

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte STEPHEN CHRISTENSEN AND  
JONATHAN H. GOSSE

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Appeal No. 2000-1646  
Application 08/467,425

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ON BRIEF

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Before KIMLIN, DELMENDO, and MOORE Administrative Patent Judges.

MOORE, Administrative Patent Judge.

**DECISION ON APPEAL**

This is an appeal under 35 U.S.C. § 134 from the final rejection of claims 1 - 8, 10 - 13, 15, 19, and 20. Claims 9, 14, 16, 17, and 18 have been canceled.

### REPRESENTATIVE CLAIM

Claim 1, which is illustrative of the subject matter on appeal, reads as follows:

1. A method for improving the integrity of a thermoplastic weld along a bondline joining fiber-reinforced resin composites along faying surfaces defining the bondline, the weld including resin surrounding a metal susceptor for heating the weld, the resin on either side of the susceptor being reinforced with fiber extending across the bondline, independent from fiber in the composites, the composites having reinforcing fiber at a fiber volume fraction in a resin, the resin in each composite and in the weld being substantially the same material, the welding method comprising the step of:

incorporating in the thermoplastic weld at least one layer of fiber reinforcement along the bondline on each side of the susceptor in the resin surrounding the susceptor, the reinforcement being in sufficient amount to alleviate residual tensile strain in the resin of the thermoplastic weld, being independent from fiber in the composites, and extending substantially the width of the bondline and the susceptor.

### THE REFERENCES

In rejecting the appealed claims, the Examiner relies on the following references:

Christensen et al (Christensen)	5,717,191	Feb. 10, 1998 (filed Jun. 06, 1995)
Murray et al. (Murray)	5,338,497	Aug. 16, 1994 (filed April 3, 1992)
Nakamura et al. (Nakamura) (Japanese Patent Application) <sup>1</sup> .	JP 3-248832	Jun. 11, 1991

### THE REJECTIONS

Claims 1-8, 10-13, 15, and 19-20 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 5, 717,191.

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<sup>1</sup> All citations herein are to the translation of record.

Claims 10-11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nakamura in view of Murray.

## DISCUSSION

### The Invention

The Appellants' invention relates generally to a method and product that uses a structural susceptor to include fiber reinforcement within the weld resin in a thermoplastic weld-joining composite. The reinforcement is said to alleviate residual tensile strain and suppress cracking present in an otherwise unreinforced weld. The Appellants state that the susceptor is the claimed subject matter of U.S. Patent 5,717,191. (Appeal Brief, page 2, lines 16-20).

### Procedural Issues

Initially, we note that the Appellants have stated in the Main Brief (page 6, lines 14-16) that the claims stand separately. As the Appellants have argued only the rejection of claims 10 and 11 separately, we will consider that rejection separately. See 37 CFR § 1.192 (c)(7)(1997).

### The Double Patenting Rejection

Claims 1-8, 10-13, 15, and 19-20 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of Christensen. The Examiner has concluded that although the claims are not identical, they are not patentably distinct from each other. The Examiner bases this upon his finding that both sets of claims teach a structural susceptor comprising a susceptor encased in a thermoplastic resin wherein the susceptor may comprise a metal material, and wherein the thermoplastic resin may be reinforced with fibers and wherein the

structural susceptor is used to bond two fiber reinforced resin composites together.

(Examiner's Answer, page 3, lines 10-14).

The Appellants argue that (1) the current PTO rules for restriction are arbitrary and the public is hurt by the vagueness and interaction of the restriction practice and obviousness-type double patenting rejections; (2) the claims of the present application are independent and distinct from the structural susceptor product claims of Christensen and the PTO would have required restriction; and (3) a double patenting rejection is improper because no patent term extension can occur because a patent issuing from this application will expire on the same day, and the law in general has a general contempt for restraints on alienation which the PTO should reconsider. (Appeal Brief, page 10, line 3 - page 11, line 22).

The Appellants do not, however, dispute that the claims are not patentably distinct over Christensen.

An obviousness-type double patenting rejection is a question of law. In re Goodman, 11 F. 3d 1046, 1052, 29 USPQ2d 2010, 2015 (Fed. Cir. 1993), Texas Instruments Inc. v. International Trade Commission, 988 F.2d 1165, 1179, 26 USPQ2d 1018, 1029 (Fed. Cir. 1993).

An obviousness-type double patenting rejection is properly used to reject claims to subject matter in a pending application which are different but not patentably distinct from the subject matter claimed in a prior patent. Goodman, 11 F. 3d at 1052, 29 USPQ at 2015, In re Braat, 937 F. 2d 589, 592, 19 USPQ2d 1289, 1291-1292 (Fed. Cir. 1991). The Appellants' brief misses the point of an obviousness-type double patenting rejection, which is, from the patent term standpoint, as follows:

The public should ... be able to act on the assumption that upon the *expiration* of the patent it will be free to use not only the invention claimed in the patent but also the modifications or variants which would have been obvious to those of ordinary skill in the art at the time the invention was made, taking into account the skill of the art and prior art other than the invention claimed in the issued patent (Emphasis in Original).

In re Longi, 759 F.2d 887, 892-893, 225 USPQ 645, 648 (Fed. Cir. 1985), citing In re Zickendraht, 319 F.2d 225, 232, 138 USPQ 23, 27 (CCPA 1963) (Rich, J. concurring).

We decline the Appellants' inherent invitation to substitute a restriction requirement standard for this rationale. Claims may be independent and distinct and yet remain not patentably distinct. The proper analysis is an obviousness analysis, which the Examiner has put forth and which remains unrebutted. Our independent review of Claim 1 of Christensen shows the susceptor for alleviating tension in a thermoplastic weld, the susceptor encased in a thermoplastic resin, with fiber reinforcement along the top and bottom of the susceptor sandwiching the suceptor. (Christensen, column 13, lines 44-62). We, therefore, agree that this renders the instantly rejected claims suitably rejected under an obviousness-type double-patenting rejection.

The Appellants' additional argument that the issued patent and the pending application will expire simultaneously is without merit. Patent terms may be adjusted for various reasons, e.g. pursuant to 35 U.S.C. § 154 (b). Further, the Examiner has correctly noted that an additional consideration is avoidance of the potential for harassment of an accused infringer by multiple parties with patents covering the same patentable invention. (Examiner's Answer, page 6, lines 9-15). We agree with the Examiner. See also In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982).

We therefore affirm the obviousness-type double-patenting rejection.

The Rejection of Claims 10-11 Over Nakamura in View of Murray

Claims 10-11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nakamura in view of Murray. The Examiner has found that Nakamura discloses a method of bonding thermoplastic materials comprising the steps of providing a first and second polymeric material wherein the polymeric material comprises a fiber reinforced thermoplastic material; interposing a susceptor which comprises an inductively heatable material embedded in a thermoplastic material between the two materials and effecting bonding by heating the susceptor. The Examiner has additionally found that Nakamura discloses that the thermoplastic material which makes up the susceptor may be the same as the thermoplastic material in the fiber reinforced materials, and that the fibers in the susceptor may be the same as the fibers in the fiber reinforced polymeric material. Finally, the Examiner has found that Nakamura discloses the product made by the process. (Examiner's Answer, page 3, line 15 - page 4, line 4).

The Examiner has also found that Murray teaches that incorporating a fibrous reinforcement of a non-induction heatable fiber improves the strength of a finished article and that inductively heatable and non-inductively heatable materials may be interwoven. Finally, the Examiner has found that Murray discloses fiberglass is a suitable non-inductively heatable material. (Examiner's Answer, page 4, lines 7-12).

The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated a fibrous reinforcement into the weld of Nakamura, because Murray teaches this improves the strength of the finished product. (Examiner's Answer, page 4, lines 11-16).

The Appellants, on the other hand, state that there is no logical connection between Nakamura or Murray which would cause a skilled worker to combine the references in the manner which has been done by the Examiner, and that even were there incentive, there is insufficient teaching in the combination of the claimed process (Appeal Brief, page 8, lines 7-11).

Our review of the Nakamura reference indicates it discloses a susceptor which is an impregnated reinforcing fiber of the same type as that in the material to be joined in a resin of the same type as the material to be joined. (See, e.g. page 4, lines 12 - 18). Nakamura further indicates that these fibers may be arranged to result in a joint which has similar structure and material properties as the other parts of the joining members. (Page 5, lines 18-25). Murray does disclose that the induction heatable material may be concentrated in selected portions or zones of the composite article (Murray, column 5, lines 45 - 46) and that induction heatable fibers may be interwoven with non-induction heatable fibers. (Murray, column 5, lines 50-52).

The Appellants make several arguments regarding the purported differences between the “present invention” and the references (See, e.g. Appeal brief, page 8, lines 25 et seq.). Most of those arguments are irrelevant<sup>2</sup>, as the Appellants have ignored the broad scope of claims 10 and 11 and cite at least in part to elements which are not present in the claimed subject matter.

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<sup>2</sup> The Appellants make arguments relating to a susceptor (Appeal Brief, page 8, last 2 lines); there is no requirement of a susceptor in claims 10 or 11. Similarly, the Appellants make arguments relating to plies of fiber between the susceptor and the composites of the weld. (Appeal Brief, page 9, lines 3-5). Likewise, this structure is not claimed in claims 10 or 11.

Since claim interpretation normally controls the remainder of the decisional process, our analysis will begin with the key legal question – what is the invention claimed? Cf. Panduit Corp. V. Dennison Manufacturing Co., 810 F.2d 1561, 1567-68, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987).

Claim 10 recites a method for improving a thermoplastic weld between prefabricated fiber-reinforced structures by alleviating residual strain by adding woven fiberglass fiber reinforcement to the weld, the fiberglass extending substantially the width of the weld and being independent from the fiber in the composites. Claim 11 is a product formed by the process of claim 10.

We will sustain this rejection as we find that Nakamura and Murray rendered these claims to have been obvious to one of ordinary skill in the art at the time the invention was made. We agree with the Examiner's observations in this regard and add the following for emphasis.

The Appellants' attention is directed to Figures 1 and 2, and the associated description on page 6 of Nakamura. Pre-fabricated fiber reinforcing structures 10, 11 are joined by a weld suitable for use in aerospace structural materials (page 5, line 30). Between the joint and extending thereacross is an induction heat generating body 1 containing reinforcing fibers (2), which can be a woven fabric (page 5, line 11). The fiber and resin selected for use in the heat generating body are to be the same as those selected for the structures to be joined to result in a similar structure for similar properties (page 4, lines 10-20). Murray in a like manner teaches the interwoven nature of the fibers (column 5, lines 50-52), and discloses glass is a well-known reinforcing fiber for commercial composite articles (column 4, lines 35-41). We therefore agree

with the Examiner's conclusion, and find that the selection of glass as the reinforcing fiber of Nakamura would have been prima facie obvious.

Accordingly, we affirm the rejection of claims 10 and 11 under 35 U.S.C. §103(a) over Nakamura in view of Murray.

Summary of Decision

The rejection of claims 1-8, 10-13, 15, and 19-20 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 5, 717,191 is sustained

The rejection of claims 10-11 under 35 U.S.C. §103(a) as being unpatentable over Nakamura in view of Murray is sustained.

Time Period for Response

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

**AFFIRMED**

EDWARD C. KIMLIN  
Administrative Patent Judge

ROMULO H. DELMENDO  
Administrative Patent Judge

JAMES T. MOORE  
Administrative Patent Judge

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