UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN ANTHONY LOTSPIH

Appeal No. 2005-2656
Application No. 09/805,586

ON BRIEF

Before McQUADE, CRAWFORD, and BAHR, Administrative Patent Judges.

APJ McQUADE, Administrative Patent Judge.

DECISION ON APPEAL

John Anthony Lotspih appeals from the final rejection of claims 1-20, all of the claims pending in the application.

THE INVENTION

The invention relates to "an air bag assembly including portions for the protection of the head and torso of a vehicle occupant during a side collision event" (specification, page 1). Representative claim 1 reads as follows:

l. An air bag assembly in a vehicle for side impact protection of a vehicle occupant, the air bag assembly comprising:

an inflator for discharging a gaseous inflation medium; and

an air bag cushion including a first inflatable portion proximal to the inflator for cushioning the torso of the vehicle occupant, a second inflatable portion distal from the inflator for cushioning the head of the vehicle occupant, a first expansion restraining element extending partially but not completely across the width of the air bag cushion in substantially nonparallel relation to a flow path of said gaseous inflation medium between the first and second inflatable portions, and at least a second expansion restraining element extending partially but not completely across the width of the air bag cushion in opposing staggered relation to the first expansion restraining element in substantially nonparallel relation to said flow path of said gaseous inflation medium, wherein the expansion restraining elements are adapted to remain operative so as to provide expansion restraint upon full inflation of the air bag cushion without failing such that the expansion restraining elements restrict expansion of the air bag cushion in the region between the first and second inflatable portions.

THE PRIOR ART

The references relied on by the examiner as evidence of obviousness are:

Matsushima et al. (Matsushima)	5,618,595	Apr. 08, 1997
Yamamoto et al. (Yamamoto)	6,065,772	May 23, 2000
Okumura et al. (Okumura)	6,129,377	Oct. 10, 2000

THE REJECTIONS

Claims 1-20 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 1-4, 7-15 and 18-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto in view of Okumura.

Claims 5, 6, 16 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto in view of Okumura and Matsushima.

Attention is directed to the main and reply briefs (filed June 8, 2004 and April 22, 2005) and the final rejection and answer (mailed November 13, 2003 and February 24, 2005) for the respective positions of the appellants and examiner regarding the merits of these rejections.

DISCUSSION

I. The 35 U.S.C. § 112, first paragraph, rejection of claims 1-20

As indicated above, this rejection rests on an alleged failure of the appellant's specification to comply with the written description requirement of § 112, ¶ 1. The test for determining compliance with this 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).

According to the examiner, the original disclosure in the instant application would not reasonably convey to the artisan that the appellant had possession at that time of the subject matter now claimed because "[c]laims 1, 11, and 12 define [that] the expansion restraining elements remain operative *without failing*, however the specification does not convey to one skilled in the art what parameters determine a successful and/or failing expansion restraining element" (final rejection, page 2).

Although the specification does not describe such parameters, the failure to do so, in and of itself, does not justify the examiner's rejection. The stated criticism of the

appellant's specification is not commensurate with the scope of the appealed claims, none of which actually recites parameters of the sort in question. Independent claims 1, 11 and 12 simply call for the expansion restraining elements to remain operative upon full inflation of the air bag cushion without failing. Relevant portions of the original specification indicate that the expansion restraining elements (1) "provide the desired deployed [air bag] configuration" (page 2), (2) "may be of structurally similar character to [the air bag] connective perimeter seams" (page 3), (3) "substantially preclud[e] inflatable expansion at the locations of their occurrence" (page 8), (4) "may be utilized to obtain desired expanded profile characteristics" (page 8), (5) "are introduced using the same connective procedures as may be used to apply the connective perimeter seams" (page 10), and (6) provide "control over the deployment profile of the air bag cushion" (page 11). These statements would reasonably convey to the artisan that the appellant had possession at that time of an air bag assembly comprising expansion restraining elements which remain operative upon full inflation of the air bag cushion without failing as is now recited in claims 1, 11 and 12.

Hence, we shall not sustain the standing 35 U.S.C. § 112, first paragraph, rejection of independent claims 1, 11 and 12, and dependent claims 2-10 and 13-20, as being based on a specification which fails to comply with the written description requirement.

II. The 35 U.S.C. § 103(a) rejection of claims 1-4, 7-15 and 18-20 as being unpatentable over Yamamoto in view of Okumura

Yamamoto, the examiner's primary reference, pertains to side impact air bag systems. For purposes of the rejection, the examiner focuses on the air bag embodiment illustrated in Figures 9-12 which is designed to inflate and deploy without being obstructed by a seat belt. This air bag 50 comprises an inflator 22, a lower chamber 51, an upper chamber 52, an upper rear chamber 53, a seam 55 separating, and defining a communication hole 54 between, the lower and upper chambers, and a seam 57 separating, and defining a communication hole 56 between, the upper and upper rear chambers. The seam 55 resists tearing during inflation, while the seam 57 tears to permit full deployment of the upper rear chamber when the inflation pressure reaches a predetermined value (see column 7, line 56, through column 8, line 15). The following passage from the reference describes the desired inflation and deployment sequence:

> When a collision force is applied to the side of the vehicle, the sensor (not shown) detects the collision force and transmits an operation command to the inflator 22. As shown in FIG. 11(a) and FIG. 12(b), the inflator 22 blows out gas G1 via the discharge ports formed in its lower portion into the lower chamber 51. The lower chamber 51 is inflated by the gas G1 to intervene between the passenger's torso and the inner wall for the vehicle compartment.

Even while the lower chamber 51 is being deployed, the gas G1 continues to be blown from the discharge ports. Therefore, the mainstream of the gas G1 hits the inner surface of the air bag 50 in the vehicle front side of the lower chamber 28. The gas G1 is reflected by the inner surface of the air bag 50 and directed to the vehicle rear side of the lower chamber 51, while substantially completely inflating the lower chamber 51.

Gas G2 deflected to the vehicle rear side of the lower chamber 51 hits the inner surface of the vehicle rear side of the air bag 50. Since the lower chamber 51 is completely inflated, however, the gas G2 passes the communication hole 54. The gas G2, immediately before passing the communication hole 54, has a momentum to flow to the vehicle rear side of the air bag 50. Therefore, the gas G2 is reflected by the inner surface of the vehicle rear side of the air bag 50 while passing the communication hole 54. After having passed the communication hole 54, gas G3 is reflected by the inner surface of the vehicle rear side of the air bag 50. Subsequently, as shown in FIG. 12(c), the gas G3 is then directed toward the vehicle front side of the upper chamber 52.

As shown in FIG. 11(b), the gas G3 flowing towards the vehicle front side of the upper chamber 52 is reflected by the inner surface of the vehicle front side of the upper chamber 52, before gas G4 flows toward the vehicle rear side of the upper chamber 52. The flow of gas G3, G4 causes the upper chamber 52 to be substantially completely inflated, as shown in FIG. 12(d).

A part of the gas G4 passes the communication hole 56 via the tear seam 57 and flows from the vehicle front side of the air bag 50 into the upper rear chamber 53, inflating and deploying a part of the upper rear chamber 53 toward the vehicle rear upper side. At this time, the upper part of the upper chamber 52 is deployed above the seat belt X, and a part of the upper rear chamber 53 turns above the seat belt X and deploys.

Thereafter, as shown in FIG. 11(c) and FIG. 12(e), the upper chamber 52 and a part of the upper rear chamber 53 are substantially completely deployed. When the internal pressure of the chambers 52 and 53 reaches a specified pressure, the tear seam 57 starts tearing from the side of the communication hole 56 due to the pressure. After the tear seam is entirely torn, the remaining part of the upper rear chamber 53 is deployed toward the vehicle rear side. The upper chamber 52 and the upper rear chamber 53 are combined into one, and the upper rear chamber 53 is substantially completely deployed. Since the remaining part of the upper rear chamber 53 is deployed avoiding, or deployed

> above the seat belt X, the seat belt X is prevented from obstructing deployment of the air bag [column 8, line 36, through column 9, line 27].

In applying Yamamoto against the appealed claims (see page 3 in the final rejection), the examiner finds correspondence between the expansion restraining elements recited in independent claims 1, 11 and 12 and the air bag seams 55 and 57 disclosed by Yamamoto. The examiner concedes, however, that Yamamoto's seams, considered together, do not respond to the limitations in these claims requiring the expansion restraining elements to remain operative upon full inflation of the air bag cushion without failing. In this regard, only one of Yamamoto's seams (seam 55) remains operative upon full inflation of the air bag cushion without failing. To overcome this deficiency, the examiner turns to Okumura.

Okumura discloses a side impact air bag made from a one-piece cloth member 9 (see Figure 9) which is folded upon itself and stitched along its adjacent peripheral edges. The air bag 11 includes an inner side wall 12, and outer side wall 13, an upper side 14, an oblique side 15, a lower side 16, a rear side 17 and a cylindrical gas inlet 19. The bag also includes a linear array of tensing joints 22 formed by stitching the inner side wall 12 to the outer wall 13 at spaced locations on the bag. When the bag is inflated, these joints establish a tension line which provides the bag with the restraining characteristics necessary to protect a passenger's head. Okumura teaches that the

tensing joints should be configured and arranged to facilitate the smooth flow of inflation gas throughout the bag (see column 10, line 59 et seq.).

Likening Okumura's tensing joints 22 to Yamamoto's seams 55 and 57, the examiner submits that

> it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the air bag assembly of Yamamoto et al. such that . . . the expansion restraint elements remain operative upon full inflation, such as the air bag assembly disclosed in Okumura et al. One would have been motivated to make such a modification in view of the suggestion in Okumura et al. that . . . the expansion restraint elements that remain operative upon inflation allow for smooth flow of inflating gas [final rejection, page 3].

Okumura, however, does not actually teach or suggest that expansion restraint elements that remain operative upon inflation lead to the smooth flow of inflating gas. Instead, Okumura teaches that tensing joints 22, which are necessary to provide air bag 11 with desirable restraint characteristics, may smooth the flow of inflating gas if they are suitably configured and arranged. These tensing joints 22 perform an entirely different function compared to the seams 55 and 57 disclosed by Yamamoto, and would not have furnished the artisan with any motivation or suggestion to modify Yamamoto's tear seam 57 so that it remains operative upon full inflation of the air bag cushion without failing. Indeed, such a modification would destroy the air bag inflation and

deployment sequence sought by Yamamoto to avoid obstruction by a seat belt. The only suggestion to combine Yamamoto and Okumura in the manner advanced by the examiner stems from hindsight knowledge impermissibly derived from the appellant's disclosure.

Accordingly, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of independent claims 1, 11 and 12, and dependent claims 2-4, 7-10, 13-15 and 18-20, as being unpatentable over Yamamoto in view of Okumura.

III. The 35 U.S.C. § 103(a) rejection of claims 5, 6, 16 and 17 as being unpatentable over Yamamoto in view of Okumura and Matsushima

As the examiner's application of Matsushima does not cure the above discussed shortcomings of Yamamoto and Okumura relative to parent claims 1 and 12, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of dependent claims 5, 6, 16 and 17 as being unpatentable over Yamamoto in view of Okumura and Matsushima.

SUMMARY

The decision of the examiner to reject claims 1-20 is reversed.

REVERSED

JOHN P. McQUADE Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
MURRIEL E. CRAWFORD Administrative Patent Judge	
JENNIFER D. BAHR Administrative Patent Judge	

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