

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte SEBASTIAN BENENOWSKI, HANS-ULRICH DIETZE,  
ERICH NUDING, STEFAN SCHMEDDERS and RUDIGER ZIETHEN

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Appeal No. 1997-1506  
Application No. 08/442,413<sup>1</sup>

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HEARD: September 15, 1999

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Before CALVERT, Administrative Patent Judge, McCANDLISH, Senior Administrative Patent Judge and BAHR, Administrative Patent Judge.

BAHR, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 5 through 15, which are all of the claims pending in this application.

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<sup>1</sup> Application for patent filed May 16, 1995.

Appeal No. 1997-1506  
Application No. 08/442,413

We AFFIRM-IN-PART.

BACKGROUND

The appellants' invention relates to a flexible switch and a method for elastic bending of a steel support. An understanding of the invention can be derived from a reading of exemplary claims 12 and 14, which appear in the appendix to the appellants' brief.<sup>2</sup>

The prior art reference of record relied upon by the examiner in rejecting the appealed claims is:

Rosenbaum et al. (Rosenbaum)	2,997,004	Aug.
22, 1961		

The following rejections are before us for review.

1. Claims 5 through 15 stand rejected under 35 U.S.C. § 112, first paragraph, as being based on a disclosure which fails to adequately teach how to make and/or use the invention.

2. Claims 11 and 15 stand rejected under 35 U.S.C. § 112, first paragraph, as, according to the examiner, the specification, as originally filed, does not provide support for the invention as is now claimed.

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<sup>2</sup> Errors in reproducing the claims in the appendix are noted by the examiner on pages 3 and 4 of the answer.

3. Claims 6 through 11 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the appellants regard as the invention.

4. Claim 14 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Rosenbaum.

Reference is made to the appellants' brief (Paper No. 12) and the examiner's answer (Paper No. 13) for the respective positions of the appellants and the examiner with regard to the merits of these rejections.

#### OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

#### Indefiniteness Rejection

In rejecting claims 6 through 11 under 35 U.S.C. § 112, second paragraph, the examiner's position is that "the lever element" lacks antecedent basis. The appellants do not

challenge this assertion and note that claim 6 should depend from claim 15, which does provide antecedent basis for the lever, not claim 14. However, since the record does not indicate that any formal amendment has been made to claim 6 to change its dependency from claim 14 to claim 15, we shall sustain the examiner's rejection of claims 6 through 11 under 35 U.S.C. § 112, second paragraph.<sup>3</sup>

Enablement Rejection

Inssofar as the enablement requirement is concerned, the dispositive issue is whether the appellants' disclosure, considering the level of ordinary skill in the art as of the date of the appellants' application, would have enabled a person of such skill to make and use the appellants' invention without undue experimentation. In re Strahilevitz, 668 F.2d 1229, 1232, 212 USPQ 561, 563-64 (CCPA 1982). In calling into question the enablement of the appellants' disclosure, the examiner has the initial burden of advancing acceptable reasoning inconsistent with enablement. Id.

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<sup>3</sup> As noted by the examiner, the copy of claim 6 in the appendix to the appellants' brief is an inaccurate reproduction of the claim of record, in that the claim 6 of record depends from claim 14, not claim 15.

In determining that the specification is non-enabling, the examiner has noted that the structure or devices which cause the forces shown on the left of Figures 1, 3 and 5 through 8 are not disclosed. The examiner's position is that, "[s]ince there is an almost infinite number of ways to generate a force on an object, this would lead to undue experimentation on the part of the ordinary skilled artisan" (answer, page 5). We do not agree. There does not appear to be any dispute that there are many electromechanical devices known in the art for generating linearly oriented forces. Further, the appellants' original disclosure (specification, page 5) discloses electromechanical actuating drives for use in bending steel supports such as rail lines of trains to switch from one track to another and to hydraulic or spindle drives (pages 4 and 8) for generating linearly oriented forces. Thus, it is our opinion that one of ordinary skill in the art would have been able, without undue experimentation, to select a conventional device for generating any of the forces disclosed by the appellants' disclosure.

Accordingly, we shall not sustain the standing rejection of claims 5 through 15 under 35 U.S.C. § 112, first paragraph, as being based on a non-enabling disclosure.

Written Description Rejections

In rejecting claim 15 under 35 U.S.C. § 112, first paragraph, the examiner's position is that the language "a device by which opposing forces are applied to the lever element" in claim 15, which was added by amendment in Paper No. 9, is not supported in the disclosure as originally filed. We do not agree.

The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to one of ordinary skill in the art 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. See Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1116-17 (Fed. Cir. 1991) and In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983).

Page 6 of the specification as originally filed stated:

To achieve this, a lever element (28), to be identified as a bendable support (28), originates at the end (24) of the support (16) and extends, in a plane offset in respect to the supports (14) and (16), past the end (24) of the support (16).

To be able to elastically bend the support (16) in the desired amount, one [sic. on] the one hand forces  $F$  and counterforces  $F$  act on the support (16) in the area of its end [27], and, on the other hand, *corresponding forces  $F$  and counterforces  $F$  act on the bendable support (28)*, so that therefore a bending moment diverging from zero is generated in the end (24) of the support (16) and thus an elastic line having a constant radius of curvature [emphasis added].

The above-cited disclosure clearly conveys that opposing forces are applied to the lever (28). While the appellants' specification as originally filed does not expressly state that the force and counterforce discussed above are applied to the lever by means of a "device" as claimed, we are satisfied that the disclosure of the use of an electromechanical actuating drive to bend the steel support (16) on page 6 of the original specification would have reasonably conveyed to one of ordinary skill in the art that all forces generated acting on the support (16), whether directly or indirectly via the lever, are generated by means of electromechanical actuating drives, rather than by hand. Thus, it is our

opinion that the appellants' original disclosure is sufficient to support "a device by which opposing forces are applied to said lever element" in claim 15.<sup>4</sup>

Accordingly, we shall not sustain the examiner's rejection of claim 15 under 35 U.S.C. § 112, first paragraph, as lacking support in the appellants' original disclosure.

Our conclusion is the opposite, however, with regard to the examiner's rejection of claim 11. The examiner asserts that the appellants' original disclosure lacks support for the spindle driven arrangement being "for generating a pair of opposing forces"<sup>5</sup> (answer, page 6). While the appellants' original disclosure (specification, pages 4 and 8) provides support for a spindle drive to effect a force coupling between the free end (38) of the bendable support (34) and the support (16), we find nothing in the original disclosure which would have reasonably conveyed that the spindle drive arrangement itself generates a "pair of opposing forces."

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<sup>4</sup> In reaching this conclusion, we note that we consider "device" to be sufficiently broad to encompass either a single actuator or multiple actuators.

<sup>5</sup> This language was added by amendment in Paper No. 9.

Accordingly, we shall sustain the examiner's rejection of claim 11 under 35 U.S.C. § 112, first paragraph, as lacking support in the appellants' original disclosure.

The Anticipation Rejection

Rosenbaum discloses a flexible switch wherein a switch tongue (18) may be switched from a straight-ahead position (shown in dotted lines in Figure 1) to a branch position (shown in solid lines in Figure 1) by "any suitable driving means" (column 3, lines 17 to 19). The switch tongue is fixed at one end to pivot about a king pin (24). During positioning in the branch position, the switch tongue is bent about an abutment block (30). With regard to whether Rosenbaum anticipates claim 14, the only matter in dispute is whether the switch tongue is bent "according to a changing radius of curvature beginning at the first, fixed end with a value of *infinity* and at the second end, with a *predetermined value*." [emphasis added]

It is axiomatic that, in proceedings before the PTO, claims in an application are to be given their broadest reasonable interpretation consistent with the specification, and that claim language should be read in light of the

specification as it would be interpreted by one of ordinary skill in the art. In re Sneed, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983). Moreover, limitations are not to be read into the claims from the specification. In re Van Geuns, 988 F.2d 1181, 1184, 26 USPQ2d 1057, 1059 (Fed. Cir. 1993) citing In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

The broadest reasonable interpretation of "a predetermined value" encompasses any and all values from zero to infinity, inclusive, in our opinion.<sup>6</sup> Therefore, regardless of the particular value of the radius of curvature of the switch tongue at the second end (the end abutting the abutment block 32) in the branch position, the radius of curvature at that second end has "a predetermined value" as claimed.

The only remaining issue is whether the radius of curvature of the switch tongue (18) in the branch position has a value of infinity (i.e., is straight) at the fixed end

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<sup>6</sup> "Predetermine" is defined as "to determine, decide or decree beforehand" (Webster's New World Dictionary, Third College Edition (Simon & Schuster, Inc. 1988)).

thereof. Our review of Figure 1 of Rosenbaum indicates that the switch tongue (18) assumes a straight shape (i.e., has a radius of curvature of infinity) for some length from the fixed end before starting to curve away from the straight-line contour approximately mid-way between the fixed end and the first abutment. While Rosenbaum refers to the shape of the switch tongue in its branch position as corresponding to "a parabola having its vertex at the block 30" with a short circular arc at the vertex (column 3, lines 38 to 42), we interpret this description to be merely a general (and not necessarily mathematically precise) description of the shape implying that the end portions approximate straight lines. Further, the appellants have admitted, on page 11 of Paper No. 9, that

Rosenbaum teaches that the middle region of the girder or beam follows a circle and the end follows a parabolic section. Due to this, the ends have a curvature of 0, an infinite curvature radius.<sup>7</sup>

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<sup>7</sup> Although the appellants have argued to the contrary on page 8 of the brief, the appellants' counsel conceded at the hearing that the fixed end of the Rosenbaum switch tongue has an infinite radius of curvature.

In view of the above, we find no reason to conclude that the examiner's finding (answer, page 7) that the Rosenbaum switch tongue has a radius of curvature of infinity at the fixed end in the branch position is in error. Accordingly, we shall affirm the examiner's rejection of claim 14 under 35 U.S.C. § 102(b).

CONCLUSION

To summarize, the decision of the examiner to reject claims 6 through 11 under 35 U.S.C. § 112, second paragraph, is affirmed. The decision of the examiner to reject claims 5 through 15 under 35 U.S.C. § 112, first paragraph, as being based on a disclosure which fails to adequately teach how to make and/or use the invention is reversed. The examiner's decision to reject claim 15 under 35 U.S.C. § 112, first paragraph, as lacking support in the original disclosure is reversed. However, the examiner's decision rejecting claim 11 under 35 U.S.C. § 112, first paragraph, as lacking support in the original disclosure, and claim 14 under 35 U.S.C. § 102(b) is affirmed.

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

IAN A. CALVERT	)	
Administrative Patent Judge	)	
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	)	BOARD OF PATENT
HARRISON E. McCANDLISH, Senior)	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
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JENNIFER D. BAHR	)	
Administrative Patent Judge	)	

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