of epoxy resin, EPPN501H (triphenylglycidyl ether type epoxy resin; the name of a product of Nippon Kayaku Co., Ltd.; it is abbreviated as EPPN) was used. As a tackifier, Hitanor 2084 (alkylphenol; softening point: 70°C; the name of a product of Hitachi Chemical Co., Ltd.; it is abbreviated as 2084) was used. Furthermore, as conductive particles, nickel in the form of particles with an average particle diameter of 3 μm was used. The results are shown in Table 2. All of the Working Examples exhibited high reparability and reliability. While it had been said that a hardening material with insufficient acetone resistance would be inferior in terms of water resistance and humidity resistance, the aforementioned Working Examples have revealed that this invention has excellent water resistance and humidity resistance. On the other hand, Comparative Example 2 exhibited poor reparability due to the lack of acrylic resin. Comparative Example 3

exhibited poor reliability due to the lack of phenoxy resin."

2. Decision

(1) Whether the requirements specified in Article 29, paragraph (2) of the Patent Act are fulfilled, in other words, whether any person ordinarily skilled in the art could have easily conceived of the invention claimed in the application based on a prior art, may be determined based on whether it was easy for the inventor who had been aware of the prior art to conceive of such feature of the invention claimed in the application that is distinguishable from the prior art (the structures that constitute the difference between the invention and the prior art). Meanwhile, since the purpose of the feature of the invention claimed in the application is to solve the problem to be solved by the invention, it is indispensable to accurately grasp the feature of the invention, in other words, to accurately grasp the problem to be solved by the invention, in order to objectively determine whether any person ordinarily skilled in the art could have easily conceived of the invention. In the course of making such determination, ex post facto analysis and non-logical thinking should be avoided. For this purpose, in order to grasp the "problem" to be solved by the invention, it is necessary to prevent inadvertent inclusion of such factors as the "means to solve the problem" or the "results of having solved the problem."

Moreover, in order to determine that the invention could have been easily conceived of, it is not sufficient to be able to merely presume, based on the results of the examination of the details of the prior art, that efforts to conceive of the feature of the invention might have been made. It should be considered reasonable to necessitate the existence of the fact that suggests that efforts must have been made in order to conceive of the feature of the invention.

(2) From the aforementioned perspective, the validity of the JPO Decision is examined below.

A. In light of the statements in the Description, specifically, the statements concerning certain parts of Working Examples and the corresponding parts of Comparative Example 1, the claimed amended invention adopted the structure, i.e., the use of bisphenol F-type phenoxy resin as an essential component, because, in comparison with the use of bisphenol A-type phenoxy resin, it would contribute to achieving the goal of enhancing the connection reliability (both at the initial point in time and 500 hours later) and reparability.

On the other hand, in the cited reference mentioned in 1., (2) above, it is stated that "Phenoxy resin is compatible with epoxy resin due to the structural similarity between

the two and has good adhesiveness" (Paragraph [0007] of Exhibit Ko No. 4). It does not contain any statements indicating any particular problem related to the compatibility and adhesiveness. Since there are other factors such as heat resistance, insulation quality, stiffness, and viscosity that should be taken into consideration when preparing a resin component for a circuit-connecting member, it may not be recognized that a suggestion, etc. was offered for the use of bisphenol F-type phenoxy resin only for the purpose of further enhancing the compatibility and adhesiveness. Even if bisphenol F-type phenoxy resin was a resin already widely known as of the filing date of this application (Exhibits Otsu No. 2 and No. 3), there is no sufficient evidence to prove that it was also known that bisphenol F-type phenoxy resin can enhance the connection reliability and reparability of a circuit-connecting member.

Furthermore, bisphenol F-type phenoxy resin is inferior to bisphenol A-type phenoxy resin in terms of heat resistance. According to JOURNAL OF APPLIED POLYMER SCIENCE VOL.7, pp. 2135-2144 (1963) (Exhibit Ko No. 6), the glass-transition temperature of bisphenol F-type phenoxy resin (whose chemical structure corresponds to Polymer No. 2 presented in Table I on page 2138 of Exhibit Ko No. 6) is 80°C, while the glass-transition temperature of bisphenol A-type phenoxy resin (whose chemical structure corresponds to Polymer No. 3 presented in Table II on page 2139 of Exhibit Ko No. 6) is 100°C. This indicates that bisphenol F-type phenoxy resin is inferior in terms of heat resistance. In light of the characteristics of the aforementioned bisphenol F-type phenoxy resin, it may not be considered to be easy for any person ordinarily skilled in the art to use bisphenol F-type phenoxy resin, which is inferior in terms of heat resistance, in place of bisphenol A-type phenoxy resin (PKHA) (Paragraph [0022] of Exhibit Ko No. 4), which was considered to have no particular problems as a phenoxy resin for a circuit-connecting member which is required to have excellent heat resistance.

B. In the JPO Decision, the JPO stated that it found that it was easy to use bisphenol F-type phenoxy resin for the cited invention based on the grounds that "the cited reference (omitted) describes a working example where 'PKHA (phenoxy resin; molecular weight: 25000; hydroxyl group: 6%; the name of a product manufactured by Union Carbide Corporation)' was used" (line 28, page 5 to line 4, page 6 of the written JPO Decision). However, "PKHA" (Paragraph [0022] of Exhibit Ko No. 4) cited in the JPO Decision was stated in the Publication of Unexamined Patent Application No. 1997-279121 as "PKHA (phenoxy resin derived from bisphenol A (omitted); the name of a product manufactured by Union Carbide Corporation)" (Paragraph [0086] of Exhibit Ko No. 5-1). Moreover, the description of US Patent No. 4343841 contains the

statement that "these resins may be commercially obtained from Union Carbide Corporation as PKHA (omitted) Bakelite phenoxy resin (omitted) and may be expressed as thermoplastic high polymer, which may be derived from bisphenol A and epichlorohydrin" (lines 44 to 48, Section 4, Exhibit Ko No. 5-2, translation). Therefore, since the "PKHA" cited by the JPO Decision is not bisphenol "F-type" phenoxy resin, but rather bisphenol "A-type" phenoxy resin, the statement "PKHA" in the cited reference cannot be considered as a suggestion for using bisphenol F-type phenoxy resin.

(3) Summary

Based on a comprehensive evaluation of the aforementioned facts, it may not be said that any person ordinarily skilled in the art could have easily conceived of the idea of using bisphenol F-type phenoxy resin for the phenoxy resin claimed as the invention in the cited reference. Therefore, there is an error in the JPO Decision in finding that, under Article 29, paragraph (2) of the Patent Act, the claimed amended invention cannot be independently patented when a patent application is filed for the invention. This error may be considered to have affected the conclusion of the JPO Decision.

3. Conclusion

As described above, there are grounds for the Reason for Rescission 2 claimed by the plaintiff (error in the determination of whether any person ordinarily skilled in the art could have easily conceived of the difference). It is reasonable to conclude, without examining any other factors, that there are grounds for the plaintiff's principal claim and therefore that the claim should be accepted. This court renders a judgment in the form of the main text.

Intellectual Property High Court, Third Division

Presiding Judge IIMURA Toshiaki

Judge SAIKI Norio

Judge SHIMASUE Kazuhide

(Attachment) Table 1 (Paragraph [0030] of the Description)

No.	Bisphenol type phenoxy resin		Bisphenol type epoxy resin		Potential hardening agent		Conductive particles		Connection reliability (Ω)		Reparability (seconds)	Adhesiveness (gf/cm)
	F type (molecular weight)	A type (molecular weight)	A type	F type	1	2	Volume (vol%)	Diameter (μm)	Initially	500 hours later		Tomoegawa E
Working Example 1	50(20,000)	-	50	-	20	-	3	10	2.6	3.1	30	870
2	50(10,000)	-	〃	-	〃	-	〃	〃	3.1	3.8	33	840
3	50(40,000)	-	〃	-	〃	-	〃	〃	2.8	3.4	28	790
4	50(70,000)	-	〃	-	〃	-	〃	〃	3.4	3.8	35	790
5	20(20,000)	-	80	-	〃	-	〃	〃	1.9	2.5	40	800
6	40(20,000)	-	60	-	〃	-	〃	〃	3.5	3.8	36	770
7	60(20,000)	-	40	-	〃	-	〃	〃	2.4	2.7	31	760
8	80(20,000)	-	20	-	〃	-	〃	〃	3.1	3.4	28	730
9	25(20,000)	25(45,000)	50	-	〃	-	〃	〃	2.0	2.5	60	780
10	10(20,000)	40(45,000)	〃	-	〃	-	〃	〃	1.9	2.5	65	760
11	40(20,000)	10(45,000)	〃	-	〃	-	〃	〃	2.2	2.6	49	740
12	50(20,000)	-	-	50	〃	-	〃	〃	2.6	2.8	41	820
13	〃	-	50	-	〃	-	0.3	〃	1.8	2.3	33	760
14	〃	-	〃	-	〃	-	7	〃	3.0	3.4	29	740
15	〃	-	〃	-	〃	-	3	5	4.0	4.2	40	790
16	〃	-	〃	-	-	3	3	10	3.7	4.0	34	730
Comparative Example 1	-	50(45,000)	〃	-	20	-	3	10	5.4	8.2	90	800
2	50(20,000)	-	〃	-	〃	-	-	-	42.7	587.0	36	760

Potential hardening agent

1. Modified imidazole microcapsules (3941)

2. Aromatic sulfonium salt (SI-60)

(Attachment) Table 2 (Paragraph [0024] of the cited reference)

Table 2

No	Acrylic resin	PKHA	983U	EPPN	3742	2084	Pla	Ni	Reparability(seconds)	Reliability (Ω)
Working Example 1	B	20	25	25	30		2vol		20	10
2	C	20	25	25	30		2vol		25	12
3	D	20	25	25	30		2vol		27	9
4	E	20	25	25	30		2vol		20	7
5	F	20	25	25	30		2vol		22	7
6	G	20	25	25	30		2vol		18	7
7	H	20	25	25	30		2vol		15	9
8	I	20	25	25	30		2vol		20	8
9	J	20	25	25	30		2vol		15	7
10	K	20	25	25	30		2vol		18	6
Comparative Example 1	A	20	25	25	30		2vol		100 ≤	200
Comparative Example 2		0	45	25	30		2vol		100 ≤	15
Working Example 11	G	5	5	55	30	5		2vol	30	5
12		10	20	30	30	10		2vol	26	7
13		20	10	30	10	30		2vol	15	8
14		40	10		20	30		2vol	25	10
Comparative Example 3		45	0	25	30			2vol	15	180
Working Example 15		5	5	55	30	5			27	12
16		10	20	30	30	10			23	15
17		20	10	30	10	30			18	10
18		40	10		20	30			20	8

