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29. There has been no showing by the plaintiffs that their customer list was in any way secret or that quotes made were confidential, and the depositions of DLM salesmen who moved to Rite-Hite indicate that the identity of potential customers for dockboards was widely known in the industry. Neither has it been shown that the new salesmen's activity effected rejection of the plaintiff's offers, some of which, according to the depositions, had been made months before the salesmen joined Rite-Hite.

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CONCLUSIONS OF LAW

1. This court has jurisdiction over the parties and the subject matter of this action.

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Counsel for the defendants will prepare an order for judgment and submit it to opposing counsel for approval as to form.

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No. 8842 Decided Apr. 26, 1973

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The invention relates to an external coating for an incandescent lamp envelope (e.g. a Christmas tree lamp) which is adapted to both indoor and outdoor use and may be applied by a dip-coating process. The claims are drawn to the resultant coated glass envelope, claim 1 being representative:

1. A hollow light-transmitting lamp-bulb-shaped glass member adapted to surround a source of radiations, a coating carried on the external surface of said glass member, said coating comprising a mixture of:

(a) a polymer consisting essentially of polymethylmethacrylate having a tack point temperature of at least 170°C. and an inherent viscosity of at least 0.44;

(b) from 0.1% to 10% by weight of said polymethylmethacrylate of an organofunctional silane having organic functional groups and silicon functional groups, organic functional groups of said silane reacted with said polymethylmethacrylate and silicon functional groups of said silane reacted with the surface of said glass member to couple said polymethylmethacrylate to said glass member;

(c) from 2% to 20% by weight of said polymethylmethacrylate of an additive organic substance which is at least substantially transparent, has a boiling temperature at atmospheric pressure of at least 250°C., and is completely soluble in said polymethylmethacrylate polymer within the temperature range of from −40°C to 170°C.; and

(d) said coating having been affixed to said glass member by applying thereon a liquid organic solvent having dissolved therein said polymer, said organofunctional silane and said additive organic substance, and said coated glass member thereafter being baked.

Dependent claims 2-9 define limitations such as specific silanes in (b), organic substances in (c), or coloring substances. Independent claim 10 is drawn to the preferred embodiment, 0.3-3% of component (b) and 5-15% of component (c).

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The primary reference Pipkin discloses glass lamp bulbs externally coated with a lacquer composition which may be based on methacrylate esters. The coating is applied in a mixture of organic solvents, the solvents then being removed.

Crissey et al. disclose methylmethacrylate polymer coatings, pigmented or clear, for ceramic articles, wherein 10-50% by weight (based on the weight of the polymer) of a plasticizer is included. The correlation is set forth between plasticizer and physical properties of the coating, such as cracking, crazing, flexibility and durability. A solvent is employed in application and removed by air-drying or baking.

Boyd, though directed to size compositions for glass fibers rather than coatings for light bulbs, teaches the use of a coupling agent to promote adhesion to the glass fibers of the polymeric coating, which may consist primarily of polymethylmethacrylate. Organic silanes are described as suitable agents, with the nature of organic radical not being critical "except the greater the degree of compatibility with the resinous material, the greater the coupling power between the resinous material and the glass surface." In these particular compositions the silane coupler is present in amounts of 0.8-3.5% by weight, the polymer 1-7% and the aqueous carrier 75-98%.

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The process limitation set forth in part (d) of claims 1 and 10 was not regarded as significant with respect to patentability of the claimed article for two reasons. First the organic solvent vehicle was no longer present in the product per se and second, an affidavit purporting to demonstrate the difference between the present coating and a coating using an aqueous vehicle provided no actual comparisons thereof.

In sustaining, the board agreed that appellants had failed to show that the use of a somewhat smaller ratio of silane to methacrylate (Boyd using a minimum of 11.4%) was significant. On reconsideration, the observation was added that "[i]t is a routine matter to determine optimum proportions for a given silane." The correspondence of appellants' ingredient (c) to conventional plasticizers was noted, a fact made evident by a review of the specification. On the matter of the process limitation, the board stated:

> * * * Insofar as the coated glass is concerned, it is immaterial whether the coupling agent was carried in water or in an organic solvent, since the carrier is no longer present in the finished article. In any event, we consider it obvious to use an organic solvent, because this is the vehicle in Pipkin and in Crissey et al.

Opinion

Appellants rest their case for unobviousness on the amount of silane coupler employed in the lamp coatings and the method of application, as set forth in the process limitation. It is urged that nowhere in the prior art is it suggested to use a silane coupler in the proportions employed by appellants or to apply a coating containing such coupler in an organic solvent. The disclosures of Boyd are said to lead only to the use of much greater amounts of the silane in an aqueous vehicle.

[1] We cannot accept appellants' contentions. The function of the silane in improving adhesion of polymeric material to a glass substrate was known, as was the effect of the plasticizer on the physical properties of the coating. Under §103 not only are the teachings of the prior art taken into consideration but also the level of ordinary skill in the pertinent art. Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). In the present case, we must agree with the Patent Office that the determination of optimum amounts of the silane to achieve its recognized effect would lie within the ambit of ordinary skill in the art. The relevant affidavit of the coinventors evidences no more than routine testing to ascertain the most favorable proportions for this particular application. No critical upper limit is established. No unexpected result is demonstrated. Hence we find no basis for patentability in the amount of silane coupler.

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But we do find that the Patent Office has established a prima facie case of obviousness for the product even with full weight being given to the process limitation. The Pipkin and Crissey et al. references specifically teach the use of an organic solvent. Hence such a solvent is an obvious alternative to the aqueous carrier of Boyd, no criticality having been taught by Boyd for the combination of silane and water.

Appellants' affidavit alleging that the use of an aqueous vehicle would result in an "extremely poorly adherent and unsatisfactory" coating fails to provide the rebuttal evidence necessary to overcome this prima facie case. As pointed out by the examiner, no comparative tests are presented for evaluation. Accordingly, on the record before us, the process limitation adds no distinguishable characteristic to the claimed product.

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Crissey et al. disclose methylmethacrylate polymer coatings, pigmented or clear, for ceramic articles, wherein 10-50% by weight (based on the weight of the polymer) of a plasticizer is included. The correlation is set forth between plasticizer and physical properties of the coating, such as cracking, crazing, flexibility and durability. A solvent is employed in application and removed by air-drying or baking.

Boyd, though directed to size compositions for glass fibers rather than coatings for light bulbs, teaches the use of a coupling agent to promote adhesion to the glass fibers of the polymeric coating, which may consist primarily of polymethylmethacrylate. Organic silanes are described as suitable agents, with the nature of organic radical not being critical "except the greater the degree of compatibility with the resinous material, the greater the coupling power between the resinous material and the glass surface." In these particular compositions the silane coupler is present in amounts of 0.8-3.5% by weight, the polymer 1-7% and the aqueous carrier 75-98%.

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The process limitation set forth in part (d) of claims 1 and 10 was not regarded as significant with respect to patentability of the claimed article for two reasons. First the organic solvent vehicle was no longer present in the product per se and second, an affidavit purporting to demonstrate the difference between the present coating and a coating using an aqueous vehicle provided no actual comparisons thereof.

In sustaining, the board agreed that appellants had failed to show that the use of a somewhat smaller ratio of silane to methacrylate (Boyd using a minimum of 11.4%) was significant. On reconsideration, the observation was added that "[i]t is a routine matter to determine optimum proportions for a given silane." The correspondence of appellants' ingredient (c) to conventional plasticizers was noted, a fact made evident by a review of the specification. On the matter of the process limitation, the board stated:

> * * * Insofar as the coated glass is concerned, it is immaterial whether the coupling agent was carried in water or in an organic solvent, since the carrier is no longer present in the finished article. In any event, we consider it obvious to use an organic solvent, because this is the vehicle in Pipkin and in Crissey et al.

Opinion

Appellants rest their case for unobviousness on the amount of silane coupler employed in the lamp coatings and the method of application, as set forth in the process limitation. It is urged that nowhere in the prior art is it suggested to use a silane coupler in the proportions employed by appellants or to apply a coating containing such coupler in an organic solvent. The disclosures of Boyd are said to lead only to the use of much greater amounts of the silane in an aqueous vehicle.

[1] We cannot accept appellants' contentions. The function of the silane in improving adhesion of polymeric material to a glass substrate was known, as was the effect of the plasticizer on the physical properties of the coating. Under §103 not only are the teachings of the prior art taken into consideration but also the level of ordinary skill in the pertinent art. Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). In the present case, we must agree with the Patent Office that the determination of optimum amounts of the silane to achieve its recognized effect would lie within the ambit of ordinary skill in the art. The relevant affidavit of the coinventors evidences no more than routine testing to ascertain the most favorable proportions for this particular application. No critical upper limit is established. No unexpected result is demonstrated. Hence we find no basis for patentability in the amount of silane coupler.

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But we do find that the Patent Office has established a prima facie case of obviousness for the product even with full weight being given to the process limitation. The Pipkin and Crissey et al. references specifically teach the use of an organic solvent. Hence such a solvent is an obvious alternative to the aqueous carrier of Boyd, no criticality having been taught by Boyd for the combination of silane and water.

Appellants' affidavit alleging that the use of an aqueous vehicle would result in an "extremely poorly adherent and unsatisfactory" coating fails to provide the rebuttal evidence necessary to overcome this prima facie case. As pointed out by the examiner, no comparative tests are presented for evaluation. Accordingly, on the record before us, the process limitation adds no distinguishable characteristic to the claimed product.

The decision of the board is *affirmed.*

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26. The plaintiffs' claim against Rite-Hite for unfair competition and violation of the anti-trust laws is based on Rite-Hite's hiring on November 3, 1968 of four of DLM's salesmen, including its general manager, who resigned their positions with DLM on November 5, 1968 and opened a sales office for Rite-Hite in DLM's vicinity the next day.[8] It is undisputed that Rite-Hite's contact with the DLM sales people was initiated by those sales people, who were dissatisfied with their treatment by the plaintiffs, and was not sought by Rite-Hite. The most Rite-Hite did was hire those men at a higher salary than DLM paid them.

27. The DLM sales people who moved to Rite-Hite made some sales to firms which had previously purchased from Akers or DLM, some of which had received quotes from DLM previously.

28. Rite-Hite also contacted two of plaintiffs' representatives with regard to handling its line rather than DLM's. In 1970, one of those representatives took on Rite-Hite's line in addition to the plaintiffs' but, as of the time of taking of his deposition had had no success with it.

29. There has been no showing by the plaintiffs that their customer list was in any way secret or that quotes made were confidential, and the depositions of DLM salesmen who moved to Rite-Hite indicate that the identity of potential customers for dockboards was widely known in the industry. Neither has it been shown that the new salesmen's activity effected rejection of the plaintiff's offers, some of which, according to the depositions, had been made months before the salesmen joined Rite-Hite.

30. The evidence presented by the plaintiffs does not establish that the Rite-Hite salesmen hired from DLM misrepresented their status or DLM's product, or that Rite-Hite encouraged them so to do. The plaintiffs do not contend that their lost salesmen were under any obligation to refrain from contacting potential customers who had been customers or potential customers of DLM.

[8] As stated on Page 30 of their post-trial brief, the plaintiffs do not contend that Rite-Hite's June, 1968 contract with American Welding, referred to in Finding No. 2, alone substantiates a finding of anti-trust law violations, but state that "when coupled with subsequent actions of Rite-Hite, it is submitted that the acquisition of Subsidiary should be considered."

Conclusions of Law

1. This court has jurisdiction over the parties and the subject matter of this action.

2. Claim 5 of U. S. Patent No. 3,329,984 is not invalid under § 102, Title 35 U.S.C.

3. The subject matter of Claim 5 of U. S. Patent No. 3,329,984 is obvious in the light of the Unarco patent and the Kelley step down board and that claim is therefore invalid and unenforceable under § 103, Title 35, U.S.C.

4. If Claim 5 of U. S. Patent No. 3,329,984 is valid, the defendants' Kwik-Bridge and modifications thereof infringe that claim.

5. The defendants have not satisfied their burden of proving that the plaintiffs have been guilty of unclean hands or fraud before the Patent Office and have failed to prove any anti-trust violation by reason of the attempted enforcement of Claim 5 of the patent in suit.

6. The plaintiffs have not satisfied their burden of proving any unfair competition on the part of Rite-Hite.

7. The plaintiffs have not satisfied their burden of proving that the defendant, Rite-Hite, attempted to monopolize trade and commerce in dockboards in violation of the Sherman Act.

Counsel for the defendants will prepare an order for judgment and submit it to opposing counsel for approval as to form.

Court of Customs and Patent Appeals

In re Luck and Gainer

No. 8842 Decided Apr. 26, 1973

PATENTS

1. Patentability — Invention — In general (§51.501)

Under 35 U.S.C. 103 not only are teachings of prior art taken into consideration but also the level of ordinary skill in pertinent art.

2. Claims — Article defined by process of manufacture (§20.15)

Product claims may include process steps to wholly or partially define claimed prod-

uct; to extent these process limitations distinguish product over prior art, they must be given same consideration as traditional product characteristics.

Particular patents—Lamp Coating

Luck and Gainer, Lamp Coating, claims 1 to 10 of application refused.

Appeal from Board of Appeals of the Patent Office.

Application for patent of Russell M. Luck and Gordon C. Gainer, Serial No. 772,439, filed Oct. 25, 1968; Patent Office Group 160. From decision rejecting claims 1 to 10, applicants appeal. Affirmed.

W. D. PALMER (BLAIR R. STUDEBAKER of counsel) both of Pittsburgh, Pa., for appellants.

S. WM. COCHRAN (FRED E. MCKELVEY of counsel) for Commissioner of Patents.

Before MARKEY, Chief Judge, RICH, BALDWIN, and LANE, Associate Judges, and ALMOND, Senior Judge.

MARKEY, Chief Judge.

This appeal is from the decision of the Board of Appeals, adhered to on reconsideration, affirming the rejection of all the claims of appellants' application, serial No. 772,439, filed October 25, 1968, for "Lamp Coating," as unpatentable under 35 U.S.C. 103 over Pipkin [1] in view of Crissey et al.[2] and Boyd.[3] We affirm.

The Invention

The invention relates to an external coating for an incandescent lamp envelope (e.g. a Christmas tree lamp) which is adapted to both indoor and outdoor use and may be applied by a dip-coating process. The claims are drawn to the resultant coated glass envelope, claim 1 being representative:

1. A hollow light-transmitting lamp-bulb-shaped glass member adapted to surround a source of radiations, a coating carried on the external surface of said glass member, said coating comprising a mixture of:

(a) a polymer consisting essentially of polymethylmethacrylate having a tack point temperature of at least 170°C. and an inherent viscosity of at least 0.44;

(b) from 0.1% to 10% by weight of said polymethylmethacrylate of an organofunctional silane having organic functional groups and silicon functional groups, organic functional groups of said silane reacted with said polymethylmethacrylate and silicon functional groups of said silane reacted with the surface of said glass member to couple said polymethylmethacrylate to said glass member;

(c) from 2% to 20% by weight of said polymethylmethacrylate of an additive organic substance which is at least substantially transparent, has a boiling temperature at atmospheric pressure of at least 250°C., and is completely soluble in said polymethylmethacrylate polymer within the temperature range of from −40°C to 170°C.; and

(d) said coating having been affixed to said glass member by applying thereon a liquid organic solvent having dissolved therein said polymer, said organofunctional silane and said additive organic substance, and said coated glass member thereafter being baked.

Dependent claims 2-9 define limitations such as specific silanes in (b), organic substances in (c), or coloring substances. Independent claim 10 is drawn to the preferred embodiment, 0.3-3% of component (b) and 5-15% of component (c).

The Prior Art

The primary reference Pipkin discloses glass lamp bulbs externally coated with a lacquer composition which may be based on methacrylate esters. The coating is applied in a mixture of organic solvents, the solvents then being removed.

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Boyd, though directed to size compositions for glass fibers rather than coatings for light bulbs, teaches the use of a coupling agent to promote adhesion to the glass fibers of the polymeric coating, which may consist primarily of polymethylmethacrylate. Organic silanes are described as suitable agents, with the nature of organic radical not being critical "except the greater the degree of compatibility with the resinous material, the greater the coupling power between the resinous material and the glass surface." In these particular compositions the silane coupler is present in amounts of 0.8-3.5% by weight, the polymer 1-7% and the aqueous carrier 75-98%.

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Opinion

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[8] As stated on Page 30 of their post-trial brief, the plaintiffs do not contend that Rite-Hite's June, 1968 contract with American Welding, referred to in Finding No. 2, alone substantiates a finding of anti-trust law violations, but state that "when coupled with subsequent actions of Rite-Hite, it is submitted that the acquisition of Subsidiary should be considered."

CONCLUSIONS OF LAW

1. This court has jurisdiction over the parties and the subject matter of this action.

2. Claim 5 of U. S. Patent No. 3,329,984 is not invalid under § 102, Title 35 U.S.C.

3. The subject matter of Claim 5 of U. S. Patent No. 3,329,984 is obvious in the light of the Unarco patent and the Kelley step down board and that claim is therefore invalid and unenforceable under § 103, Title 35, U.S.C.

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Court of Customs and Patent Appeals

In re LUCK AND GAINER

No. 8842 Decided Apr. 26, 1973

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[8] As stated on Page 30 of their post-trial brief, the plaintiffs do not contend that Rite-Hite's June, 1968 contract with American Welding, referred to in Finding No. 2, alone substantiates a finding of anti-trust law violations, but state that "when coupled with subsequent actions of Rite-Hite, it is submitted that the acquisition of Subsidiary should be considered."

Conclusions of Law

1. This court has jurisdiction over the parties and the subject matter of this action.

2. Claim 5 of U. S. Patent No. 3,329,984 is not invalid under § 102, Title 35 U.S.C.

3. The subject matter of Claim 5 of U. S. Patent No. 3,329,984 is obvious in the light of the Unarco patent and the Kelley step down board and that claim is therefore invalid and unenforceable under § 103, Title 35, U.S.C.

4. If Claim 5 of U. S. Patent No. 3,329,984 is valid, the defendants' Kwik-Bridge and modifications thereof infringe that claim.

5. The defendants have not satisfied their burden of proving that the plaintiffs have been guilty of unclean hands or fraud before the Patent Office and have failed to prove any anti-trust violation by reason of the attempted enforcement of Claim 5 of the patent in suit.

6. The plaintiffs have not satisfied their burden of proving any unfair competition on the part of Rite-Hite.

7. The plaintiffs have not satisfied their burden of proving that the defendant, Rite-Hite, attempted to monopolize trade and commerce in dockboards in violation of the Sherman Act.

Counsel for the defendants will prepare an order for judgment and submit it to opposing counsel for approval as to form.

Court of Customs and Patent Appeals

In re Luck and Gainer

No. 8842 Decided Apr. 26, 1973

PATENTS

1. Patentability — Invention — In general (§51.501)

Under 35 U.S.C. 103 not only are teachings of prior art taken into consideration but also the level of ordinary skill in pertinent art.

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Luck and Gainer, Lamp Coating, claims 1 to 10 of application refused.

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W. D. PALMER (BLAIR R. STUDEBAKER of counsel) both of Pittsburgh, Pa., for appellants.

S. WM. COCHRAN (FRED E. MCKELVEY of counsel) for Commissioner of Patents.

Before MARKEY, Chief Judge, RICH, BALDWIN, and LANE, Associate Judges, and ALMOND, Senior Judge.

MARKEY, Chief Judge.

This appeal is from the decision of the Board of Appeals, adhered to on reconsideration, affirming the rejection of all the claims of appellants' application, serial No. 772,439, filed October 25, 1968, for "Lamp Coating," as unpatentable under 35 U.S.C. 103 over Pipkin [1] in view of Crissey et al.[2] and Boyd.[3] We affirm.

The Invention

The invention relates to an external coating for an incandescent lamp envelope (e.g. a Christmas tree lamp) which is adapted to both indoor and outdoor use and may be applied by a dip-coating process. The claims are drawn to the resultant coated glass envelope, claim 1 being representative:

> 1. A hollow light-transmitting lamp-bulb-shaped glass member adapted to surround a source of radiations, a coating carried on the external surface of said glass member, said coating comprising a mixture of:
>
> (a) a polymer consisting essentially of polymethylmethacrylate having a tack point temperature of at least 170°C. and an inherent viscosity of at least 0.44;
>
> (b) from 0.1% to 10% by weight of said polymethylmethacrylate of an organofunctional silane having organic functional groups and silicon functional groups, organic functional groups of said silane reacted with said polymethylmethacrylate and silicon functional groups of said silane reacted with the surface of said glass member to couple said polymethylmethacrylate to said glass member;
>
> (c) from 2% to 20% by weight of said polymethylmethacrylate of an additive organic substance which is at least substantially transparent, has a boiling temperature at atmospheric pressure of at least 250°C., and is completely soluble in said polymethylmethacrylate polymer within the temperature range of from −4C°C to 170°C.; and
>
> (d) said coating having been affixed to said glass member by applying thereon a liquid organic solvent having dissolved therein said polymer, said organofunctional silane and said additive organic substance, and said coated glass member thereafter being baked.

Dependent claims 2-9 define limitations such as specific silanes in (b), organic substances in (c), or coloring substances. Independent claim 10 is drawn to the preferred embodiment, 0.3-3% of component (b) and 5-15% of component (c).

The Prior Art

The primary reference Pipkin discloses glass lamp bulbs externally coated with a lacquer composition which may be based on methacrylate esters. The coating is applied in a mixture of organic solvents, the solvents then being removed.

Crissey et al. disclose methylmethacrylate polymer coatings, pigmented or clear, for ceramic articles, wherein 10-50% by weight (based on the weight of the polymer) of a plasticizer is included. The correlation is set forth between plasticizer and physical properties of the coating, such as cracking, crazing, flexibility and durability. A solvent is employed in application and removed by air-drying or baking.

Boyd, though directed to size compositions for glass fibers rather than coatings for light bulbs, teaches the use of a coupling agent to promote adhesion to the glass fibers of the polymeric coating, which may consist primarily of polymethylmethacrylate. Organic silanes are described as suitable agents, with the nature of organic radical not being critical "except the greater the degree of compatibility with the resinous material, the greater the coupling power between the resinous material and the glass surface." In these particular compositions the silane coupler is present in amounts of 0.8-3.5% by weight, the polymer 1-7% and the aqueous carrier 75-98%.

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The process limitation set forth in part (d) of claims 1 and 10 was not regarded as significant with respect to patentability of the claimed article for two reasons. First the organic solvent vehicle was no longer present in the product per se and second, an affidavit purporting to demonstrate the difference between the present coating and a coating using an aqueous vehicle provided no actual comparisons thereof.

In sustaining, the board agreed that appellants had failed to show that the use of a somewhat smaller ratio of silane to methacrylate (Boyd using a minimum of 11.4%) was significant. On reconsideration, the observation was added that "[i]t is a routine matter to determine optimum proportions for a given silane." The correspondence of appellants' ingredient (c) to conventional plasticizers was noted, a fact made evident by a review of the specification. On the matter of the process limitation, the board stated:

> * * * Insofar as the coated glass is concerned, it is immaterial whether the coupling agent was carried in water or in an organic solvent, since the carrier is no longer present in the finished article. In any event, we consider it obvious to use an organic solvent, because this is the vehicle in Pipkin and in Crissey et al.

Opinion

Appellants rest their case for unobviousness on the amount of silane coupler employed in the lamp coatings and the method of application, as set forth in the process limitation. It is urged that nowhere in the prior art is it suggested to use a silane coupler in the proportions employed by appellants or to apply a coating containing such coupler in an organic solvent. The disclosures of Boyd are said to lead only to the use of much greater amounts of the silane in an aqueous vehicle.

[1] We cannot accept appellants' contentions. The function of the silane in improving adhesion of polymeric material to a glass substrate was known, as was the effect of the plasticizer on the physical properties of the coating. Under §103 not only are the teachings of the prior art taken into consideration but also the level of ordinary skill in the pertinent art. Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). In the present case, we must agree with the Patent Office that the determination of optimum amounts of the silane to achieve its recognized effect would lie within the ambit of ordinary skill in the art. The relevant affidavit of the coinventors evidences no more than routine testing to ascertain the most favorable proportions for this particular application. No critical upper limit is established. No unexpected result is demonstrated. Hence we find no basis for patentability in the amount of silane coupler.

[2] As for the method of application, it is well established that product claims may include process steps to wholly or partially define the claimed product. See In re Brown, 59 CCPA ____, 459 F.2d 531, 535, 173 USPQ 685, 688 (1972), and the cases cited therein. To the extent these process limitations distinguish the *product* over the prior art, they must be given the same consideration as traditional product characteristics. In the present case, we cannot agree with the Patent Office that the absence of the carrier in the final product renders the carrier immaterial. The method of application could well result in a difference in the coated article, regardless of the fate of the solvent.

But we do find that the Patent Office has established a prima facie case of obviousness for the product even with full weight being given to the process limitation. The Pipkin and Crissey et al. references specifically teach the use of an organic solvent. Hence such a solvent is an obvious alternative to the aqueous carrier of Boyd, no criticality having been taught by Boyd for the combination of silane and water.

Appellants' affidavit alleging that the use of an aqueous vehicle would result in an "extremely poorly adherent and unsatisfactory" coating fails to provide the rebuttal evidence necessary to overcome this prima facie case. As pointed out by the examiner, no comparative tests are presented for evaluation. Accordingly, on the record before us, the process limitation adds no distinguishable characteristic to the claimed product.

The decision of the board is *affirmed.*

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26. The plaintiffs' claim against Rite-Hite for unfair competition and violation of the anti-trust laws is based on Rite-Hite's hiring on November 3, 1968 of four of DLM's salesmen, including its general manager, who resigned their positions with DLM on November 5, 1968 and opened a sales office for Rite-Hite in DLM's vicinity the next day.[8] It is undisputed that Rite-Hite's contact with the DLM sales people was initiated by those sales people, who were dissatisfied with their treatment by the plaintiffs, and was not sought by Rite-Hite. The most Rite-Hite did was hire those men at a higher salary than DLM paid them.

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30. The evidence presented by the plaintiffs does not establish that the Rite-Hite salesmen hired from DLM misrepresented their status or DLM's product, or that Rite-Hite encouraged them so to do. The plaintiffs do not contend that their lost salesmen were under any obligation to refrain from contacting potential customers who had been customers or potential customers of DLM.

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CONCLUSIONS OF LAW

1. This court has jurisdiction over the parties and the subject matter of this action.

2. Claim 5 of U. S. Patent No. 3,329,984 is not invalid under § 102, Title 35 U.S.C.

3. The subject matter of Claim 5 of U. S. Patent No. 3,329,984 is obvious in the light of the Unarco patent and the Kelley step down board and that claim is therefore invalid and unenforceable under § 103, Title 35, U.S.C.

4. If Claim 5 of U. S. Patent No. 3,329,984 is valid, the defendants' Kwik-Bridge and modifications thereof infringe that claim.

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Counsel for the defendants will prepare an order for judgment and submit it to opposing counsel for approval as to form.

Court of Customs and Patent Appeals

In re LUCK AND GAINER

No. 8842 Decided Apr. 26, 1973

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The Rejection

The examiner considered it obvious to modify the basic coating of Pipkin by including the silane coupler of Boyd to improve adhesion and the plasticizer of Crissey et al. to improve the physical characteristics of the coating. An affidavit submitted in an attempt to establish criticality for the upper limit of 10% for the silane in the present coating was found to be unpersuasive. Moreover, determination of optimum amounts of silane for a particular coating was considered within the realm of routine experimentation for one of ordinary skill in the art.

The process limitation set forth in part (d) of claims 1 and 10 was not regarded as significant with respect to patentability of the claimed article for two reasons. First the organic solvent vehicle was no longer present in the product per se and second, an affidavit purporting to demonstrate the difference between the present coating and a coating using an aqueous vehicle provided no actual comparisons thereof.

In sustaining, the board agreed that appellants had failed to show that the use of a somewhat smaller ratio of silane to methacrylate (Boyd using a minimum of 11.4%) was significant. On reconsideration, the observation was added that "[i]t is a routine matter to determine optimum proportions for a given silane." The correspondence of appellants' ingredient (c) to conventional plasticizers was noted, a fact made evident by a review of the specification. On the matter of the process limitation, the board stated:

> * * * Insofar as the coated glass is concerned, it is immaterial whether the coupling agent was carried in water or in an organic solvent, since the carrier is no longer present in the finished article. In any event, we consider it obvious to use an organic solvent, because this is the vehicle in Pipkin and in Crissey et al.

Opinion

Appellants rest their case for unobviousness on the amount of silane coupler employed in the lamp coatings and the method of application, as set forth in the process limitation. It is urged that nowhere in the prior art is it suggested to use a silane coupler in the proportions employed by appellants or to apply a coating containing such coupler in an organic solvent. The disclosures of Boyd are said to lead only to the use of much greater amounts of the silane in an aqueous vehicle.

[1] We cannot accept appellants' contentions. The function of the silane in improving adhesion of polymeric material to a glass substrate was known, as was the effect of the plasticizer on the physical properties of the coating. Under §103 not only are the teachings of the prior art taken into consideration but also the level of ordinary skill in the pertinent art. Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). In the present case, we must agree with the Patent Office that the determination of optimum amounts of the silane to achieve its recognized effect would lie within the ambit of ordinary skill in the art. The relevant affidavit of the coinventors evidences no more than routine testing to ascertain the most favorable proportions for this particular application. No critical upper limit is established. No unexpected result is demonstrated. Hence we find no basis for patentability in the amount of silane coupler.

[2] As for the method of application, it is well established that product claims may include process steps to wholly or partially define the claimed product. See In re Brown, 59 CCPA ____, 459 F.2d 531, 535, 173 USPQ 685, 688 (1972), and the cases cited therein. To the extent these process limitations distinguish the *product* over the prior art, they must be given the same consideration as traditional product characteristics. In the present case, we cannot agree with the Patent Office that the absence of the carrier in the final product renders the carrier immaterial. The method of application could well result in a difference in the coated article, regardless of the fate of the solvent.

But we do find that the Patent Office has established a prima facie case of obviousness for the product even with full weight being given to the process limitation. The Pipkin and Crissey et al. references specifically teach the use of an organic solvent. Hence such a solvent is an obvious alternative to the aqueous carrier of Boyd, no criticality having been taught by Boyd for the combination of silane and water.

Appellants' affidavit alleging that the use of an aqueous vehicle would result in an "extremely poorly adherent and unsatisfactory" coating fails to provide the rebuttal evidence necessary to overcome this prima facie case. As pointed out by the examiner, no comparative tests are presented for evaluation. Accordingly, on the record before us, the process limitation adds no distinguishable characteristic to the claimed product.

The decision of the board is *affirmed.*