

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT A. VANDERHYE, NICOLAS C.S. APPLEGATE, DOUGLAS M. DUKES, NICOLAS J. LEONE, JOSEPH SEDLAK, JASON C. SIGNOR, MARK W. STEINER, and TIMOTHY A. VANDERPOEL

Appeal 2006-3102
Application 10/443,961
Technology Center 3700

Decided: February 26, 2007

Before ANITA PELLMAN GROSS, STUART S. LEVY and
LINDA E. HORNER, *Administrative Patent Judges*.
HORNER, *Administrative Patent Judge*.

DECISION ON APPEAL

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Application 10/443,961

STATEMENT OF THE CASE

The Appellants seek our review under 35 U.S.C. § 134 (2002) of the Examiner's final rejection of claims 1 and 4.¹ We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We AFFIRM-IN-PART.

THE INVENTION

The Appellants invented a vertically collapsible vertical axis wind turbine. Claim 1, reproduced below, is representative of the subject matter on appeal.

1. A vertically collapsible vertical axis wind turbine comprising: a substantially vertical shaft; at least two vane supports mounted by the shaft; and at least two vertically collapsible material vanes supported by the vane supports, so that the vanes are movable from a first operative position in which the vane material is substantially taut, to a second inoperative position in which the vane material collapses and is not taut.

¹ Claims 1-14, 16, 17, 19, and 21-24 are pending. Claims 15, 18, and 20 have been canceled. Claims 7-9, 11, 12, 14, 16, 17, 19, and 21-24 are allowed. Claims 2, 3, 5, 6, 10, and 13 are objected to but allowable if rewritten in independent form.

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THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

DeBerg	US 4,191,507	Mar. 04, 1980
Feldman	US 5,171,127	Dec. 15, 1992

The following rejections are before us for review.

1. Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by DeBerg.
2. Claims 1 and 4 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Feldman.

FIRST ISSUE

The Appellants contend that the Examiner erred in rejecting claim 1, because the sails of DeBerg, when in the operative position, are not taut unless the wind blows (Br. 4-5). The Examiner contends that DeBerg anticipates claim 1 because the blades of DeBerg are taut when the wind blows on them, as shown in Figure 3, and are slack and in a vertically collapsed position when the wind does not blow on them, as shown in Figure 4 (Answer 5-6). The Examiner further contends that DeBerg also discloses that the sails are in a vertically collapsed position in the fully collapsible windmill embodiment of Figure 5 (Answer 4). The issue before us is whether the Appellants have shown that the Examiner erred in rejecting claim 1 as anticipated by DeBerg.

FINDINGS OF FACT

A preponderance of the evidence establishes the following facts:

The wind turbine of claim 1 has vanes that are movable from a first operative position in which the vane material is substantially taut, to a second inoperative position in which the vane material collapses and is not taut.

Claim 1 does not require that the vane material is substantially taut even when the wind does not blow.

DeBerg discloses a windmill having a vertical central axle 12 and windmill vane arrays 11A-11C (DeBerg, col. 2, ll. 6, 16-17).

Each vane array 11A-11C is comprised of sails 22A, 24A, and 26A made of a flexible fabric (DeBerg, col. 2, ll. 25-27).

The sails are mounted to a flexible frame by sail arms 28A, 30A, and 32A extending horizontally from a support column 20A (DeBerg, col. 2, ll. 37-38).

Each sail is fastened at one edge to the sail arm and at its other end to a plurality of cords 40, which connect its opposite edge to a cord arm (e.g., 34A) (DeBerg, col. 2, ll. 42-45 and Figure 1).

When the wind direction flows directly from the cord arms of the vane toward the sail arms, the sails receive the full force from the wind and billow outwardly such that they are taut (DeBerg, col. 2, ll. 60-64, Figures 1 and 3).

The sails in this billowed condition extend vertically along the central axle 12 (DeBerg, Figures 1 and 3).

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When the wind is blowing from the opposite direction so that it travels from the sail arms toward the cord arms of the vane, the sails are lifted flat to provide little resistance to the wind (DeBerg, col. 2, ll. 66-68, Figures 1 and 4).

In this flat condition, the sails collapse vertically, such that each sail resides in a single horizontal plane, and the sails are slack and not taut (DeBerg, Figure 4).

DeBerg further discloses a fully collapsible windmill embodiment in which the sail arms are held by cables 50A-50C, and the entire windmill can be collapsed by detaching cables from upper and lower collars 60 and 62 (DeBerg, Figure 5 and col. 4, ll. 19-22 and col. 5, ll. 19-23).

PRINCIPLES OF LAW

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

ANALYSIS

Contrary to Appellants’ arguments on page 4 of the Brief, claim 1 does not require that all of the vane material of the turbine remain taut at the same time or that the vane material remain taut even when the wind is not blowing. Claim 1 requires only that the vanes are movable from a first operative position in which the vane material is substantially taut, to a second inoperative position in which the vane material collapses and is not taut.

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In the windmill of DeBerg, the vane material is in a first operative position when the wind is blowing directly into the sail as shown in Figure 3. In this position, the Appellants concede that the sail is substantially taut (Br. 4). The vane material of DeBerg is in a second inoperative position when the wind is not blowing into the sail, as shown in Figure 4. The vane material collapses vertically as it moves from the first position, in which the sail billows and extends vertically along the central axle, to a second position, in which the sail lies horizontally in a single plane. This second position is inoperative because the wind is not exerting force upon the windmill. In this second position, the Appellants concede that the vane material is not taut (Reply Br. 1).

Further, DeBerg discloses in the collapsible windmill embodiment of Figure 5 that the vanes can be vertically collapsed from the first operative position to a second inoperative position by detaching the cables that hold the sail arms. When the cables are detached, the vane material collapses vertically as it moves from the first position, in which the sail billows and extends vertically along the central axle, to a second position, in which the sail arms are disconnected and the material is no longer taut. The Appellants concede that when the windmill is disassembled, the sails are vertically collapsed (Reply Br. 2).

As such, we find that DeBerg anticipates claim 1 because it discloses vane material that moves from a first operative position to a second inoperative position as claimed.

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CONCLUSIONS OF LAW

We conclude that the Examiner did not err in rejecting claim 1 as anticipated by DeBerg. As such, we sustain the Examiner's rejection of claim 1 under 35 U.S.C. § 102(b).

SECOND ISSUE

The Appellants contend that the Examiner erred in rejecting claims 1 and 4 because Feldman does not disclose moving its blades 200 to a second inoperative position where the blades are not taut. Rather, the Appellants contend that when the blades 200 of Feldman are in the furled, or inoperative position 200F, the blade material is still taut (Br. 6). The Examiner contends that Feldman shows the vertically collapsible blades of claim 1, which are connected to sliding control hub 324 and slide along spindle shaft 320S (Answer 6-7). The issue before us is whether the Appellants have shown that the Examiner erred in rejecting claims 1 and 4 as anticipated by Feldman.

FINDINGS OF FACT

A preponderance of the evidence establishes the following facts:

The wind turbine of claim 1 has vanes that are movable to a second inoperative position in which the vane material collapses and is not taut.

Feldman discloses a wind turbine having blade panels that are attached to a sliding control hub 324 (Feldman, col. 8, ll. 7-9).

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Feldman shows that when the sliding control hub 324 is in its uppermost position, such that the blade panels are in their inoperative position 330F, the blade panels 330 are taut (Feldman, Figure 8 and col. 10, ll. 49-52).

As such, Feldman does not disclose vanes that are movable from a first operative position in which the vane material is substantially taut, to a second inoperative position in which the vane material collapses and is not taut.

ANALYSIS

The Examiner failed to show how the blade panels in Figure 8 are not taut, as required by claim 1, when in the furled position 330F. Figure 8 of Feldman shows that the blade panels are not vertically collapsed, and are instead taut, when furled. As such, we find that Feldman does not anticipate claim 1 or its dependent claim 4, because it fails to disclose vanes that are movable from a first operative position, in which the vane material is substantially taut, to a second inoperative position, in which the vane material is not taut.

CONCLUSIONS OF LAW

We conclude that Examiner erred in rejecting claims 1 and 4 as anticipated by Feldman. As such, we do not sustain the Examiner's rejection of claims 1 and 4 under 35 U.S.C. § 102(b).

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DECISION

The decision of the Examiner to reject claim 1 under 35 U.S.C. § 102(b) as anticipated by DeBerg is sustained, and the decision of the Examiner to reject claims 1 and 4 under 35 U.S.C. § 102(b) as anticipated by Feldman is not sustained.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

ANITA PELLMAN GROSS Administrative Patent Judge))))))
STUART S. LEVY Administrative Patent Judge))))))
LINDA E. HORNER Administrative Patent Judge))
) BOARD OF PATENT) APPEALS) AND) INTERFERENCES))

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