

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today  
(1) was not written for publication in a law journal and  
(2) is not binding precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte THOMAS R. NEUENSCHWANDER

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Appeal No. 95-1727  
Application 07/966,876<sup>1</sup>

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ON BRIEF

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

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1  
through 4, 7 through 12, and 15. Claims 30 through 33 stand  
allowed. Claims 5, 6, 13, and 14 stand objected to as being

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<sup>1</sup>Application for patent filed October 26, 1992.

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dependent upon a rejected base claim but would be allowable according to the examiner if rewritten in independent form including all of the limitations of the base claim and any intervening claims. These noted claims constitute all of the claims remaining in the application.

Appellant's invention pertains to a method of manufacturing an interlocked lamination stack from a sheet of stock material and a method of manufacturing a stack of interlocking laminations from a sheet of stock material. An understanding of the invention can be derived from a reading of exemplary claims 1 and 8, with copies thereof being appended to appellant's brief.

As evidence of obviousness, the examiner has applied the documents listed below:

Zimmerle	3,203,077	Aug. 31, 1965
Martin	4,728,842	Mar. 1, 1988
Webb et al (Webb)	5,075,150	Dec. 24, 1991

The following rejections are before us for review.

Claims 3 and 11 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

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Claims 1, 2, 4, 8 through 10, and 12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Zimmerle in view of Martin.

Claims 3, 7, 11, and 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Zimmerle in view of Martin, as applied above, further in view of Webb.

The full text of the examiner's rejections and response to the argument presented by appellant appears in the final rejection and answer (Paper Nos. 6 and 11), while the complete statement of appellant's argument can be found in the main and reply briefs (Paper Nos. 10 and 12).

In the main brief (page 4), appellant indicates that claims 1, 2, 4, 7 through 10, 12, and 15 stand or fall together and that claims 3 and 11 stand or fall together. Based upon this statement, we focus our attention exclusively upon selected claims 1 and 3, infra.

#### OPINION

In reaching our conclusion on the issues raised in this appeal, this panel of the board has carefully considered appellant's specification and claims,<sup>2</sup> the applied teachings,<sup>3</sup>

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<sup>2</sup> Claim 1 recites, inter alia, a slot having the desired skew angle in a resulting stack of laminations. In light thereof, we understand the second lamination, as does the first

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and the respective viewpoints of appellant and the examiner. As a consequence of our review, we make the determinations which follow.

The indefiniteness issue

We reverse the rejection of claims 3 and 11 under 35 U.S.C. § 112, second paragraph.

We understand the examiner's concern that the language "the surface of said indentation" in both claims 3 and 11 is indefinite in that it lacks proper antecedent basis.

However, when we read this language in the context of the underlying disclosure (specification, page 10, lines 4 through 9), we reach the conclusion that the metes and bounds of the claimed subject matter are determinate. More specifically, as indicated in the referenced portion of the specification, the

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lamination, to include not only the recited centrally located generally circular indentation but also a plurality of circumferentially spaced openings defining a plurality of circumferentially spaced slots.

<sup>3</sup> In our evaluation of the applied patents, we have considered all of the disclosure thereof for what it would have fairly taught one of ordinary skill in the art. See In re Boe, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966). Additionally, this panel of the board has taken into account not only the specific teachings, but also the inferences which one skilled in the art would reasonably have been expected to draw from the disclosure. See In re Preda 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

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amount of force acting on the indentation portion 48 (Figure 5) is effective to improve the flatness of the portion so that "its surface" is generally planar. Thus, we readily perceive that "the surface" in the claim language at issue denotes both the upper and lower faces of the indentation portion which are subjected to the opposed forces acting thereon and flattened, as seen in Figure 5. We, accordingly, determine that the language of claims 3 and 11 is definite in meaning.

The obviousness issues

CLAIM 1

We reverse the rejection of claim 1 under 35 U.S.C. § 103. It follows that claims 2, 4, 7 through 10, 12, and 15 fall therewith.

Claim 1 addresses a method of manufacturing an interlocked lamination stack from a sheet stock material, with the interlocked stack defining a central axis (as disclosed, the central shaft hole 26 of Figure 2 has a central axis 28). The claimed method requires, inter alia, the step of forming a first lamination in stock material including forming openings and a "centrally located" generally circular indentation defining a corresponding depression and projection. As claimed, this arrangement enables the first lamination to be rotatable relative

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to the second lamination by an infinitely adjustable angle sufficient to define a desired skew angle after which the indentations are interlocked.

The patent to Zimmerle (Figures 7, 8, 11, and 12) teaches a dynamoelectric machine lamination assembly and procedure including three special holes 75, 85 that permit angular displacement between adjacent laminations so as to allow sufficient space for interlock means 76 to be skewed simultaneously with skewing the winding slots along the outer periphery of each of the rotor laminations (column 5, lines 61 through 71 and column 7, lines 28 through 33). We understand that this discrete arrangement of special holes would permit limited relative angular displacement between laminations based upon the circumferential extent of the holes.

The Martin patent relates to a laminated assembly for a dynamoelectric machine that includes interlocking projections and recesses for securing adjacent laminations together by compressive interference fit, wherein the compressive interference fit is between ridges 52 on the projection 54 and the recess 40 (Figures 3A and 4). It is clear to us that the Martin teaching is concerned with a plurality of interlocking projections and recesses on each lamination for securing adjacent

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laminations. This viewpoint is buttressed by the claims of the Martin patent and the discussion in column 1 (lines 20 through 24) of Martin of U.S. Patent No. 2,975,312 (of record in the present application), which latter patent discloses interlocking projections and recesses having the same identical outlines and dimensions.

Based upon our assessment of the Zimmerle and Martin patents, supra, we find ourselves in accord with appellant's view in the matter of the rejection of claim 1 (main brief, page 7) that these teachings would not have been suggestive of using a centrally located, generally circular indentation to interlock laminas.

#### CLAIM 3

We reverse the rejection of claim 3 under 35 U.S.C. § 103. Claim 11 falls therewith.

As is apparent from the rejection, the examiner relies upon the Webb patent solely for its teaching of the application of a counter force. However, like the appellant (main brief, pages 9 and 10 and reply brief, page 3), we recognize that the Webb teaching of the use of counter pressure during lamina interlocking (column 5, lines 53 through 60) would not have been suggestive of applying a counter force during the "forming" step,

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as now claimed.

In summary, this panel of the board has:

reversed the rejection of claims 3 and 11 under 35 U.S.C. § 112, second paragraph, as being indefinite;

reversed the rejection of claims 1, 2, 4, 8 through 10, and 12 under 35 U.S.C. § 103 as being unpatentable over Zimmerle in view of Martin; and

reversed the rejection of claims 3, 7, 11, and 15 under 35 U.S.C. § 103 as being unpatentable over Zimmerle in view of Martin and Webb.

The decision of the examiner is reversed.

REVERSED

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IRWIN CHARLES COHEN	)	
Administrative Patent Judge	)	
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	)	
	)	BOARD OF PATENT
BRADLEY R. GARRIS	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
JOHN P. MCQUADE	)	
Administrative Patent Judge	)	

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