

The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* ROBERT M. ANDRES

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Appeal 2007-2980  
Application 10/396,649  
Technology Center

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Decided: October 31, 2007

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Before TERRY J. OWENS, MURRIEL E. CRAWFORD, and ANTON W. FETTING, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellant appeals from a rejection of claims 1-8, 11-18 and 21-25, which are all of the pending claims.

THE INVENTION

The Appellant claims a method for sensitizing an air bag deployment threshold. Claim 1 is illustrative:

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1. A method of sensitizing an air bag deployment threshold comprising the steps of:
    - (1) measuring a first acceleration;
    - (2) measuring a second acceleration in a direction generally opposite the first acceleration;
    - (3) measuring a third acceleration;
    - (4) determining if the first acceleration exceeds a predetermined acceleration;
    - (5) comparing the third acceleration to a reference value, the reference value having an origin biased in the direction of the second acceleration; and
    - (6) increasing a crash-pulse energy term in response to the third acceleration increasing above the reference value of said step (5).

## THE REFERENCE

Feser US 6,584,386 B2 Jun. 24, 2003  
(filed Mar. 5, 2001)

## THE REJECTIONS

Claims 1-8, 11-18 and 21-25 stand rejected as follows: under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter the Appellant regards as the invention; under 35 U.S.C. § 112, first paragraph, written

description requirement;<sup>1</sup> and under 35 U.S.C. § 103 as being unpatentable over Feser.

## OPINION

We affirm the rejections under 35 U.S.C. § 112, first and second paragraphs.<sup>2</sup> Due to the indefiniteness of the claims we do not reach the rejection under 35 U.S.C. § 103.

### Rejection under 35 U.S.C. § 112, second paragraph

The first five steps of the Appellant's claim 1 require:

- (1) measuring a first acceleration (p1 in figure 4),<sup>3</sup>
- (2) measuring a second acceleration in a direction generally opposite the first acceleration (p2 in figure 4),
- (3) measuring a third acceleration (p3 in figure 4),
- (4) determining if the first acceleration exceeds a predetermined acceleration (ROW1\_MAX\_MIN in figure 4 (Spec. ¶ 25; Br. 7)),
- (5) comparing the third acceleration to a reference value, the reference value having an origin biased in the direction of the second acceleration....

In comparing step (5) the limitation "a reference value, the reference value having an origin biased in the direction of the second acceleration" was added by amendment (filed August 22, 2005). Regarding the comparing step the Specification states (Spec. ¶ 25):

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<sup>1</sup> The Examiner makes a corresponding objection to the Specification under 35 U.S.C. § 132 (Ans. 4-5).

<sup>2</sup> We also sustain the objection to the Specification under 35 U.S.C. § 132.

Acceleration peak p3 is in the crash direction and exceeds the ROW1\_MAX\_MIN level to again qualify for a minimum significant level. Where acceleration peak p3 crosses the ROW\_1\_MAX\_MIN level initiates an increase in the CPR term (CPE1) because the energy of [p3] is greater than p1 when considering the origin of p3 and the time interval between p1 and p3.

The origin of p3 referred to appears to be the horizontal line at the lower end of the line having circles in it that extends downwardly from p3 in figure 4. That horizontal line is the p2 peak clipped to approximately half (or other percentage) of the previous peak (p1) size (Spec. ¶ 24).

The added limitation “having an origin biased in the direction of the second acceleration” is broader than the original disclosure. It encompasses not only the disclosed clipped p2 peak but also any other value that arguably can be considered biased in the direction of p2.

The Appellant argues that the reference value in step (5) is the vertical line having horizontal dashes through p2 in figure 4 (Br. 7).<sup>4</sup> The origin of the reference value, the Appellant argues, is the horizontal line above p2 in figure 4, i.e., p2 clipped to approximately 50% of p1. *See id.* Apparently the Appellant is arguing that the reference value is the horizontal clipped p2 line. Otherwise, it is not clear which point on the vertical line with horizontal dashes through p2 is the reference value. Regardless, the

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<sup>3</sup> References herein to figure 4 are to the figure as amended August 22, 2005.

<sup>4</sup> The Appellant does not include the rejection under 35 U.S.C. § 112, second paragraph, in the Appellant’s list of rejections (Br. 8). However, because the Appellant has set forth the Appellant’s argued meaning of the claims (Br. 7-8), we address the claim clarity issue.

Appellant's original disclosure states that peak p3 is compared to ROW1\_MAX\_MIN, not to the clipped p2 value (Spec. ¶ 25). Because ROW1\_MAX\_MIN is toward p2 from p3, ROW1\_MAX\_MIN arguably can be considered biased in the direction of p2. Because any other point in the direction of p2 also could be considered biased in the direction of p2, the claim limitation "having an origin biased in the direction of the second acceleration" is unclear. It is a generic expression that arguably encompasses the Appellant's claim interpretation but also encompasses an undeterminable number of other claim interpretations.

The last step of claim 1 is:

(6) increasing a crash-pulse energy term in response to the third acceleration increasing above the reference value of said step (5).

Step (5) recites that the reference value has an origin biased in the direction of the second acceleration. The Appellant's Specification, however, states that "[w]here acceleration peak 3 crosses the ROW1\_MAX\_MIN level initiates an increase in the CPE term (CPE 1)...” (Spec. ¶ 25). Thus, the Specification indicates that the reference value that p3 must exceed in step (6) to increase the crash-pulse energy term is ROW1\_MAX\_MIN, not the horizontal clipped p2 line as apparently argued by the Appellant with respect to step (5). Arguably, like the horizontal clipped p2 line, ROW1\_MAX\_MIN is biased in the direction of p2, but so is any other value in the p2 direction.

The Appellant argues that the reference value in step (6) to which p3 is compared is the vertical line with horizontal dashes to the left of the

vertical line with circles ending at p3 in figure 4 (Br. 7). That vertical line with horizontal dashes extends between the horizontal clipped p2 line and ROW1\_MAX\_MIN. What determines whether the crash-pulse energy term is increased, however, is the relationship of p3 to ROW1\_MAX\_MIN (Spec. ¶ 25), not a line origin. Regardless, even if the vertical line with horizontal dashes can somehow be considered a reference value, the claim 1 language “origin biased in the direction of the second acceleration” encompasses an origin at any point on that line and any other origin in the p2 direction. For this additional reason the “origin biased in the direction of the second acceleration” limitation renders the scope of claim 1 unclear.

The Appellant’s claim 12 differs from claim 1 by reciting that the third acceleration is in a direction generally the same as the first acceleration. That limitation appears to be implicit in claim 1 because, as disclosed in the Appellant’s Specification (Spec. ¶¶ 23 and 25), both the first and third accelerations are in the crash direction. Regardless, as in claim 1, “origin biased in the direction of the second acceleration” renders claim 12 indefinite.

The Examiner argues that it is unclear whether “origin” refers to magnitude or the timing (Ans. 6).<sup>5</sup> The Appellant responds (Br. 10):

As to it not being clear if the original [sic, origin] stands for the “magnitude” or the “timing,” the entirety of the specification makes this clear. Note labels  $t_0$ , “crash direction” and “anti-crash direction.”

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<sup>5</sup> This argument was set forth by the Examiner with respect to the rejection under 35 U.S.C. § 112, first paragraph, written description (Ans. 6), but we discuss it with respect to the rejection under 35 U.S.C. § 112, second paragraph, because it is a claim clarity issue.

Appellant also labels the timing bars TL0, TL1, etc., to illustrate the time periods as discussed in the specification.

As indicated in the Appellant's figure 4, "t<sub>0</sub>" and the timing bars pertain to time whereas "crash direction" and "anti-crash direction" pertain to magnitude. Hence, the Appellant's argument that mixes t<sub>0</sub>, "crash direction", "anti-crash direction", TL0 and TL1 supports the Examiner's argument that it is unclear whether "origin" pertains to time or magnitude.

For the above reasons the Appellant's independent claims 1 and 12 and dependent claims 2-8, 11, 13-18 and 21-27 fail to comply with the 35 U.S.C. § 112, second paragraph, claim clarity requirement.

#### Rejection under 35 U.S.C. § 112, first paragraph

The Examiner argues that the Appellant's original disclosure does not provide adequate written descriptive support for "reference value having an origin biased in the direction of the second acceleration" in step (5) of independent claims 1 and 12 (Ans. 10). The Appellant argues that "[a]s illustrated in Figure 4, the horizontal line which cuts across peak P2 defines the origin that is biased in the direction of the second acceleration" (Br. 10). That line may be an origin biased in the direction acceleration, but it does not define the origin biased in the direction of the second acceleration. Any point in the direction of the second acceleration arguably can also be an origin biased in the direction of the second acceleration. The Appellant's original disclosure does not provide adequate written descriptive support for that breadth of "reference value having an origin biased in the direction of the second acceleration" added by amendment (filed August 22, 2005).

For the above reasons the Appellant's independent claims 1 and 12 and dependent claims 2-8, 11, 13-18 and 21-25 fail to comply with the 35 U.S.C. § 112, first paragraph, written descriptive support requirement.

The Examiner argues that the recitations in claims 21-25 regarding the origin do not have adequate written descriptive support in the Appellant's original disclosure (Ans. 6). The Appellant does not respond to the Examiner's argument. For this additional reason we find that claims 21-25 fail to comply with the 35 U.S.C. § 112, first paragraph, written descriptive support requirement.

#### Objection to the Specification under 35 U.S.C. § 132

Because the Specification and the claims contain new matter and the Examiner has both objected to the Specification and rejected the claims based upon that new matter, we rule on the propriety of the objection to the Specification. *See Manual of Patent Examining Procedure* § 2163.06(II)(8<sup>th</sup> ed., rev. 5, Aug. 2006).

The Examiner argues that “The origin of the first peak reference value (dashed vertical line) is located at a percentage of the first peak value” added to Specification paragraph 24 is new matter (Ans. 4-5). The Appellant argues that support appears in the notation in figure 4 that “The minimum is clipped below zero to a percentage of the first peak (p1) size (ex. 50%)” (Br. 9). That argument is not well taken because the Appellant's original disclosure indicates that the first peak reference value is ROW1\_MAX\_MIN (Spec. ¶ 23), not the clipped p2 peak. The Appellant also argues that “still further explanation is provided throughout the Appellant's specification”

(Br. 9). Because the Appellant does not point with reasonable specificity to any relied-upon portion of the Specification, that argument is not persuasive.

The Examiner argues that “That is, the origin of the first peak reference value is biased in the direction of the second peak” added by amendment (filed Aug. 22, 2005) to Specification paragraph 25 is new matter (Ans. 5). The Appellant argues that “Appellant’s added statement ‘that is, the origin of the first peak reference value is biased in the direction of the second peak’ simply recites what Appellant had previously stated in a more concise sentence” (Br. 9). The previous sentence originally read: “Where acceleration peak p3 crosses the ROW1\_MAX\_MIN level initiates an increase in the CPE term (CPE1) because the energy of [sic] is greater than p1 when considering the origin of p3 and the time interval between p1 and p3.” The Appellant amended that sentence to read: “Where acceleration peak p3 increases above the first peak reference value the CPE term (CPE1) is increased because the energy is greater than p1 when considering the origin of p3 and the time interval between p1 and p3.” Both of those sentences pertain to the CPE term increasing when acceleration peak p3 crosses the first peak reference value which is ROW1\_MAX\_MIN. It does not follow from either the original or the modified sentence that the origin of the first peak reference value is biased in the direction of the second peak as stated in the next sentence added by amendment. The added sentence is broader and introduces the concept of the first peak reference value, rather than being limited to ROW1\_MAX\_MIN, being any value biased in the direction of the second peak. Hence, the added sentence adds new matter to the Specification.

We therefore sustain the Examiner's objection to the Specification under 35 U.S.C. § 132.

#### Rejection under 35 U.S.C. § 103

In some instances, it is possible to make a reasonable, conditional interpretation of claims adequate for the purpose of resolving patentability issues to avoid piecemeal appellate review. In the interest of administrative and judicial economy, this course is appropriate wherever reasonably possible. *See Ex parte Saceman*, 27 USPQ2d 1472, 1474 (Bd. Pat. App. & Int. 1993); *Ex parte Ionescu*, 222 USPQ 537, 540 (Bd. App. 1984). In other instances, however, it may be impossible to determine whether or not claimed subject matter is anticipated by or would have been obvious over references because the claims are so indefinite that considerable speculation and assumptions would be required regarding the meaning of terms employed in the claims with respect to the scope of the claims. *See In re Steele*, 305 F.2d 859, 862, 134 USPQ 292, 295 (CCPA 1962). For the reasons set forth above the Appellants' claims are sufficiently indefinite that application of the prior art to the claims is not possible.

The Appellant argues that "the horizontal lines which extend from an apex of a peak (or are clipped to a percentage thereof) and then pass through a subsequent peak are for reference only to define the biased origin for measurement of subsequent peaks" (Br. 9). Feser's statement that "[t]he CPF term exclusively supplies a contribution to the threshold when the level of the minimum  $A_{m2}$  occurring later in time is greater than the level of the minimum  $A_{m1}$  earlier in time" (col. 8, ll. 53-56) indicates that a crash pulse energy term (CPF) is increased when  $A_{m2}$  exceeds the horizontal line

through  $A_{m1}$  in Feser's figure 7. Hence, if the Appellant's claim limitation "reference value having an origin biased in the direction of the second acceleration" encompasses a horizontal line from a previous peak, then in Feser's figure 7 the horizontal line at  $A_{m1}$  can be a reference value for peak  $A_{m2}$  having an origin biased in the direction of the second acceleration ( $A_m$ ). However, because, as discussed above regarding the rejection under 35 U.S.C. § 112, second paragraph, that claim limitation can have other meanings that render the scope of the claims unclear, Feser cannot be applied to the claims. Consequently we do not reach the rejection under 35 U.S.C. § 103.

#### DECISION

The rejections of claims 1-8, 11-18 and 21-25 under 35 U.S.C. § 112, second paragraph, and under 35 U.S.C. § 112, first paragraph, written description requirement, are affirmed. We sustain the objection to the Specification under 35 U.S.C. § 132. Due to the indefiniteness of the claims we do not reach the rejection under 35 U.S.C. § 103.

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AFFIRMED

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

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