

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. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FRANCIS CHARLES DLUBAK

Appeal No. 2003-0091
Application No. 09/298,640

ON BRIEF

Before COHEN, McQUADE and NASE, Administrative Patent Judges.
McQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Francis Charles Dlubak appeals from the final rejection of claims 1 through 3 and 5 through 36, all of the claims pending in the application.

THE INVENTION

The invention relates to "penetration resistant windows, and more particularly relates to laminated window glass which resists damage from hurricanes and the like" (specification, page 1).

Representative claims 1 and 22 read as follows:

1. A penetration resistant window comprising:
a frame defining an internal channel;

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an exterior transparent sheet;

an interior transparent sheet;

a penetration resistant sheet between the exterior and interior transparent sheets, extending from edges of the exterior and interior sheets in a direction substantially parallel with planes defined by the exterior and interior transparent sheets;

wherein the edges of the exterior and interior sheets extend into the channel of the frame and are secured within the channel of the frame; and

said penetration resistant sheet is secured within the channel of the frame.

22. Laminated window glass consisting essentially of:

an exterior glass sheet;

an interior transparent sheet; and

a penetration resistant sheet disposed between, and adhered to either or both of, the exterior glass sheet and the interior transparent sheet, extending from edges of the exterior glass sheet and the interior transparent sheet in a direction substantially parallel with planes defined by the exterior and interior sheets; and

wherein said penetration resistant sheet is secured between the glass sheet and the transparent sheet without the use of double sided tape.

THE PRIOR ART

The references relied on by the examiner to support the final rejection are:

Fischer et al. (Fischer)	4,594,290	June 10, 1986
Grolig et al. (Grolig)	4,952,258	Aug. 28, 1990
Bolton et al. (Bolton)	5,002,820	Mar. 26, 1991
Schimmelpenningh et al.	5,853,828	Dec. 29, 1998

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(Schimmelpenningh)

THE REJECTIONS

Claims 22 through 36 stand rejected under 35 U.S.C. § 112, first paragraph, as being based on a specification which fails to comply with the written description requirement.

Claims 22 through 25, 30, 31 and 35 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Grolig.

Claims 1 through 3, 5 through 11, 18 through 27 and 34 through 36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schimmelpenningh.

Claims 12, 13, 28 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schimmelpenningh in view of Fischer.

Claims 14 through 17 and 30 through 33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schimmelpenningh in view of Bolton.

Attention is directed to the appellant's main and reply briefs (Paper Nos. 14 and 16) and to the examiner's answer (Paper No. 15) for the respective positions of the appellant and examiner regarding the merits of these rejections.¹

¹ In the final rejection (Paper No. 11), claims 22 through 26, 28 and 35 also stood rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,937,611 to Howes. The

DISCUSSION

I. The 35 U.S.C. § 112, first paragraph (written description),
rejection of claims 22 through 36

In the examiner's view (see page 4 in the answer), the appellant's specification fails to comply with the written description requirement of § 112, ¶ 1, with respect to the recitation in independent claim 22, from which claims 23 through 36 depend, that the penetration resistant sheet is secured between the glass sheet and the transparent sheet "without the use of double sided tape."

The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claim language. In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983). The content of the drawings may also be considered in determining compliance with the written description requirement. Id.

examiner withdrew this rejection in view of the arguments advanced in the main brief (see page 10 in the answer).

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The relevant portion of the appellant's original disclosure is the passage on page 5 of the specification which states that

[a]n adhesive layer (not shown) may be used to mount the exterior and/or interior transparent sheets 14 and 16 on the penetration resistant sheet 20. The adhesive layer is preferably substantially co-extensive with the exterior and interior glass transparent sheets 14 and 16. Any suitable type of adhesive layer may be used, provided that it adequately secures the exterior and interior transparent sheets 14 and 16 to the penetration resistant sheet 20, and does not decrease light transmission through the window 10 to an undesirable extent. The optional adhesive layer may comprise polyurethane, PVB or silicone, with polyurethane being preferred in many applications.

There is no indication here that the appellant contemplated using a double sided tape to secure the penetration resistant sheet between the two transparent glass sheets, or that a double sided tape would fall within the group of adhesives listed by the appellant. More importantly, the passage clearly states that the use of an adhesive layer (such as a double sided tape) to mount the exterior and/or interior transparent glass sheets to the penetration resistant sheet is optional. Thus, the disclosure of the application as originally filed would reasonably convey to the artisan that the appellant had possession at that time of a laminated glass window as recited in claim 22 wherein the penetration resistant sheet is secured between the glass sheet

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and the transparent sheet without the use of any adhesive layer including a double sided tape.

Accordingly, we shall not sustain the standing 35 U.S.C. § 112, first paragraph, rejection of claims 22 through 36.

II. The 35 U.S.C. § 102(b) rejection of claims 22 through 25, 30, 31 and 35 as being anticipated by Grolig

Grolig discloses laminated safety glass having at least one function layer embodying a desirable characteristic unrelated to safety, e.g., the capability of reflecting heat and/or solar radiation. As described by Grolig,

FIG. 1 shows a laminated safety glass which is composed of a glass/polyvinylbutyral sheet/plastic sheet comprising function layer/polyvinylbutyral sheet/glass laminate. The coated plastic sheet layer 3, comprising a substrate sheet 1 and one or more function layers 2, projects beyond the edge of the other layers of the laminate 18, which here are the polyvinylbutyral sheets 4, 5 in contact with both sides of the plastic sheet layer 3 and also the glass panes 6 and 7 adjacent thereto.

The material of the substrate sheet 1 is polyethylene terephthalate, polyamide or polyether sulfone . . . coated with a light-transparent, heat-reflecting film 2 . . . composed, for example, of two metal layers and two dielectric layers [column 4, lines 1 through 19].

Anticipation is established only when a single prior art reference discloses, expressly or under principles of inherency, each and every element of a claimed invention. RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ

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385, 388 (Fed. Cir. 1984). In other words, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. Scripps Clinic & Research Found. v. Genentech Inc., 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991).

Independent claim 22 has a "consisting essentially of" transition phrase which excludes elements that would materially affect the basic and novel characteristics of the claimed invention. See AFG Industries Inc. v. Cardinal IG Co., 239 F.3d 1239, 1245, 57 USPQ2d 1776, 1780-81 (Fed. Cir. 2001). In applying Grolig against claim 22 (see pages 5, 10 and 11 in the answer), the examiner reads the "exterior glass sheet" and "interior transparent sheet" limitations on Grolig's glass panes 6 and 7, and the penetration resistant sheet limitations on the combination of Grolig's plastic sheet layer 3 and polyvinylbutyral sheets 4 and 5. As persuasively argued by the appellant (see pages 6, 9 and 10 in the main brief and page 2 in the reply brief), this analysis is unsound. Based on Grolig's description thereof, a person of ordinary skill in the art would have understood the laminated safety glass shown in Figure 1 as embodying five "sheets" of the sort set forth in claim 22: glass pane 6, glass pane 7, polyvinylbutyral sheet 4, polyvinylbutyral

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sheet 5 and sheet layer 3, each of which materially affects the basic characteristics the glass. The examiner's position that the sheet layer 3 and polyvinylbutyral sheets 4 and 5 collectively constitute a "penetration resistant sheet" as required by claim 22 runs counter to Grolig's description of these elements as separate entities. Hence, Grolig does not meet the exclusions required by the "consisting essentially of" limitation in claim 22.

Therefore, we shall not sustain the standing 35 U.S.C. § 102(b) rejection of independent claim 22 and dependent claims 23 through 25, 30, 31 and 35 as being anticipated by Grolig.

III. The 35 U.S.C. § 103(a) rejection of claims 1 through 3, 5 through 11, 18 through 27 and 34 through 36 as being unpatentable over Schimmelpenningh

Schimmelpenningh discloses a safety glass structure 20 resistant to extreme wind and impact conditions. The structure comprises

a frame forming an opening and defining an outer rigid channel [1]; a laminated glass panel [10] within the opening comprising first and second glass layers [5 and 6] bonded to an interlayer [7] of plasticized polyvinyl butyral [PVB]; an inner rigid channel [8] within the frame circumscribing the periphery of and bonded to said laminated glass panel by a self-sealing adhesive [9] which permits no or minimal relative movement between the border area of the panel and said inner rigid channel; and said inner rigid channel being

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mounted in and bonded to the outer rigid channel with a resilient material [11] which permits the panel to flex within its border when exposed to said extreme wind- and impact-conditions [Abstract].

One of the preferred adhesives 9 for bonding the inner rigid channel to the laminated glass panel is polyvinyl butyral (see column 3, lines 53 through 62). To this end, Schimmelpenningh indicates that

[w]hen the laminate is being constructed, the PVB interlayer sheet is normally larger than the glass sheet, [and] when this excess PVB is present at the edges of the resulting laminate this will function as a self-sealing adhesive if the laminated panel with the excess PVB is inserted into the inner rigid channel. Generally, the laminate with the channel are autoclaved together laminating the channel to the glass with the excess PVB. Alternatively, the excess PVB at the edges of the laminate may be trimmed flush with the edges of the glass and used to fill the inner channel prior to autoclaving to bond the laminated safety glass panel to the channel [column 3, line 63, through column 4 line 7].

Schimmelpenningh does not teach, and would not have suggested, a penetration resistant window responding to the limitation in claim 1 requiring a penetration resistant sheet extending from the edges of exterior and interior transparent sheets in a direction substantially parallel with planes defined by the exterior and interior sheets. The examiner's reliance (see page 6 in the answer) on the passage from Schimmelpenningh reproduced in the immediately preceding paragraph to meet this

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limitation is not well taken. Although Schimmelpenningh's penetration resistant sheet (PVB interlayer 7) extends from the edges of interior and exterior transparent sheets (glass layers 5 and 6) before the laminated glass panel 10 is inserted into the inner rigid channel 8 and autoclaved therewith, the excess PVB takes the form of a self-sealing adhesive 9 in the finished window and, as is evident from Schimmelpenningh's drawing figure, no longer extends from edges of the exterior and interior sheets in a direction substantially parallel with planes defined by the exterior and interior sheets.

Accordingly, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of claim 1 and dependent claims 2, 3, 5 through 11 and 18 through 21 as being unpatentable over Schimmelpenningh.

On the other hand, it is not apparent, nor has the appellant cogently explained, why Schimmelpenningh's laminated glass panel 10, with its penetration resistant sheet (PVB interlayer 7) extending from the edges of interior and exterior transparent sheets (glass layers 5 and 6), is not fully responsive to the laminated window glass recited in independent claim 22. That this laminated glass panel constitutes an intermediate product does not diminish its status as a valid reference against the

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appellant's claims since Schimmelpenningh both intended and appreciated its existence. See In re Mullin, 481 F.2d 1333, 1336, 179 USPQ 97, 99 (CCPA 1973).

Furthermore, as the excess PVB is ultimately intended to form a self-sealing adhesive 9 bonding the laminated glass panel 10 and the inner rigid channel 8, it would have been obvious to extend it from the edges of the exterior and interior transparent sheets a substantially uniform distance around the perimeters of these sheets as recited in dependent claim 25.

Thus, we shall sustain the standing 35 U.S.C. § 103(a) rejection of claims 22 and 25 as being unpatentable over Schimmelpenningh.

We also shall sustain the standing 35 U.S.C. § 103(a) rejection of dependent claims 23, 24, 26, 27 and 34 through 36 as being unpatentable over Schimmelpenningh since the appellant has not challenged such with any reasonable specificity, thereby allowing these claims to stand or fall with parent claim 22 (see In re Nielson, 816 F.2d 1567, 1572, 2 USPQ2d 1525, 1528 (Fed. Cir. 1987)).

IV. The 35 U.S.C. § 103(a) rejection of claims 12, 13, 28 and 29 as being unpatentable over Schimmelpenningh in view of Fischer

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Fischer discloses an impact resistant transparent laminate comprising an interior ply 13 which can be made from any number of suitable materials including polyvinyl butyral and copolymers of ethylene/methacrylic acid ionomers (see column 4, lines 52 through 68).

Since Fischer does not cure the above noted shortcoming of Schimmelpenningh relative to the subject matter recited in parent claim 1, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of dependent claims 12 and 13 as being unpatentable over Schimmelpenningh in view of Fischer.

We shall sustain, however, the standing 35 U.S.C. § 103(a) rejection of claims 28 and 29 as being unpatentable over Schimmelpenningh in view of Fischer.

Claim 28 depends from claim 22 and further defines the penetration resistant sheet as comprising an ionoplast polymeric material. Claim 29 depends from claim 28 and further defines the ionoplast polymeric material as comprising ethylene/methacrylic acid copolymers. Notwithstanding the appellant's argument to the contrary (see pages 8 and 11 in the main brief and pages 3 and 4 in the reply brief), Fischer's express teaching of polyvinyl butyral and copolymers of ethylene/methacrylic acid ionomers as suitable alternatives for use as an interlayer in an impact

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resistant transparent laminate would have provided the artisan with ample suggestion or motivation to substitute an interlayer of ethylene/methacrylic acid copolymers for Schimmelpenningh's interlayer of polyvinyl butyral, thereby arriving at the subject matter recited in claims 28 and 29.

V. The 35 U.S.C. § 103(a) rejection of claims 14 through 17 and 30 through 33 as being unpatentable over Schimmelpenningh in view of Bolton

Bolton discloses laminated safety glass comprising an interlayer 24 formed of one or more bonded layers of plastic chosen on the basis of their flexibility and rigidity (see column 4, line 31 et seq.).

As Bolton does not cure the above noted shortcoming of Schimmelpenningh relative to the subject matter recited in parent claim 1, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of dependent claims 14 through 17 as being unpatentable over Schimmelpenningh in view of Bolton.

We shall sustain, however, the standing 35 U.S.C. § 103(a) rejection of claims 30 through 33 as being unpatentable over Schimmelpenningh in view of Bolton.

Claim 30, which is representative of this group, depends from claim 22 and further defines the penetration resistant sheet

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as comprising multiple layers. Notwithstanding the appellant's general argument to the contrary (see pages 8, 9, 11 and 12 in the main brief and pages 3 and 4 in the reply brief), Bolton's teaching that a laminated safety glass interlayer may be formed of one or more bonded layers of plastic materials chosen for their flexibility and rigidity would have provided the artisan with ample suggestion or motivation to make Schimmelpenninck's interlayer of multiple layers for the same purpose, thereby arriving at the subject matter recited in claim 30. Since the appellant has not argued separately the patentability of claims 30 through 33, claims 31 through 33 stand or fall with representative claim 30 (see In re Young, 927 F.2d 588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991); In re Wood, 582 F.2d 638, 642, 199 USPQ 137, 140 (CCPA 1978)).

SUMMARY

The decision of the examiner:

a) to reject claims 22 through 36 under 35 U.S.C. § 112, first paragraph, as being based on a specification which fails to comply with the written description requirement is reversed;

b) to reject claims 22 through 25, 30, 31 and 35 under 35 U.S.C. § 102(b) as being anticipated by Grolig is reversed;

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c) to reject claims 1 through 3, 5 through 11, 18 through 27 and 34 through 36 under 35 U.S.C. § 103(a) as being unpatentable over Schimmelpenningh is reversed with respect to claims 1 through 3, 5 through 11 and 18 through 21, and affirmed with respect to claims 22 through 27 and 34 through 36;

d) to reject claims 12, 13, 28 and 29 under 35 U.S.C. § 103(a) as being unpatentable over Schimmelpenningh in view of Fischer is reversed with respect to claims 12 and 13, and affirmed with respect to claims 28 and 29; and

e) to reject claims 14 through 17 and 30 through 33 under 35 U.S.C. § 103(a) as being unpatentable over Schimmelpenningh in view of Bolton is reversed with respect to claims 14 through 17, and affirmed with respect to claims 30 through 33.

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

AFFIRMED-IN-PART

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Administrative Patent Judge)	
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AFFIRMED IN PART

February 18, 2004