

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

**Application No:** 81143194  
**Filing Date:** August 18, 2006  
**Applicant(s):** Jon Nichols, et al.  
**Confirmation No:** 1364  
**Group Art Unit:** 3677  
**Examiner:** Emily M. Morgan  
**Title:** Door Hinge System For Automotive Vehicle  
**Attorney Docket No:** 81143194  
**Customer No:** 91663

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**APPEAL BRIEF**

This brief is submitted in support of the Notice of Appeal of the Final Rejection filed December 2, 2009.

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## **I. Real Party in Interest**

The real party in interest in this matter is Ford Global Technologies, LLC, which is a wholly owned subsidiary of Ford Motor Company, both of Dearborn, Michigan (hereinafter “Ford”).

## **II. Related Appeals and Interferences**

There are no other known appeals or interferences which will directly affect or be directly affected by or have bearing on the Board’s decision in the pending appeal.

## **III. Status of the Claims**

Claims 1-3 and 5-10 are pending in the application. All claims stand finally rejected.

The rejection of Claims 1-3 and 5-10 is being appealed.

## **IV. Status of Amendments**

No amendments were filed following the Final Rejection.

## **V. Summary of Claimed Subject Matter**

Claims 1, 7, and 8 are the only independent claims in this case. Each of the claims is best understood with reference to Figures 1-6, and with reference to the following citations to Appellant’s specification.

### Independent Claim 1

A door hinge system for an automotive vehicle includes a hinge body, 36 (¶ 21, ln. 1-2) having a first portion, 36a, pivotably attached to vehicle door 22, and a second portion, 36b, pivotably attached to C-pillar 28 (¶ 21, ln. 1-2). A central control link, 40, having a first link end, 40a, and a second link end, 40b (¶ 21, ln. 3-4), is pivotably attached to hinge body 36 at a location offset laterally from a line connecting the pivot points at which hinge body 36 is attached to door 22 and C-pillar 28 (¶ 26, ln. 2-5). Control link 40 is attached to hinge body 36 at a position mediate its first and second ends (¶ 26, ln. 2-4). A body link, 48, has a first end, 48a, pivotably attached to C-pillar 28, and a second end, 48b, pivotably attached to the first link end 40a of control link 40 (¶ 22, ln.1-6). A door link, 52, has a first end, 52a, pivotably attached to door 22, and a second end, 52b, pivotably attached to the second link end 40b of control link 40 (¶ 22, ln.1-6).

### Independent Claim 7

A door system for an automotive vehicle includes a door, 22, adapted for swinging about a generally vertical axis, upper hinge, 30, and lower hinge 32 (¶ 20, ln.1-5). Each of the upper and lower hinges includes a hinge body, 36 (¶ 21, ln. 1-2) having a first portion, 36a, pivotably attached to vehicle door 22, and a second portion, 36b, pivotably attached to C-pillar 28 (¶ 21, ln. 1-2). A central control link, 40, having a first link end, 40a, and a second link end, 40b (¶ 21, ln. 3-4), is

pivotably attached to hinge body 36 at a location offset laterally from a line connecting the pivot points at which hinge body 36 is attached to door 22 and C-pillar 28 (§ 26, ln. 2-5). Control link 40 is attached to hinge body 36 at a position mediate its first and second ends (§ 26, ln. 2-4). A body link, 48, has a first end, 48a, pivotably attached to C-pillar 28, and a second end, 48b, pivotably attached to the first link end 40a of control link 40 (§ 22, ln.1-6). A door link, 52, has a first end, 52a, pivotably attached to door 22, and a second end, 52b, pivotably attached to the second link end 40b of control link 40 (§ 22, ln.1-6).

### Independent Claim 8

An automotive vehicle includes a body, 14, having a door opening with a door, 22, adapted for swinging about a generally vertical axis. (§ 18, ln.1-4). A hinge body, 36 (§ 21, ln. 1-2) has a first portion, 36a, pivotably attached to vehicle door 22, and a second portion, 36b, pivotably attached to C-pillar 28 (§ 21, ln. 1-2). A central control link, 40, has a first link end, 40a, and a second link end, 40b (§ 21, ln. 3-4), which is pivotably attached to hinge body 36 at a location offset laterally from a line connecting the pivot points at which hinge body 36 is attached to door 22 and C-pillar 28 (§ 26, ln. 2-5). Control link 40 is attached at a position mediate its first and second ends (§ 26, ln. 2-4). A body link, 48, has a first end, 48a, pivotably attached to C-pillar 28, and a second end, 48b, pivotably attached to

the first link end 40a of control link 40 (§ 22, ln.1-6). A door link, 52, has a first end, 52a, pivotably attached to door 22, and a second end, 52b, pivotably attached to the second link end 40b of control link 40 (§ 22, ln.1-6).

upper hinge, 30, and lower hinge 32 (§ 20, ln.1-5).

## **VI. Grounds of Rejection to be Reviewed on Appeal**

1. The rejection of Claims 1-3 and 5-10 under 35 U.S.C. §103(a) as being unpatentable over Gross (US 758,530) in view of Siladke. (US 5,491,875).

## VII. Arguments

**The rejection of Claims 1-3 and 5-10 under 35 U.S.C. §103(a) as being unpatentable over Gross (US 758,530) in view of Siladke. (US 5,491,875).**

1. The Examiner bases the rejection upon the stated premise that it would have been obvious to alter the shape of the main hinge body of Gross to accommodate an alternative use, as taught by Siladke. As motivation, the Examiner cites a desire to reduce cost by using a design which, the Examiner asserts, would not require undue changes to a hinge allegedly configured similarly to that of the Gross hinge.

Appellants respectfully submit that the Examiner is misinterpreting Siladke; moreover, the Examiner has premised the rejection upon unsupportable assumptions.

The Examiner assumes that Gross, as modified by some feature of Siladke, would be less expensive, but there is no evidence to support this conclusion. More fundamentally, the Gross and Siladke hinges are not configured similarly. Gross has a central control link 15, which has two end links 17 and 19. Siladke, on the other hand, clearly lacks a central control link because Siladke uses two middle links, 44 and 52, which extend between bracket 30 which is bolted to a vehicle body, and bracket 60, which is bolted to a vehicle door – there is no central control link. In fact, Siladke's structures 44 and 52 are not 'links' because they are rigidly,

as opposed to pivotably, attached to the vehicle body and door. It is clear that the lexicography of Appellants' specification uses the term 'link' only to refer to a member having a pivotable mounting at both ends.

The Gross and Siladke hinges are mechanically incompatible, and the Examiner has not offered a cogent argument for overcoming this incompatibility. The Examiner argues that it would have been obvious to modify the shape of the main body of the hinge, citing Gross at item 12 and Siladke at item 52, but the Examiner is incorrect because Siladke's item 52 is not the 'main body' of his hinge. Rather, Siladke's element 44 is the weight bearing element, while item 52 is an attitude control element. In any event, the Examiner has not explained how one skilled in the art would adapt the central control linkage of Gross to meld with the decidedly functionally different linkage of Siladke.

In essence, the Examiner has failed to provide a sufficient reason, with a rational underpinning, to explain why one having ordinary skill in the art would have modified Gross to include the shape of Siladke's middle link 52, given that the Gross and Siladke hinges operate in fundamentally different ways. Moreover, because Siladke's middle link 52 is not a load bearing link and is not linked or configured in the manner of any of Appellants' links, the Gross/Siladke hinge could not function in the manner claimed by Appellants. As a result, the Examiner's rejection of independent claims 1, 7, and 8 is not sustainable.

Regarding Claim 2, the Examiner argues that it would have been obvious to reshape Gross' main hinge body in a C-Shape. However, there is no teaching or suggestion of a C-shaped main hinge body within either Gross or Siladke, whether these references are taken either singly, or in combination, and, as a result, the Examiner's rejection of Claim 2 is not sustainable for this additional reason.

Claims 3 and 5 depend from Claim 1, and are therefore allowable over the Examiner's rejection.

Regarding Claim 6, the Examiner asserts that the central control link of the combination resulting from Gross and Siladke would be pivoted at a location offset from the center of a line connecting the pivot points of the hinge body. But, the Examiner offers no evidence supporting this contention, and Claim 7 is allowable for this additional reason.

Claims 7 and 8 are allowable for the reasons cited in the discussion of Claim 1.

Claim 9 is allowable because of its dependency upon Claim 7.

Claim 10 is allowable for the same reasons as Claim 2.

**VIII. Conclusion**

For the foregoing reasons, Appellants respectfully request that the Board direct the Examiner in charge of this examination to withdraw the rejections and to issue each of the claims remaining in this case.

Please charge any fees required in the filing of this appeal to deposit account 06-1510.

Respectfully submitted,

Date: \_\_\_\_\_1/27/10\_\_\_\_\_

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**IX. Claims Appendix**

1. A door hinge system for an automotive vehicle, comprising:  
a hinge body having a first portion pivotably attached to a door, and a second portion pivotably attached to a vehicle body;  
a central control link having a first link end and a second link end, with said central control link being pivotably attached to said hinge body at a location offset laterally from a line connecting the pivot points at which said hinge body is attached to said door and said vehicle body, with said control link being attached at a position mediate said first and second link ends;  
a body link having a first end pivotably attached to said vehicle body, and a second end pivotably attached to the first link end of said central control link; and  
a door link having a first end pivotably attached to said door, and a second end pivotably attached to the second link end of said central control link.
2. A door hinge system according to Claim 1, wherein said hinge body comprises a rigid, C-shaped member having a first end pivotably attached to said door and a second end pivotably attached to said vehicle body.
3. A door hinge system according to Claim 1, wherein said second portion of said hinge body is pivotably attached to a C pillar portion of a vehicle body.

5. A door hinge system according to Claim 1, wherein said hinge body is attached to said door and to said vehicle body for rotation about generally vertical axes.

6. A door hinge system according to Claim 1, wherein said central control link is attached to said hinge body at a location offset longitudinally from the center of a line which is parallel to a line connecting the pivot points at which said hinge body is attached to said door and said vehicle body.

7. A door system for an automotive vehicle, comprising:  
a door adapted for swinging about a generally vertical axis;  
an upper hinge body having a first end pivotably attached to an upper portion of said door, and a second end adapted for pivotable attachment to an upper portion of a vehicle body;

and upper central control link having a first link end and a second link end, with said central control link being pivotably attached to said upper hinge body at a location offset laterally from a line connecting the pivot points at which said hinge body is attached to said door and said vehicle body, with said control link being attached at a position mediate said first and second link ends;

a body link having a first end adapted for pivotable attachment to said vehicle body, and a second end pivotably attached to the first link end of said

upper central control link;

a door link having a first end pivotably attached to said door and a second end pivotably attached to the second link end of said upper central control link;

a lower hinge body having a first end pivotably attached to a lower portion of said door, and a second end adapted for pivotable attachment to a lower portion of a vehicle body;

a lower central control link having a first link end and a second link end, with said central control link being pivotably attached to said lower hinge body at a location offset laterally from a line connecting the pivot points at which said hinge body is attached to said door and said vehicle body, with said control link being attached at a position mediate said first and second link ends;

a body link having a first end adapted for pivotable attachment to said vehicle body, and a second end pivotably attached to the first link end of said lower central control link;

a door link having a first end pivotably attached to said door and a second end pivotably attached to the second link end of said lower central control link.

8. An automotive vehicle, comprising:

a body having a passenger compartment with a door opening;

a door sized to fit said door opening;

a hinge body having a first end pivotably attached to said door, and a

second end pivotably attached to said body, such that said door may be rotated about a plurality of generally vertical axes;

a central control link having a first link end and a second link end, with said central control link being pivotably attached to said hinge body at a location offset laterally from a line connecting the pivot points at which said hinge body is attached to said door and said vehicle body, with said control link being attached at a position mediate said first and second link ends;

a body link having a first end pivotably attached to said vehicle body, and a second end pivotably attached to the first link end of said central control link; and

a door link having a first end pivotably attached to said door, and a second end pivotably attached to the second link end of said central control link.

9. An automotive vehicle according to Claim 8, wherein said second end of said hinge body is attached to a C pillar of said body.

10. An automotive vehicle according to Claim 8, wherein said hinge body comprises a C-shaped member.

**X. Evidence Appendix**

None.

**XI. Related Proceedings Appendix**

None.