

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 11

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte SHAWN D. PANNELL

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Appeal No. 2001-0096  
Application 09/301,891

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ON BRIEF

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Before WILLIAM F. SMITH, GARRIS 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 13 through 17, all the claims pending in this application.

REPRESENTATIVE CLAIM

Claim 13, which is illustrative of the subject matter on appeal, reads as follows:

13. A bonded composite structure having a joint reinforced with Z-direction reinforcement, comprising:
- (a) at least two fiber-reinforced resin composite elements arranged to define a bondline along an interface between the elements, each element being a laminate having a plurality of plies, each ply having fiber reinforcement defining an X-Y plane;
  - (b) a composite strip having cured resin and having X-Y fiber reinforcement, the strip being positioned along the bondline between the elements, the X-Y fiber reinforcement in the strip being confined to the bondline;
  - (c) Z-direction reinforcement extending at least from the strip into one element to reinforce a joint between the strip and that element, the Z-direction reinforcement having an areal density in the range from 0.5 – 2.0% in the bondline;
  - (d) bonds containing resin between the strip and each element along the bondline to define the joint.

THE REFERENCES

In rejecting the appealed claims under obviousness-type double patenting, the Examiner relies on the following references:

Alston et al. (Alston)	5,868,886	Feb. 9, 1999 (filed Dec. 22, 1995)
Pannell (Pannell)	5,935,698	Aug. 10, 1999 (filed Mar. 7, 1997)

### THE ISSUE

The issue presented for review is whether the examiner erred in rejecting claims 13 through 17 as unpatentable over Pannell in view of Alston.

### DELIBERATIONS

Our deliberations in this matter have included evaluation and review of the following materials:

- (1) the instant specification, including all of the claims on appeal;
- (2) Appellant's main Brief (Paper No. 7) and the Reply Brief (Paper No. 9);
- (3) the Examiner's Answer (Paper No. 8);
- (4) the above-cited prior art references; and
- (5) the application's prosecution history.

On consideration of the entire record, including the above-listed materials, we affirm the Examiner's rejection of obviousness-type double patenting.

### DISCUSSION

#### Procedural Issues

Initially, we note that the Appellant has stated in the Main Brief (page 4, lines 8-9) that the claims stand separately. The Examiner has observed in the Examiner's Answer (page 2, lines 13-15) that the Appellant's Main Brief does not include the reasons in support of that statement as required by 37 C.F.R. § 1.192 (c)(7). In its Reply Brief (page 4, lines 8-10) the Appellant again emphatically asserts that separate arguments were included in the Main Brief.

After close scrutiny of both the Main Brief and Reply Brief, we are unable to find the separate arguments for each claim to which Appellant refers. Therefore, we note that the claims stand or fall together.

#### The Invention

Appellant's invention relates to improving the strength of composite structures of laminate materials by using precured Z-pinned strips for cocured, bonded, or welded composite structures. The pending claims are directed to a bonded composite structure.

#### The Rejection

The Examiner has finally rejected claims 13 through 17 as unpatentable over claims 1-9 of Pannell in view of Alston under the judicially created doctrine of obviousness-type double patenting (Paper No. 5, page 2, paragraph 2).

#### Preliminary Discussion

As several arguments are raised throughout the briefs that require discussion before we reach the merits of the rejection, we address those arguments first.

Appellant initially argues that the instant claims are not subject to obviousness-type double patenting, stating that the claims of Pannell are presented in product by process format and are therefore separate and distinct from the structure claims of the pending application. (Main Brief, page 4, lines 12 – 17). Appellant further argues that the Pannell claims and the present claims would have been subject to a restriction requirement if presented in the same application and that the claims of the present

application can be made by a materially different process. (Main Brief, page 4, lines 14-18).

The Examiner observes that Pannell contains claims which are not in product by process structure; specifically, claims 5, 6, 7, 8, and 9. (Examiner's Answer, page 7, lines 9-10). The Examiner also asserts that the argument relating to restriction is mere conjecture. (Examiner's Answer, page 7, lines 8-9).

Although a Reply Brief was filed, it fails to acknowledge the existence of claims 5-9 of Pannell. It does, however, seem to assert that the appropriate standard for reviewing obviousness-type double patenting rejections should be that applied for determining infringement, or alternatively that for the imposition of a restriction requirement. (Reply Brief, page 4, line 17 – page 5, line 2).

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).

Appellant's briefs miss 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 Appellant's inherent invitation to substitute an infringement-type standard or restriction requirement-type standard for this rationale. Claims may have different scope and yet remain not patentably distinct. The proper analysis is an obviousness analysis.

Appellant's additional argument that the issued patent and the pending application have the same priority claims and therefore will expire simultaneously is without merit. Patent terms may be adjusted for various reasons, e.g. pursuant to 35 U.S.C. § 154 (b).

Appellant also states (without citation to authority) that "It is improper to combine references when formulating an obviousness-type double patenting rejection." (Main Brief, page 5, lines 22-23), and "Obviousness-type double patenting cannot combine references" (Reply Brief, page 5, line 3).

This is simply incorrect. The appropriate procedure for a double-patenting rejection has been laid out by the Federal Circuit as follows:

Thus, we start by examining the claims of the ... patent, and by assessing the prior art references in order to ascertain whether the PTO made out a prima facie case of obviousness.

Longi, 759 F.2d at 895-896, 225 USPQ at 651. It is proper to combine references in an obviousness-type double patenting rejection and this argument of Appellant is without merit.

Appellant criticizes the Examiner's use of the specification of the secondary reference in formulating the rejection, stating that (without citation to authority) "For double patenting, only the claims can be compared and relied upon" (Main Brief, page 5, lines 15-16 and Reply Brief, page 5, lines 24-25). The Examiner notes that the examination and analysis which occurs in an obviousness-type double-patenting rejection is an analysis which is "similar in nature to that which transpires when a rejection under 35 USC 103(a) is made" (Examiner's Answer, page 10, lines 7-8).

The Examiner is correct. We note that the law on this point is well settled and clear.

[A] double patenting of the obviousness-type rejection is "analogous to [a failure to meet] the non-obviousness requirement of 35 U.S.C. §103," except that the patent principally underlying the double patenting rejection is not considered prior art.

Longi, 759 F.2d at 892, n.4, 225 USPQ at 648, n.4. In Longi, the Federal Circuit noted that the prior commonly-owned patents disclosed titanium compounds, and relied upon the specifications of four additional prior art references to establish that nitrogen-containing titanium was an equivalent for catalytic purposes, noting that "a prima facie

case of obviousness-type double patenting was properly made”. Id., 759 F. 2d at 896, 225 USPQ at 651.

Therefore, the Examiner’s reliance upon the specification of the Alston reference is proper and this argument of Appellant is without merit.

Finally, Appellant makes multiple arguments (none supported with authority) surrounding the PTO requirement for common ownership of patents which are subject to terminal disclaimers, stating that it is “not judicially created and also is not fairly based on statutory authority. The requirement is poorly considered, even if it is technically authorized. The PTO should withdraw the requirement. It wastes time and money. Restrictions on alienation are disfavored at law, in general” (Main Brief, page 6, lines 4-8).

The Appellant continues this line reasoning in the Reply Brief, stating “The PTO should withdraw the requirement. It is a restraint on alienation. It is designed to protect the infringer when the patent system is designed to promote the advance of science and technology by rewarding inventors for a limited time for disclosing their inventions. The current PTO policy conflicts with the Constitutional foundation for the patent system. It wastes time and money. Restrains on alienation are disfavored at law, in general, and have no place in patent law where a single claim may be transferred or licensed” (Reply Brief, page 6, line 18 – page 7, line 2).

In response, the Examiner observed that one of the purposes of requiring a terminal disclaimer is to ensure that the patents which issue on the same invention which are not patentably distinct remain commonly owned and “avoid potential

harassment of an accused infringer by multiple parties with patents covering the same patentable invention”, citing 1202 OG 112, 37 C.F.R. § 1.601(n), and In re Van Ornum and Stang, 686 F.2d 937, 214 USPQ 761 (CCPA 1982) (Examiner’s Answer, page 10, lines 11-13).

The Examiner is correct. Contrary to Appellant’s argument, patent claims may not be singly transferred. Separate claims of the same patent may not be assigned to different parties See Pope Manufacturing Co. v. Gormully & Jeffery Manufacturing Co., 144 U.S. 248 (1892), the Appellant’s objections to the restraint on alienation notwithstanding.

#### Substantive Discussion

We now turn to the merits of the obviousness-type double patenting rejection as applied to the pending claims.

The Examiner notes that the Pannell claims recite an article of manufacture which include Z-pin reinforcement between two composite layers for fiber reinforced resin impregnated material. The claims also recite two fiber reinforced composite elements that are arranged to define a bond line with a cured strip of resin at the bond line where the cured strip included Z-pin reinforcement.

The Examiner admits that the claims of Pannell failed to teach the inclusion of X and Y reinforcement in the composite elements being joined and the specific areal density of the pins in the finished composite joint.

Appellant has not addressed the Examiner’s discussion of the Pannell claims substantively.

We find claims 5 and 6 of Pannell to be particularly illustrative and reproduce them below.

5. A bonded composite structure having a pin-reinforced thermoplastic weld, comprising:
  - a) at least two fiber-reinforced composite elements arranged to define a bond line along an interface between the elements;
  - b) a composite strip of cured resin having X-Y fiber reinforcement and Z-pin reinforcement, the strip being positioned at the bond line; and
  - c) a thermoplastic weld between each element and the strip along the interface, the welds including Z-pin reinforcement resulting from penetration of the Z pins in the strip into each weld.
  
6. A bonded composite structure, comprising:
  - a) at least two fiber-reinforced composite elements arranged to define a bond line along an interface between the elements;
  - b) a composite strip of cured resin having X-Y fiber reinforcement and Z-pin reinforcement, the strip being positioned along the bond line; and
  - c) bonds between the elements and the strip along the interface, the bonds including Z-pin reinforcement resulting from penetration of the Z-pins in the strip into each bond,

wherein the strip includes a metal susceptor susceptible to heating by magnetic induction.

Our review of Pannell's claims above indicate that they include claims in the form of a bonded composite structure (see column 20, line 44 - column 22, line 5), and are not merely product-by-process claims as implied by the Appellant's briefs (Main Brief, page 4, lines 13-14 and Reply Brief, page 4, line 12).

According to the Final Rejection, Pannell's claims include every element of appealed claim 13, excluding the "(1) that each composite element is a laminate having a plurality of plies, each ply having fiber reinforcement defining an X-Y plane, and (2) an areal density in the range from 0.5 – 2.0% in the bond line" (Final Rejection, Paper No. 5, page 2, paragraph 2, lines 4-6). Appellant has not contested this statement.

The Final Rejection relies on Alston, column 5, lines 63-64 to state that "composites formed from laminates having a plurality of plies, each ply having fiber reinforcement defining an X-Y plane are conventional" (Final Rejection, Paper No. 5, page 2, paragraph 2, lines 6-8).

The Appellant disputes this characterization of Alston, stating "Alston does not have two elements, each of which includes a plurality of plies" (Reply Brief, page 5, lines 12-13).

Further, the Final Rejection relies on Alston, column 3, lines 29-30 to state that "it would have been obvious to provide the specified areal density as this is a preferred areal density for Z-pins" (Final Rejection, Paper No. 5, page 2, paragraph 2, line 8 – page 3, line 2).

The Appellant only disputes the Examiner's usage of the disclosure of Alston, which we have previously addressed, and not the substance of this characterization.

Our analysis begins with the cited art. We note initially that the cited art is in the same field of endeavor as the present application, and the disclosed and resultant structures of the cited art are similar. Thus, we see no issues with this combination of references.

Next, we turn to the claims of Pannell. Claim 6 in particular describes a bonded composite structure having at least two fiber-reinforced composite elements arranged to define a bond line along the interface between the elements, a composite strip of cured resin having X-Y fiber reinforcement and Z-pin reinforcement, the strip being positioned along the bond line, and bonds between the elements and the strip along the interface, the bonds including Z-pin reinforcement resulting from the penetration of the Z-pins in the strip into each bond.

We agree with the Examiner's analysis that this disclosure includes all the elements of pending claim 13, save only the disclosure of each element being a laminate having a plurality of plies, each ply having fiber reinforcement defining an X-Y plane, and an areal density of Z-direction reinforcement of from 0.5% to 2.0% in the bondline.<sup>1</sup>

We then turn to Alston. At column 5, lines 61-62, a simulated repair is made using 16-ply K-III B thermoplastic polyimide flat composite coupons reinforced with graphite fiber. Pins are inserted in the patterns of Figure 3 and Figure 6. See also claim 5 of Alston (composite laminate), claim 14 (composite structure is a plurality of plies of cured and consolidated fiber-reinforced resin matrix composite material), and claims 15, 16, 17, 19, and 20, element (b).

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<sup>1</sup> Although not argued individually by the Appellant, we note claim 14's subject matter (discrete fibers) is disclosed by Pannell's claim 9 (carbon fibers); claim 15's extension of Z-direction reinforcement entirely through the strip into both elements by Pannell's claim 3, element (c); claim 16's metal susceptor by Pannell's claim 6; and claim 17's carbon fiber by Pannell's claim 9. As previously noted, these claims will stand or fall based upon the disposition of claim 13.

Other than the incorrect statement that “Alston does not have two elements, each of which includes a plurality of plies” (Reply Brief, page 5, lines 12-13), Appellant has not provided any arguments why this disclosure does not teach that it is conventional to use elements which are multi-ply laminates having X-Y reinforcement in composite bonded systems.

We therefore see no error in the Examiner’s utilization of Alston to show the conventionality of using multi-ply laminates having X-Y reinforcement.

Likewise, Alston at column 3, lines 29-30, discloses the Z-pin areal density of 0.375-1.50%. The Appellant does not dispute this.

We therefore also see no error in the Examiner’s utilization of Alston to show the conventionality of using Z-directional reinforcement at an areal density of 0.5-2.0% in the bond line is not disclosed in the relevant prior art.

The Appellant asserts that Alston claims a patch for repairing a composite structure and does not teach the elements of a precured strip; two composite elements joined with a precured strip and pinned with Z-direction reinforcement; two elements, each with a plurality of plies; X-Y reinforcement and Z direction reinforcement extending from the strip into at least one element; and two bonds in an “element-strip-element sandwich” (Main Brief, page 4, line 21 – page 5, line 9 and Reply Brief, page 5, lines 6-18).

This argument overlooks the essence of the rejection. Alston is a secondary reference and not utilized in the rejection for the points made by the Appellant.

Accordingly, we are not persuaded by this argument and find no error of law by the Examiner.

The examiner's decision, rejecting claims 13 through 17 as unpatentable for obviousness-type double patenting is affirmed.

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**

WILLIAM F. SMITH  
Administrative Patent Judge

BRADLEY R. GARRIS  
Administrative Patent Judge

JAMES T. MOORE  
Administrative Patent Judge

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