UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 7,167,294 B2
APPLICATION NO. : 10/817645
DATED : January 23, 2007
INVENTOR(S) : Niall R. Lynam, John O. Lindahl and Hahns Y. Fuchs

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 1:
Line 13, "entirety" should be --entireties--.

Column 6:
Line 46, "ajoint." should be --a joint.--.

Column 8:
Line 34, "piano" should be --plano--.

Column 9:
Line 61, "piano" should be --plano--.

Column 10:
Line 56, "piano" should be --plano--.

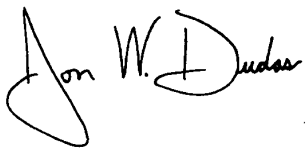
Column 11:
Line 22, "piano" should be --plano--.

Column 13:
Line 45, "piano" should be --plano--.

Column 27:
Claim 49, Line 2, insert --reflective-- after "said".

Signed and Sealed this

Twenty-fourth Day of June, 2008



JON W. DUDAS
Director of the United States Patent and Trademark Office

PTO/SB/44 (09-07)
Approved for use through 08/31/2010. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,167,294 B2

APPLICATION NO.: 10/817,645

ISSUE DATE : January 23, 2007

INVENTOR(S) : Niall R. Lynam, John O. Lindahl, and Hahns Y. Fuchs

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 1:
Line 13, "entirety" should be --entireties--.

Column 6:
Line 46, "ajoint." should be --a joint.--.

Column 8:
Line 34, "piano" should be --plano--.

Column 9:
Line 61, "piano" should be --plano--.

Column 10:
Line 56, "piano" should be --plano--.

Column 11:
Line 22, "piano" should be --plano--.

Column 13:
Line 45, "piano" should be --plano--.

Column 27:
Claim 49, Line 2, insert --reflective-- after "said".

MAILING ADDRESS OF SENDER (Please do not use customer number below):

2851 Charlevoix Drive S.E., Suite 207
P.O. Box 888695
Grand Rapids, MI 49588-8695

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	2917837
Application Number:	10817645
International Application Number:	
Confirmation Number:	2833
Title of Invention:	EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY
First Named Inventor/Applicant Name:	Niall R. Lynam
Customer Number:	28101
Filer:	Catherine S. Collins/Chana Withers
Filer Authorized By:	Catherine S. Collins
Attorney Docket Number:	DON01 P-1148
Receipt Date:	27-FEB-2008
Filing Date:	02-APR-2004
Time Stamp:	14:49:07
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	TransmittalFormSigned.pdf	61276 dea757ff322b1f537a3f7c30df1ca576aff55f6a	no	1

Warnings:	
Information:	

2	Request for Certificate of Correction	CertificateOfCorrectionRequest.pdf	838525 63220d820aad96963e2b34db3effec052a2b9f73	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	899801	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/21 (11-07)
Approved for use through 11/30/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission: 2

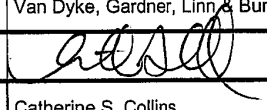
Application Number	10/817,645
Filing Date	April 2, 2004
First Named Inventor	Niall R. Lynam, et al.
Art Unit	2872
Examiner Name	Ricky D. Shafer
Attorney Docket Number	DON09 P-1148

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please identify below):
  Request For Certificate of Correction

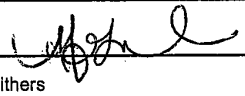
Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Van Dyke, Gardner, Linn & Burkhart, LLP		
Signature			
Printed name	Catherine S. Collins		
Date	February 27, 2008	Reg. No.	37 599

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	Chana L. Withers	Date	February 27, 2008

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,645	01/23/2007	7167294	DON01 P-1148	2833

28101 7590 01/03/2007

VAN DYKE, GARDNER, LINN AND BURKHART, LLP
2851 CHARLEVOIX DRIVE, S.E.
P.O. BOX 888695
GRAND RAPIDS, MI 49588-8695

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Niall R. Lynam, Holland, MI;
John O. Lindahl, Fruitport, MI;
Hahns Y. Fuchs, Dorftrozelten, GERMANY;

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

28101 7590 10/10/2006

VAN DYKE, GARDNER, LINN AND BURKHART, LLP
2851 CHARLEVOIX DRIVE, S.E.
P.O. BOX 888695
GRAND RAPIDS, MI 49588-8695

12/13/2006 WASFAW2 00000049 10817645

01 FC:1501 1400.00 OP
02 FC:1504 300.00 OP

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Catherine S. Collins	(Depositor's name)
	(Signature)
December 8, 2006	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,645	04/02/2004	Niall R. Lynam	DON01 P-1148	2833

TITLE OF INVENTION: EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1400	$300	$0	$1700	01/10/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
SHAFER, RICKY D	2872	359-874000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Van Dyke, Gardner, Linn & Burkhart, LLP
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Donnelly Corporation

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Holland, Michigan

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
☒ Issue Fee
☒ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
☒ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☒ The Director is hereby authorized to charge ~~the required~~ any additional fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 22-0190 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date December 8, 2006

Typed or printed name Catherine S. Collins Registration No. 37 599

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

28101 7590 10/10/2006

VAN DYKE, GARDNER, LINN AND BURKHART, LLP
2851 CHARLEVOIX DRIVE, S.E.
P.O. BOX 888695
GRAND RAPIDS, MI 49588-8695

EXAMINER	
SHAFER, RICKY D	
ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 10/10/2006

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,645	04/02/2004	Niall R. Lynam	DON01 P-1148	2833

TITLE OF INVENTION: EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1400	$300	$0	$1700	01/10/2007

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 07/06) Approved for use through 04/30/2007.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

28101 7590 10/10/2006

VAN DYKE, GARDNER, LINN AND BURKHART, LLP
2851 CHARLEVOIX DRIVE, S.E.
P.O. BOX 888695
GRAND RAPIDS, MI 49588-8695

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,645	04/02/2004	Niall R. Lynam	DON01 P-1148	2833

TITLE OF INVENTION: EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1400	$300	$0	$1700	01/10/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
SHAFER, RICKY D	2872	359-874000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,645	04/02/2004	Niall R. Lynam	DON01 P-1148	2833

28101 7590 10/10/2006

VAN DYKE, GARDNER, LINN AND BURKHART, LLP
2851 CHARLEVOIX DRIVE, S.E.
P.O. BOX 888695
GRAND RAPIDS, MI 49588-8695

EXAMINER	
SHAFER, RICKY D	
ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 10/10/2006

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 07/06) Approved for use through 04/30/2007.

Notice of Allowability	Application No.	Applicant(s)	
	10/817,645	LYNAM ET AL	
	Examiner	Art Unit	
	Ricky D. Shafer	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *07/10/2006*.

2. ☒ The allowed claim(s) is/are *60-117*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

RICKY D. SHAFER
PATENT EXAMINER
ART UNIT 2872

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. The application has been amended as follows:

In claim 109, line 1, numeral "110" has been changed to read --108--.

In claim 110, line 1, numeral "108" has been changed to read --109--.

3. The following is an examiner's statement of reasons for allowance:

The prior art of record does not teach or fairly suggest an automobile exterior side view mirror system that includes a first reflective element with unit magnification and a second reflective element with a curvature, with substantially the entire portion of the second reflective element abutting a demarcation element, which is positioned between the first and second reflective elements, and having its front surface generally coplanar with the front surface of first reflective element whereby an image in the field of view of the second reflective element transitions to the field of view of the first reflective element smoothly, as stated in applicant's remarks filed on July 10, 2006.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricky D. Shafer whose telephone number is (571) 272-2320.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RDS

October 01, 2006

RICKY D. SHAFER
PATENT EXAMINER
ART UNIT 2872

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Bib Data Sheet

CONFIRMATION NO. 2833

SERIAL NUMBER	FILING OR 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/817,645	04/02/2004 RULE	359	2872	DON01 P-1148

APPLICANTS

Niall R. Lynam, Holland, MI;
John O. Lindahl, Fruitport, MI;
Hahns Y. Fuchs, Dorftrozelten, GERMANY;

ROS

**** CONTINUING DATA ***************************

This application is a CON of 09/745,172 12/20/2000 PAT 6,717,712 which is a CIP of 09/478,315 01/06/2000 PAT 6,522,451

ROS

**** FOREIGN APPLICATIONS *********************

ROS

IF REQUIRED, FOREIGN FILING LICENSE GRANTED
** 06/21/2004

Foreign Priority claimed	STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS
☐ yes ☒ no	MI	13	58	3

35 USC 119 (a-d) conditions met: ☐ yes ☒ no ☐ Met after Allowance

Verified and Acknowledged: R.D SHAFER
Examiner's Signature Initials

ADDRESS
28101

TITLE AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM ROS

~~Exterior mirror plane auxiliary reflective element assembly~~

FILING FEE RECEIVED	FEES: Authority has been given in Paper
1454	No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:

☐ All Fees
☐ 1.16 Fees (Filing)
☐ 1.17 Fees (Processing Ext. of time)
☐ 1.18 Fees (Issue)
☐ Other _____
☐ Credit

Issue Classification	Application/Control No.	Applicant(s)/Patent under Reexamination
	10/817,645	LYNAM ET AL
	Examiner	Art Unit
	Ricky D. Shafer	2872

ISSUE CLASSIFICATION

ORIGINAL CLASS	ORIGINAL SUBCLASS	CROSS REFERENCE(S) CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)						
359	265	359	841	864	866	868	872		
INTERNATIONAL CLASSIFICATION		248	549	900					
G02F	1/115								
G02B	5/10								
G02B	7/182								
B60R	1/106								
	1								

(Assistant Examiner) (Date)

10/4/06
(Legal Instruments Examiner) (Date)

RICKY D. SHAFER
PATENT EXAMINER
ART UNIT ~~2877~~ 2872

10/01/2006
(Primary Examiner) (Date)

Total Claims Allowed: 58

O.G. Print Claim(s)	O.G. Print Fig.
1	5E

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	~~1~~		~~31~~	2	61	32	91		121		151		181
	~~2~~		~~32~~	3	62	33	92		122		152		182
	~~3~~		~~33~~	4	63	34	93		123		153		183
	~~4~~		~~34~~	5	64	35	94		124		154		184
	~~5~~		~~35~~	6	65	36	95		125		155		185
	~~6~~		~~36~~	7	66	37	96		126		156		186
	~~7~~		~~37~~	8	67	38	(97)		127		157		187
	~~8~~		~~38~~	9	68	39	98		128		158		188
	~~9~~		~~39~~	12	69	40	99		129		159		189
	~~10~~		~~40~~	13	70	41	100		130		160		190
	~~11~~		~~41~~	14	71	42	101		131		161		191
	~~12~~		~~42~~	15	72	43	102		132		162		192
	~~13~~		~~43~~	10	73	44	103		133		163		193
	~~14~~		~~44~~	11	74	45	104		134		164		194
	~~15~~		~~45~~	16	75	46	105		135		165		195
	~~16~~		~~46~~	17	76	47	106		136		166		196
	~~17~~		~~47~~	18	77	48	107		137		167		197
	~~18~~		~~48~~	19	78	49	(108)		138		168		198
	~~19~~		~~49~~	20	79	50	109		139		169		199
	~~20~~		~~50~~	21	80	51	110		140		170		200
	~~21~~		~~51~~	22	81	52	111		141		171		201
	~~22~~		~~52~~	23	82	53	112		142		172		202
	~~23~~		~~53~~	24	83	54	113		143		173		203
	~~24~~		~~54~~	25	84	55	114		144		174		204
	~~25~~		~~55~~	26	85	56	115		145		175		205
	~~26~~		~~56~~	27	86	57	116		146		176		206
	~~27~~		~~57~~	28	87	58	117		147		177		207
	~~28~~		~~58~~	29	88		118		148		178		208
	~~29~~		~~59~~	30	89		119		149		179		209
	~~30~~	1	(60)	31	90		120		150		180		210

Search Notes

Application/Control No.	Applicant(s)/Patent under Reexamination	
10/817,645	LYNAM ET AL	
Examiner	**Art Unit**	
Ricky D. Shafer	2872	

SEARCHED			
Class	Subclass	Date	Examiner
SEARCH UPDATED		9/30/2006	RDS

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner
359	265, 841	9/30/2006	RDS
359	864, 866	"	"
359	868, 872	"	"
248	549, 900	9/30/2006	RDS

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
REFERENCES CITED IN PARENT APPLICATIONS CHECKED.	9/30/2006	RDS

Index of Claims

Application/Control No.	Applicant(s)/Patent under Reexamination
10/817,645	LYNAM ET AL
Examiner	**Art Unit**
Ricky D. Shafer	2872

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim		Date
Final	Original	
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	11	
	12	
	13	
	14	
	15	
	16	
	17	
	18	
	19	
	20	
	21	
	22	
	23	
	24	
	25	
	26	
	27	
	28	
	29	
	30	
	31	
	32	
	33	
	34	
	35	
	36	
	37	
	38	
	39	
	40	
	41	
	42	
	43	
	44	
	45	
	46	
	47	
	48	
	49	
	50	
	51	
	52	
	53	
	54	
	55	
	56	
	57	
	58	
	59	
	60	
1	61	=
2	62	=
3	63	=
4	64	=
5	65	=
6	66	=
7	67	=
8	68	=
9	69	=
12	70	=
13	71	=
14	72	=
15	73	=
10	74	=
11	75	=
16	76	=
17	77	=
18	78	=
19	79	=
20	80	=
21	81	=
22	82	=
23	83	=
24	84	=
25	85	=
26	86	=
27	87	=
28	88	=
29	89	=
30	90	=
31	91	=
32	92	=
33	93	=
34	94	=
35	95	=
36	96	=
37	97	=
38	98	=
39	99	=
40	100	=
41	101	=
42	102	=
43	103	=
44	104	=
45	105	=
46	106	=
47	107	=
48	108	=
49	109	=
50	110	=
51	111	=
52	112	=
53	113	=
54	114	=
55	115	=
56	116	=
57	117	=
58	118	
	119	
	120	
	121	
	122	
	123	
	124	
	125	
	126	
	127	
	128	
	129	
	130	
	131	
	132	
	133	
	134	
	135	
	136	
	137	
	138	
	139	
	140	
	141	
	142	
	143	
	144	
	145	
	146	
	147	
	148	
	149	
	150	

said second reflective element disposed adjacent to and separate from said first reflective element;

said first reflective element including a rearward field of view having a principal axis, said second reflective element having a rearward field of view having a principal axis, said principal axis of said second reflective element angled downwardly with respect to the principal axis of said first reflective element when mounted in said exterior sideview mirror assembly;

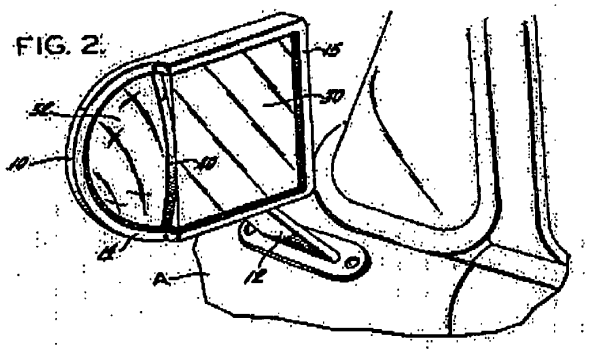
a demarcation element between said first reflective element and said second reflective element, said first and second reflective elements abutting opposing sides of said demarcation element; and

wherein substantially the entire portion of said second reflective element abutting said demarcation element has its front surface generally coplanar with the front surface of said first reflective element whereby an image in the field of view of said second reflective element transitions to the field of view of said first reflective element smoothly.

Applicants respectfully urge that none of Tobin, Holt, or Traynor discloses or suggests the claimed combination. For example, with reference to Claim 60, none of Tobin, Holt, or Traynor discloses or suggests an exterior side view mirror system that includes a first reflective element with a unit magnification and a second reflective element with a curvature, with substantially the entire portion of the second reflective element abutting a demarcation element, which is positioned between the first and second reflective elements, and having its front surface generally coplanar with the front surface of the first reflective element whereby an image in the field of view of the second reflective element transitions to the field of view of the first reflective element smoothly.

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 18

FIG. 2



In contrast, Tobin discloses a mirror assembly that includes a flat reflective element and a portion of a spherical segment, preferably one half of a spherical segment, such that the peak of the convex section is flush with the front face 31 of the planar mirror 30. Therefore, as best seen in FIG. 2, the remaining portion of the convex section 32 is not coplanar with and in fact is recessed below the surface of the planar mirror 30. Nor does Holt or Traynor cure the deficiencies of Tobin. Therefore, even when combined, the references do not disclose or suggest the claimed combination.

With reference to Claim 76, Claim 76 further calls for the principal axis of the rearward field of view of the second reflective element to be directed generally outwardly and downwardly with respect to the principal axis of the first reflective element. Applicants respectfully urge that neither Tobin, Holt, nor Traynor discloses or suggests the claimed combination. In contrast, in each case, the second reflective element has a principal axis that is either aligned with or parallel to the principal axis of the second reflective element. Therefore,

none of the references disclose or suggest a principal axis of a second reflective element being directed generally outwardly and downwardly with respect to the principal axis of the first reflective element.

With respect to Claim 77, Claim 77 further calls for the principal axis of the rearward field of view of the second reflective element to form a downward angle with respect to the longitudinal axis of the automobile in a range of 0.75° to about 5° when the principal axis of the first reflective element is generally parallel to the longitudinal axis of the automobile. Again, Applicants respectfully urge that this is neither taught nor suggested by the references alone or in combination.

With reference to Claim 97, Applicants respectfully urge that none of Tobin, Holt, or Traynor discloses or suggests an exterior side view mirror system that includes first and second reflective elements, with the rearward field of view of the first and second reflective elements each having a principal axis, with the principal axis of the rearward field of view of the second reflective element being downward relative to the principal axis of the rearward field of view of the first reflective element in combination with substantially the entire portion of the second reflective element abutting a demarcation element, which is located between the first and second elements, such that its front surface is generally coplanar with the front surface of the first reflective element whereby an image in the rearward field of view of the second reflective element transitions to the rearward field of view of the first reflective element smoothly. As best understood from each of the figures in the Tobin reference, the curved reflective element has a principal axis that is coplanar with the principal axis of the planar reflective element. Further, neither Holt nor Traynor remedies

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 20

the deficiencies of Tobin. Therefore, even when combined, the references do not teach or suggest the claimed combination.

With respect to Claims 92 and 95, reference is made to the remarks made in reference to Claim 76.

With reference to Claims 102 and 104, Applicants refer the Examiner to the remarks made in reference to Claim 76.

Accordingly, Applicants respectfully submit that Claims 60-62, 64-66, 69-76, 92, 95-98, 100-102, and 104-107 are patentably distinguishable over Tobin in view of Holt or Traynor or any other reference of record.

The Examiner rejects Claims 67, 68, 84, 103, and 108-117 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539 or Traynor et al. '046 and, further, in view of Enomoto '166 or Mizuta et al '302.

Claims 67, 68, and 84 depend from amended Claim 60 and, thus, incorporate the same limitations as amended Claim 60. Therefore, Applicants respectfully urge that Claims 67, 68, and 84 are patentable over Tobin in view of Holt or Traynor for at least the reasons set forth above in reference to Claim 60. Further, Applicants respectfully urge that neither Enomoto nor Mizuta remedies the deficiencies of Tobin, Holt, or Traynor. For example, neither Enomoto nor Mizuta discloses or suggests, for example, an exterior sideview mirror system that includes a first reflective element with a unit magnification and a second reflective element with a curvature, with substantially the entire portion of the second reflective element abutting a demarcation element that is positioned between the first and second reflective elements and having its front surface generally

coplanar with the front surface of the first reflective element whereby an image in the field of view of the second reflective element transitions to the field of view of the first reflective element smoothly. Therefore, Applicants respectfully submit that Claims 67, 68, and 84 are patentably distinguishable over Tobin in view of Holt, Traynor, Enomoto, Mizuta, or any other reference of record.

With reference to Claim 103, Claim 103 depends from amended Claim 97 and, thus, incorporates the same limitations as amended Claim 97. Furthermore, Applicants respectfully submit that neither Enomoto nor Mizuta cure the deficiencies of Tobin, Holt, or Traynor for at least the reasons set forth above in reference to Claims 67, 68, and 84. Therefore, Applicants respectfully urge that Claim 103 are patentably distinguishable over Tobin in view of Holt, Traynor, Enomoto, or Mizuta or any other reference of record.

Claim 108 has been amended to more clearly Applicants' invention, which now calls for:

> An automobile exterior sideview mirror system comprising:
> an exterior sideview mirror assembly adapted for attachment to a side of an automobile;
> said exterior sideview mirror assembly including a reflective element assembly;
> said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;
> an actuator operable to adjust the orientation of said reflective element assembly;
> <u>said first reflective element extending from an inboard side of said reflective element assembly to an outboard side of said reflective element assembly;</u>

said second reflective element disposed at an outboard ~~outer~~, upper portion of said reflective element assembly wherein at least a portion of said reflective element is disposed beneath said second reflective element at an outboard lower portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

a demarcation element between said first reflective element and said second reflective element, said first and second reflective elements abutting opposing sides of said demarcation element; and

wherein substantially the entire portion of said second reflective element abutting said demarcation element has its front surface generally coplanar with the front surface of said first reflective element whereby an image in the field of view of said second reflective element transitions to the field of view of the first reflective element smoothly.

Applicants respectfully urge that none of Tobin, Holt, Traynor, Enomoto, and Mizuta discloses or suggests the claimed combination. For example, none of the references discloses or suggests an exterior rearview mirror assembly that includes a reflective element assembly with a first reflective element having a unit magnification and a second reflective element having a curvature, with the first reflective element extending from an inboard side of the reflective element assembly to an outboard side of the reflective element assembly in combination with the second reflective element disposed at an outboard upper portion of the reflective element assembly wherein at least a portion of the first reflective is disposed beneath the second reflective element at an outboard lower portion of the reflective element assembly and, further, in combination with substantially the entire portion of the second reflective element

abutting a demarcation element, which is positioned between the first and second reflective elements, and having its front surface generally coplanar with the front surface of the first reflective element whereby the image in the field of view of the second reflective element transitions to the field of view with the first reflective element smoothly. Therefore, Applicants respectfully urge that Claim 108 and its dependent claims, namely Claims 109-117, are patentably distinguishable over Tobin in view of Holt, Traynor, Enomoto, or Mizuta or any other reference of record.

The Examiner rejects Claims 63, 77-82, 89-91, 93, 94, and 99 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539 or Traynor et al. '046 and, further, in view of Marhauer '770.

Claims 63, 77-82, 89-91, 93 and 94 are dependent upon amended Claim 60. Therefore, Applicants respectfully urge that Claim 63, 77-82, 89-91, 93 and 94 are patentably distinguishable over Tobin in view of Holt or Traynor for at least the reasons set forth above in reference to Claim 60. Further, Applicants respectfully submit that Marhauer does not cure the deficiencies of any of Tobin, Holt, or Traynor. For example, Marhaurer does not disclose or suggest an exterior sideview mirror system that includes a first reflective element with a unit magnification and a second reflective element with a curvature, with substantially the entire portion of the second reflective element abutting a demarcation element that is positioned between the first and second reflective elements and having its front surface generally coplanar with the front surface of the first reflective element whereby an image in the field of view of the second reflective element transitions to the field of view of the first reflective element smoothly. Therefore, Applicants

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 24

respectfully submit that Claims 63, 77-82, 89-91, 93, and 94 are patentably distinguishable over Tobin in view of Holt, Traynor, or Marhauer or any other reference of record.

With respect to Claim 99, Claim 99 depends from amended Claim 97 and, thus, incorporates the same limitations as amended Claim 97. Further, Applicants respectfully submit that Marhauer does not cure the deficiencies of Tobin, Holt, or Traynor for at least the reasons set forth above. Therefore, Applicants respectfully submit that Claim 99 is patentably distinguishable over Tobin, in view of Holt, Traynor, or Marhauer.

The Examiner rejects Claims 86-88 under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539 or Traynor et al. '046 and, further, in view of Bauer et al. '864 or Kanazawa '367.

Claim 86-88 are dependent upon amended Claim 60 and, thus, incorporate the same limitations as amended Claim 60. Further, Applicants respectfully submit that neither Bauer nor Kanazawa cures the deficiencies of Tobin, Holt, or Traynor. For example, neither Bauer nor Kanazawa discloses or suggests an exterior rearview mirror assembly with a first reflective element with a unit magnification and a second reflective element with a curvature, with substantially the entire portion of the second reflective element abutting a demarcation element, which is positioned between the first and second reflective element, and having its front surface generally coplanar with the front surface of the first reflective element whereby an image in the field of view of the second reflective element transitions to the field of view of the first reflective element smoothly. Applicants, therefore, respectfully submit that Claims 86-88 are patentably distinguishable over

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 25

Tobin in view of Holt, Traynor, Bauer et al. or Kanazawa or in view of any other reference of record.

In light of the above amendments and remarks, Applicants respectfully request reconsideration of the present application and a Notice of Allowance of all claims.

Should the Examiner have any questions or comments, the Examiner is invited to contact the undersigned at (616) 975-5506.

Respectfully submitted,

NIALL R. LYNAM ET AL.

By: Van Dyke, Gardner, Linn & Burkhart, LLP

July 10, 2006
Date

Catherine S. Collins
Registration No. 37 599
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500
collins@vglb.com

CSC:lmsc

Via Facsimile No. (571) 273-8300

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicants	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Dear Sir:

RESPONSE

In response to the Office Action mailed March 10, 2006, having a three-month period of response ending June 10, 2006, Applicants herewith submit a Petition and Fee for a one-month Extension of Time and wish to amend their application as follows:

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 2

IN THE TITLE:

Please correct the title as shown in the attached Corrected Bibliographic Data Sheet. This correction reflects the title change submitted in the Preliminary Amendment filed on April 2, 2004.

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 3

IN THE CLAIMS:

Please amend Claims 60, 76, 77, 95, 97, 102, 104, 108, 109, 110, and 112 as follows:

1-59. (canceled)

60. (currently amended) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said first reflective element and said second reflective element supported at a support element and with a demarcation element between said first and second reflective elements, said first and second reflective elements abutting opposing sides of said demarcation element;

said second reflective element disposed at an outboard ~~outer~~, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element supported on said support element adjacent to and separate from said first reflective element; and

wherein substantially the entire portion of said second reflective element that abuts ~~abutting~~ said demarcation element has its front surface generally coplanar with the front surface of said first reflective element whereby an image in the field of view of said second reflective element transitions to the field of view of said first reflective element smoothly ~~substantially along the entire length that said second reflective element abuts said demarcation element~~.

61. (previously presented) The exterior sideview mirror system of Claim 60, wherein said demarcation element is dark colored.

62. (previously presented) The exterior sideview mirror system of Claim 60, wherein said reflective element assembly includes a first bezel portion extending around said first reflective element, said demarcation element comprising a segment of said first bezel portion.

63. (previously presented) The exterior sideview mirror system of Claim 60, wherein said second reflective element comprises a curved reflective element comprising a bent substrate with at least one radius of curvature in the range of about 4000 mm to about 100 mm.

64. (previously presented) The exterior sideview mirror system of Claim 60, wherein said support element comprises a frame, said first and second reflective elements being mounted at said frame.

65. (previously presented) The exterior sideview mirror system of Claim 64, wherein said second reflective element is mounted at said frame at an outboard position, and said first reflective element is positioned adjacent said second reflective element and at an inboard position with respect to said second reflective element when said exterior sideview mirror assembly is mounted to an automobile.

66. (previously presented) The exterior sideview mirror system of Claim 64, wherein said first reflective element is mounted at said frame by a backing plate.

67. (previously presented) The exterior sideview mirror system of Claim 66, wherein said backing plate is adapted to mount to an actuator operable to adjust the orientation of said reflective element assembly.

68. (previously presented) The exterior sideview mirror system of Claim 67, wherein said actuator comprises an electrical actuator.

69. (previously presented) The exterior sideview mirror system of Claim 64, wherein said first reflective element and said second reflective element are adjacently attached at said frame, said frame including a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

70. (previously presented) The exterior sideview mirror system of Claim 69, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

71. (previously presented) The exterior sideview mirror system of Claim 69, wherein said second perimeter portion is angled downwardly and forwardly with respect to said first perimeter portion when said mirror assembly is mounted to an automobile.

72. (previously presented) The exterior sideview mirror system of Claim 64, wherein said second reflective element is attached at said frame by at least one of an adhesive attachment and a mechanical attachment.

73. (previously presented) The exterior sideview mirror system of Claim 66, wherein said backing plate is attached to one side of said first reflective element and said frame by one of an adhesive attachment, a welded attachment, and a mechanical attachment.

74. (previously presented) The exterior sideview mirror system of Claim 73, wherein an opposed side of said frame forms a bezel around said first reflective element.

75. (previously presented) The exterior sideview mirror system of Claim 60, wherein said first reflective element includes a rearward field of view having a principal axis different from a principal axis of the rearward field of view of said second reflective element when mounted in said exterior sideview mirror assembly.

76. (currently amended) The exterior sideview mirror system of Claim 75, wherein said principal axis of the rearward field of view of said second reflective element is directed generally outwardly and downwardly with respect to the principal axis of the first reflective element a ~~longitudinal axis of the automobile~~.

77. (currently amended) The exterior sideview mirror system of Claim 76, wherein said principal axis of the rearward field of said second reflective element forms a downward angle with respect to the longitudinal axis of the automobile in the range from about 0.75° to about 5° when the principal axis of the first reflective element is generally parallel to the longitudinal axis of the automobile.

78. (previously presented) The exterior sideview mirror system of Claim 77, wherein said downward angle is in a range from about 1.5° to about 3.5°.

79. (previously presented) The exterior sideview mirror system of Claim 77, wherein said downward angle is in a range of about 2° to about 3°.

80. (previously presented) The exterior sideview mirror system of Claim 76, wherein said principal axis of said second reflective element forms an outward angle with respect to the longitudinal axis of the automobile in a range of about 0.75° to about 5°.

81. (previously presented) The exterior sideview mirror system of Claim 80, wherein said outward angle is in a range of about 1° to about 3°.

82. (previously presented) The exterior sideview mirror system of Claim 81, wherein said outward angle is in a range of about 1.25° to about 2.5°.

83. (withdrawn) The exterior sideview mirror system of Claim 81, wherein said exterior sideview mirror assembly comprises a fixedly attached exterior sideview mirror assembly.

84. (previously presented) The exterior sideview mirror system of Claim 60, wherein said exterior sideview mirror assembly comprises a break-away exterior sideview mirror assembly.

85. (withdrawn) The exterior sideview mirror system of Claim 60, wherein said exterior sideview mirror assembly comprises a powerfold exterior sideview mirror assembly.

86. (previously presented) The exterior sideview mirror system of Claim 60, wherein at least one of said first reflective element and said second reflective element comprises a variable reflectance reflective element.

87. (previously presented) The exterior sideview mirror system of Claim 86, wherein each of said first reflective element and said second reflective element comprises a variable reflectance reflective element.

88. (previously presented) The exterior sideview mirror system of Claim 60, wherein said first reflective element comprises an electrochromic reflective element.

89. (previously presented) The exterior sideview mirror system of Claim 60, wherein said first reflective element has a first principal axis and said second reflective element has a second

principal axis when supported on said support element, said second principal axis being angled outwardly from said first principal axis at an angle in a range of about 0.75° to about 5°.

90. (previously presented) The exterior sideview mirror system of Claim 89, wherein said second principal axis is angled outwardly from said first principal axis at an angle in a range of about 1° to about 3°.

91. (previously presented) The exterior sideview mirror system of Claim 89, wherein said second principal axis is angled outwardly from said first principal axis at an angle in a range of about 1.25° to about 2.5°.

92. (previously presented) The exterior sideview mirror system of Claim 60, wherein said second reflective element has a second principal axis that is angled downwardly from a first principal axis of said first reflective element when supported on said support element.

93. (previously presented) The exterior sideview mirror system of Claim 92, wherein said second principal axis is angled downwardly from said first principal axis at an angle in a range of approximately 0.75° to about 5°.

94. (previously presented) The exterior sideview mirror system of Claim 92, wherein said second principal axis is angled downwardly from said first principal axis at an angle in a range of about 2° to about 3°.

95. (currently amended) The exterior sideview mirror system of Claim 60, wherein said second reflective element has a second principal axis that is directed generally outwardly and downwardly with respect to a longitudinal axis of an automobile when said mirror assembly is mounted to the automobile and when the principal axis of the first reflective element is generally parallel to the longitudinal axis of the vehicle.

96. (previously presented) The exterior sideview mirror system of Claim 60, wherein said support element includes a support surface for said second reflective element, said support surface angling a second principal axis of said second reflective element.

97. (currently amended) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

said first reflective element including a rearward field of view having a principal axis, said second reflective element having a rearward field of view having ~~different from~~ a principal axis, said principal axis of said second reflective element angled downwardly with respect to the principal axis ~~of the rearward field of view~~ of said first ~~second~~ reflective element when mounted in said exterior sideview mirror assembly;

a demarcation element between said first reflective element and said second reflective element, said first and second reflective elements abutting opposing sides of said demarcation element; and

wherein substantially the entire portion of said second reflective element abutting said demarcation element has its front surface generally coplanar with the front surface of said first reflective element whereby an image in the field of view of said second reflective element

transitions to the field of view of said first reflective element smoothly ~~substantially along the entire length that said second reflective element abuts said demarcation element~~.

98. (previously presented) The exterior sideview mirror system of Claim 97, wherein said reflective element assembly includes a first bezel portion extending around said first reflective element, said demarcation element comprising a segment of said first bezel portion.

99. (previously presented) The exterior sideview mirror system of Claim 97, wherein said second reflective element comprises a curved reflective element comprising a bent substrate with at least one radius of curvature in the range of about 4000 mm to about 100 mm.

100. (previously presented) The exterior sideview mirror system of Claim 97, further comprising a support element, said first reflective element and said second reflective element supported at said support element.

101. (previously presented) The exterior sideview mirror system of Claim 100, wherein said support element including a support surface for said second reflective element, said support surface angling said principal axis of said second reflective element.

102. (currently amended) The exterior sideview mirror system of Claim 101, wherein said principal axis of said second reflective element is directed generally outwardly and downwardly with respect to the principal axis of the first reflective element ~~longitudinal axis of an automobile~~ when said mirror assembly is mounted to the automobile.

103. (previously presented) The exterior sideview mirror system of Claim 97, further comprising an actuator operable to adjust the orientation of said reflective element assembly.

104. (currently amended) The exterior sideview mirror system of Claim 97, wherein said principal axis of the rearward field of view of said second reflective element is directed generally outwardly and downwardly with respect to the principal axis of the first reflective element ~~a longitudinal axis of the automobile~~.

105. (previously presented) The exterior sideview mirror system of Claim 97, wherein said principal axis of said second reflective element forms an outward angle with respect to a longitudinal axis of the automobile.

106. (previously presented) The exterior sideview mirror system of Claim 97, further comprising a frame, said first and second reflective elements being mounted at said frame, said frame including a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

107. (previously presented) The exterior sideview mirror system of Claim 106, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

108. (currently amended) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

an actuator operable to adjust the orientation of said reflective element assembly;

said first reflective element extending from an inboard side of said reflective element assembly to an outboard side of said reflective element assembly;

said second reflective element disposed at an outboard ~~outer~~, upper portion of said reflective element assembly wherein at least a portion of said first reflective element is disposed beneath said second reflective element at an outboard lower portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

a demarcation element between said first reflective element and said second reflective element, said first and second reflective elements abutting opposing sides of said demarcation element; and

wherein substantially the entire portion of said second reflective element abutting said demarcation element has its front surface generally coplanar with the front surface of said first reflective element whereby an image in the field of view of said second reflective element transitions to the field of view of the first reflective element smoothly ~~substantially along the entire length that said second reflective element abuts said demarcation element~~.

109. (currently amended) The exterior sideview mirror system of Claim 110 [[108]], wherein said first reflective element has a first principal axis and said second reflective element has a second principal axis, said second principal axis being angled outwardly from said first principal axis.

110. (currently amended) The exterior sideview mirror system of Claim 108 [[109]], wherein said second principal axis is angled downwardly from said first principal axis of said first reflective element.

111. (previously presented) The exterior sideview mirror system of Claim 110, wherein said second principal axis is directed generally outwardly and downwardly with respect to a longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

112. (currently amended) The exterior sideview mirror system of Claim 110, further comprising a support element, said support element including a support surface for said second reflective element, said support surface tilting said second reflective element to angle ~~angling~~ said second principal axis of said second reflective element relative to said first principal axis.

113. (previously presented) The exterior sideview mirror system of Claim 112, wherein said support element comprises a frame, said first and second reflective elements being mounted at said frame.

114. (previously presented) The exterior sideview mirror system of Claim 113, wherein said second reflective element is mounted at said frame at an outboard position, and said first reflective element is positioned adjacent said second reflective element and at an inboard position with respect to said second reflective element when said exterior sideview mirror assembly is mounted to an automobile.

115. (previously presented) The exterior sideview mirror system of Claim 114, wherein said frame includes a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

116. (previously presented) The exterior sideview mirror system of Claim 115, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 14

117. (previously presented) The exterior sideview mirror system of Claim 116, wherein said second perimeter portion is angled downwardly and forwardly with respect to said first perimeter portion when said mirror assembly is mounted to an automobile.

REMARKS

Applicants acknowledge the Examiner's review of the specification, claims, and drawings. In light of the above amendments and following remarks, Applicants respectfully request reconsideration of the present application. The amendments and remarks presented herein are fully supported by the application as originally filed. No new matter has been entered.

STATUS OF THE CLAIMS:

Claims 60-117 are pending in the application. Claims 83 and 85 have been withdrawn from consideration. Claims 1-59 were previously canceled.

TITLE:

Applicants submit herewith a Corrected Bibliographic Data Sheet showing the corrected title, which reflects the change to the title submitted in the Preliminary Amendment filed April 2, 2004.

CLAIM REJECTIONS UNDER 35 U.S.C. § 103:

The Examiner rejects Claims 60-62, 64-66, 69-76, 92, 95-98, 100-102, and 104-107 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539 or Traynor et al. '046.

Applicants respectfully traverse. Notwithstanding, Applicants have amended Claims 60 and 97 to more clearly define Applicants' invention, which now call for:

60. An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said first reflective element and said second reflective element supported at a support element and with a demarcation element between said first and second reflective elements, said first and second reflective elements abutting opposing sides of said demarcation element;

said second reflective element disposed at an outboard, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element supported on said support element adjacent to and separate from said first reflective element; and

wherein substantially the entire portion of said second reflective element that abuts said demarcation element has its front surface generally coplanar with the front surface of said first reflective element whereby an image in the field of view of said second reflective element transitions to the field of view of said first reflective element smoothly.

97. An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

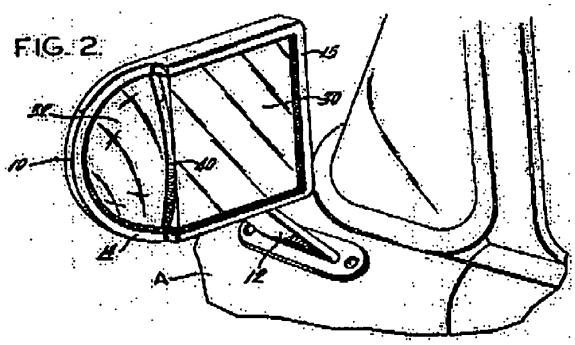
said second reflective element disposed adjacent to and separate from said first reflective element;

said first reflective element including a rearward field of view having a principal axis, said second reflective element having a rearward field of view having a principal axis, said principal axis of said second reflective element angled downwardly with respect to the principal axis of said first reflective element when mounted in said exterior sideview mirror assembly;

a demarcation element between said first reflective element and said second reflective element, said first and second reflective elements abutting opposing sides of said demarcation element; and

wherein substantially the entire portion of said second reflective element abutting said demarcation element has its front surface generally coplanar with the front surface of said first reflective element whereby an image in the field of view of said second reflective element transitions to the field of view of said first reflective element smoothly.

Applicants respectfully urge that none of Tobin, Holt, or Traynor discloses or suggests the claimed combination. For example, with reference to Claim 60, none of Tobin, Holt, or Traynor discloses or suggests an exterior side view mirror system that includes a first reflective element with a unit magnification and a second reflective element with a curvature, with substantially the entire portion of the second reflective element abutting a demarcation element, which is positioned between the first and second reflective elements, and having its front surface generally coplanar with the front surface of the first reflective element whereby an image in the field of view of the second reflective element transitions to the field of view of the first reflective element smoothly.



In contrast, Tobin discloses a mirror assembly that includes a flat reflective element and a portion of a spherical segment, preferably one half of a spherical segment, such that the peak of the convex section is flush with the front face 31 of the planar mirror 30. Therefore, as best seen in FIG. 2, the remaining portion of the convex section 32 is not coplanar with and in fact is recessed below the surface of the planar mirror 30. Nor does Holt or Traynor cure the deficiencies of Tobin. Therefore, even when combined, the references do not disclose or suggest the claimed combination.

With reference to Claim 76, Claim 76 further calls for the principal axis of the rearward field of view of the second reflective element to be directed generally outwardly and downwardly with respect to the principal axis of the first reflective element. Applicants respectfully urge that neither Tobin, Holt, nor Traynor discloses or suggests the claimed combination. In contrast, in each case, the second reflective element has a principal axis that is either aligned with or parallel to the principal axis of the second reflective element. Therefore,

none of the references disclose or suggest a principal axis of a second reflective element being directed generally outwardly and downwardly with respect to the principal axis of the first reflective element.

With respect to Claim 77, Claim 77 further calls for the principal axis of the rearward field of view of the second reflective element to form a downward angle with respect to the longitudinal axis of the automobile in a range of 0.75° to about 5° when the principal axis of the first reflective element is generally parallel to the longitudinal axis of the automobile. Again, Applicants respectfully urge that this is neither taught nor suggested by the references alone or in combination.

With reference to Claim 97, Applicants respectfully urge that none of Tobin, Holt, or Traynor discloses or suggests an exterior side view mirror system that includes first and second reflective elements, with the rearward field of view of the first and second reflective elements each having a principal axis, with the principal axis of the rearward field of view of the second reflective element being downward relative to the principal axis of the rearward field of view of the first reflective element in combination with substantially the entire portion of the second reflective element abutting a demarcation element, which is located between the first and second elements, such that its front surface is generally coplanar with the front surface of the first reflective element whereby an image in the rearward field of view of the second reflective element transitions to the rearward field of view of the first reflective element smoothly. As best understood from each of the figures in the Tobin reference, the curved reflective element has a principal axis that is coplanar with the principal axis of the planar reflective element. Further, neither Holt nor Traynor remedies

the deficiencies of Tobin. Therefore, even when combined, the references do not teach or suggest the claimed combination.

With respect to Claims 92 and 95, reference is made to the remarks made in reference to Claim 76.

With reference to Claims 102 and 104, Applicants refer the Examiner to the remarks made in reference to Claim 76.

Accordingly, Applicants respectfully submit that Claims 60-62, 64-66, 69-76, 92, 95-98, 100-102, and 104-107 are patentably distinguishable over Tobin in view of Holt or Traynor or any other reference of record.

The Examiner rejects Claims 67, 68, 84, 103, and 108-117 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539 or Traynor et al. '046 and, further, in view of Enomoto '166 or Mizuta et al '302.

Claims 67, 68, and 84 depend from amended Claim 60 and, thus, incorporate the same limitations as amended Claim 60. Therefore, Applicants respectfully urge that Claims 67, 68, and 84 are patentable over Tobin in view of Holt or Traynor for at least the reasons set forth above in reference to Claim 60. Further, Applicants respectfully urge that neither Enomoto nor Mizuta remedies the deficiencies of Tobin, Holt, or Traynor. For example, neither Enomoto nor Mizuta discloses or suggests, for example, an exterior sideview mirror system that includes a first reflective element with a unit magnification and a second reflective element with a curvature, with substantially the entire portion of the second reflective element abutting a demarcation element that is positioned between the first and second reflective elements and having its front surface generally

said second reflective element disposed at an outboard ~~outer~~, upper portion of said reflective element assembly wherein at least a portion of said reflective element is disposed beneath said second reflective element at an outboard lower portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

coplanar with the front surface of the first reflective element whereby an image in the field of view of the second reflective element transitions to the field of view of the first reflective element smoothly. Therefore, Applicants respectfully submit that Claims 67, 68, and 84 are patentably distinguishable over Tobin in view of Holt, Traynor, Enomoto, Mizuta, or any other reference of record.

With reference to Claim 103, Claim 103 depends from amended Claim 97 and, thus, incorporates the same limitations as amended Claim 97. Furthermore, Applicants respectfully submit that neither Enomoto nor Mizuta cure the deficiencies of Tobin, Holt, or Traynor for at least the reasons set forth above in reference to Claims 67, 68, and 84. Therefore, Applicants respectfully urge that Claim 103 are patentably distinguishable over Tobin in view of Holt, Traynor, Enomoto, or Mizuta or any other reference of record.

Claim 108 has been amended to more clearly Applicants' invention, which now calls for:

An automobile exterior sideview mirror system comprising:
an exterior sideview mirror assembly adapted for attachment to a side of an automobile;
said exterior sideview mirror assembly including a reflective element assembly;
said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;
an actuator operable to adjust the orientation of said reflective element assembly;
said first reflective element extending from an inboard side of said reflective element assembly to an outboard side of said reflective element assembly;

abutting a demarcation element, which is positioned between the first and second reflective elements, and having its front surface generally coplanar with the front surface of the first reflective element whereby the image in the field of view of the second reflective element transitions to the field of view with the first reflective element smoothly. Therefore, Applicants respectfully urge that Claim 108 and its dependent claims, namely Claims 109-117, are patentably distinguishable over Tobin in view of Holt, Traynor, Enomoto, or Mizuta or any other reference of record.

The Examiner rejects Claims 63, 77-82, 89-91, 93, 94, and 99 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539 or Traynor et al. '046 and, further, in view of Marhauer '770.

Claims 63, 77-82, 89-91, 93 and 94 are dependent upon amended Claim 60. Therefore, Applicants respectfully urge that Claim 63, 77-82, 89-91, 93 and 94 are patentably distinguishable over Tobin in view of Holt or Traynor for at least the reasons set forth above in reference to Claim 60. Further, Applicants respectfully submit that Marhauer does not cure the deficiencies of any of Tobin, Holt, or Traynor. For example, Marhaurer does not disclose or suggest an exterior sideview mirror system that includes a first reflective element with a unit magnification and a second reflective element with a curvature, with substantially the entire portion of the second reflective element abutting a demarcation element that is positioned between the first and second reflective elements and having its front surface generally coplanar with the front surface of the first reflective element whereby an image in the field of view of the second reflective element transitions to the field of view of the first reflective element smoothly. Therefore, Applicants

respectfully submit that Claims 63, 77-82, 89-91, 93, and 94 are patentably distinguishable over Tobin in view of Holt, Traynor, or Marhauer or any other reference of record.

With respect to Claim 99, Claim 99 depends from amended Claim 97 and, thus, incorporates the same limitations as amended Claim 97. Further, Applicants respectfully submit that Marhauer does not cure the deficiencies of Tobin, Holt, or Traynor for at least the reasons set forth above. Therefore, Applicants respectfully submit that Claim 99 is patentably distinguishable over Tobin, in view of Holt, Traynor, or Marhauer.

The Examiner rejects Claims 86-88 under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539 or Traynor et al. '046 and, further, in view of Bauer et al. '864 or Kanazawa '367.

Claim 86-88 are dependent upon amended Claim 60 and, thus, incorporate the same limitations as amended Claim 60. Further, Applicants respectfully submit that neither Bauer nor Kanazawa cures the deficiencies of Tobin, Holt, or Traynor. For example, neither Bauer nor Kanazawa discloses or suggests an exterior rearview mirror assembly with a first reflective element with a unit magnification and a second reflective element with a curvature, with substantially the entire portion of the second reflective element abutting a demarcation element, which is positioned between the first and second reflective element, and having its front surface generally coplanar with the front surface of the first reflective element whereby an image in the field of view of the second reflective element transitions to the field of view of the first reflective element smoothly. Applicants, therefore, respectfully submit that Claims 86-88 are patentably distinguishable over

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 25

Tobin in view of Holt, Traynor, Bauer et al. or Kanazawa or in view of any other reference of record.

In light of the above amendments and remarks, Applicants respectfully request reconsideration of the present application and a Notice of Allowance of all claims.

Should the Examiner have any questions or comments, the Examiner is invited to contact the undersigned at (616) 975-5506.

Respectfully submitted,

NIALL R. LYNAM ET AL.

By: Van Dyke, Gardner, Linn & Burkhart, LLP

July 10, 2006
Date

Catherine S. Collins
Registration No. 37 599
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500
collins@vglb.com

CSC:lmsc

said second reflective element disposed at an outboard ~~outer~~, upper portion of said reflective element assembly wherein at least a portion of said reflective element is disposed beneath said second reflective element at an outboard lower portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

a demarcation element between said first reflective element and said second reflective element, said first and second reflective elements abutting opposing sides of said demarcation element; and

wherein substantially the entire portion of said second reflective element abutting said demarcation element has its front surface generally coplanar with the front surface of said first reflective element whereby an image in the field of view of said second reflective element transitions to the field of view of the first reflective element smoothly.

Applicants respectfully urge that none of Tobin, Holt, Traynor, Enomoto, and Mizuta discloses or suggests the claimed combination. For example, none of the references discloses or suggests an exterior rearview mirror assembly that includes a reflective element assembly with a first reflective element having a unit magnification and a second reflective element having a curvature, with the first reflective element extending from an inboard side of the reflective element assembly to an outboard side of the reflective element assembly in combination with the second reflective element disposed at an outboard upper portion of the reflective element assembly wherein at least a portion of the first reflective is disposed beneath the second reflective element at an outboard lower portion of the reflective element assembly and, further, in combination with substantially the entire portion of the second reflective element

This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☑ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.
As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.

Via Facsimile No. (571) 273-8300

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicant	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

RESEND

Dear Sir:

CERTIFICATE OF FACSIMILE TRANSMISSION

I certify that the following papers are being facsimile transmitted to the Patent and Trademark Office on the date shown below:

Petition and Fee for Extension of Time (in duplicate);

Corrected Patent Application Bibliographic Data form;

Response to Office Action mailed March 10, 2006.

YOU SHOULD RECEIVE A TOTAL OF 30 PAGES INCLUDING THIS TRANSMITTAL.

Dated: July 10, 2006.

Catherine S. Collins
Van Dyke, Gardner, Linn & Burkhart, LLP
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc
Enclosures

INVENTOR INFORMATION

Filed April 2, 2004

CORRECTED

Inventor One Given Name:: Niall R
Family Name:: Lynam
Postal Address Line One:: 248 Foxdown
City:: Holland
State or Province:: Michigan
Country:: USA
Postal or Zip Code:: 49424
City of Residence:: Holland
State or Province of Residence:: Michigan
Country of Residence:: USA
Citizenship Country:: USA
Inventor Two Given Name:: John O
Family Name:: Lindahl
Postal Address Line One:: Forty South 7th Street
City:: Fruitport
State or Province:: Michigan
Country:: USA
Postal or Zip Code:: 49415
City of Residence:: Fruitport
State or Province of Residence:: Michigan
Country of Residence:: USA
Citizenship Country:: USA
Inventor Three Given Name:: Hahns Y
Family Name:: Fuchs
Postal Address Line One:: Gartenstrasse 1A
City:: Dorftrozelten
Country:: Germany
Postal or Zip Code:: 97904
City of Residence:: Dorftrozelten
Country of Residence:: Germany
Citizenship Country:: Germany

CORRESPONDENCE INFORMATION

Correspondence Customer Number:: 28101
Fax One:: (616) 975-5505
Electronic Mail One:: collins@vglb.com

APPLICATION INFORMATION

Title Line One:: AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYST
Title Line Two:: EM
Total Drawing Sheets:: 13
Formal Drawings?:: Yes
Application Type:: Utility
Docket Number:: DON01 P-1148
Secrecy Order in Parent Appl.?:: No

REPRESENTATIVE INFORMATION

Representative Customer Number:: 28101

CONTINUITY INFORMATION

This application is a:: CONTINUATION OF
> Application One:: 09/745,172
Filing Date:: 12-20-2000
Patent Number:: 6,717,712

Which is a:: CONTINUATION IN PART OF
>> Application Two:: 09/478,315
Filing Date:: 01-06-2000
Patent Number:: 6,522,451

Source:: PrintEFS Version 1.0.1

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicants	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Date of this Paper: July 10, 2006.

Dear Sir:

PETITION AND FEE FOR
EXTENSION OF TIME (37 C.F.R. 1.136[a])

1. This is a petition for an extension of time to respond to the final Office Action mailed March 10, 2006, for a period of one month.

2. Applicant is:

   a small entity

   x other than small entity

3.

Extension (months)		Fee for other than small entity	Fee for small entity
x	one month	$120.00	$60.00
	two months	$450.00	$225.00
	three months	$1,020.00	$510.00

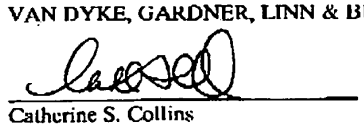
4. An amendment:

   x is filed herewith has been filed

5. Fee Payment:

   x Please charge the amount of $120.00 and any additional fees required or credit any excess fee paid to Deposit Account No. 22-0190. A duplicate of this Petition is attached.

VAN DYKE, GARDNER, LINN & BURKHART, LLP



Catherine S. Collins
Registration No. 37 599
2851 Charlevoix Drive, S.E.
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

07/12/2006 AWONDAF1 00000036 220190 10817645

01 FC:1251 120.00 DA

CSC:lmsc

PTO/SB/06 (12-04)
Approved for use through 7/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 10/817,645

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))							
SEARCH FEE (37 CFR 1.16(k), (i), or (m))							
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))							
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*					
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*					
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
			X =		OR	X =	
			X =			X =	
			TOTAL			TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II

AB
2-6-06

AMENDMENT A	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(j))	** 58	Minus	** 58	=					
Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	=	X =		OR	X =	
Application Size Fee (37 CFR 1.16(s))					X =		OR	X =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
X 7/10/6									
Total (37 CFR 1.16(j))	** 50	Minus	** 58	=					
Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	=	X =		OR	X =	
Application Size Fee (37 CFR 1.16(s))					X =		OR	X =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,645	04/02/2004	Niall R. Lynam	DON01 P-1148	2833

28101 7590 03/10/2006

VAN DYKE, GARDNER, LINN AND BURKHART, LLP
2851 CHARLEVOIX DRIVE, S.E.
P.O. BOX 888695
GRAND RAPIDS, MI 49588-8695

EXAMINER	
SHAFER, RICKY D	
ART UNIT	**PAPER NUMBER**
2872	

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)	
	10/817,645	LYNAM ET AL.	
	Examiner	Art Unit	
	Ricky D. Shafer	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *60-117* is/are pending in the application.

4a) Of the above claim(s) *83 and 85* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *60-82,84 and 86-117* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/06/2006 has been entered.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 60-62, 64-66, 69-76, 92, 95-98, 100-102 and 104-107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr ('952) in view of Holt ('539) or Traynor et al ('046).

Tobin, Jr discloses an automobile exterior side view mirror system comprising an exterior side view mirror assembly (10) adapted for attachment to a side of an automobile; said exterior side view mirror assembly including a reflective element assembly (30,32); said reflective element assembly including a first reflective element (30) having unit magnification and a second reflective element (32) having a curvature; said first reflective element and said second reflective element supported at a support element (35), wherein said support includes a frame (20) and a backing plate (14); said second reflective element disposed at an outer, upper portion as well as the lower portion of said reflective element assembly when

said reflective element assembly is included in said exterior side view mirror assembly and when said exterior side view mirror assembly is attached to the side of an automobile; said second reflective element supported on said support element adjacent to and separate from said first reflective element; a demarcation element (40) of a dark (red) color adjacent said first reflective element and said second reflective element; and wherein the portion of said second reflective element adjacent said demarcation element has a front surface generally coplanar with the front surface of said first reflective element, wherein the second reflective element inherently includes a rearward field of view having a principal axis which is different from a principal axis of the rearward field of view of the first reflective element due to the convex characteristics of the second reflective element which generally extends the rearview field of view outwardly and downwardly with respect to a longitudinal axis of the automobile, note Fig. 4 along with the associated description thereof, except for the demarcation element being positioned between said first and second reflective elements in such a matter that said first and second reflective elements abuts opposing sides of said demarcation element.

Holt and Traynor et al each teach it is well known to employ a small gap between two adjacent mirrors and disposed within said gap a material which serves as a demarcation element in the same field of endeavor for the purpose of providing a clear dividing line and/or demarcation between said mirrors so as to provide a driver of a vehicle with two distinct and separate images, to avoid any possible confusion between the images.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mirror assembly of Tobin, Jr to include a gap or segment (demarcation element) between the first and second reflective elements, as taught by Holt or

Traynor et al, in order to provide a clear dividing line and/or demarcation between the first and second reflective elements in order to provide a driver of a vehicle with two separate and distinct images to avoid confusion between the images.

4. Claims 67, 68, 84, 103, 108-117 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr ('952) in view Holt ('539) or Traynor et al ('046) as applied to claims 60-62, 64-66, 69-76, 92, 95-98, 100-102 and 104-107 above, and further in view of Enomoto ('166) or Mizuta et al ('302).

Tobin, Jr in view of Holt discloses all of the subject matter claimed, note the above explanation, except for an electrical actuator to adjust the orientation of the reflective element assembly.

Enomoto and Mizuta et al each teach it well known to use electrically operated actuator(s) in the same field of endeavor for the purpose of adjusting the position and/or orientation of a reflective element.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the reflective element assembly of Tobin, Jr to include electrically operable actuator(s) as is well known and commonly used and employed in the mirror art, as taught by Oskam or Enomoto, in order to adjust the position and/or orientation of the reflective element assembly.

Moreover, it has been held that providing automatic means to replace manual activity, which accomplishes the same result, involves only routine skill in the art. Note In Re Venner, 120 USPQ 192.

As to the limitations of claim 84, it is well known to use breakaway exterior side view mirror assemblies in the same field of endeavor for the purpose of folding the position and/or orientation of a mirror.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the exterior side view mirror assembly of Tobin, Jr to include a break-away exterior side view mirror assembly, as is well known and commonly used and employed in the mirror art, in order to fold the position and/or orientation of the reflective element(s).

5. Claims 63, 77-82, 89-91, 93, 94 and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr ('952) in view Holt ('539) or Traynor et al ('046) as applied to claims 60-62, 64-66, 69-76, 92, 95-98, 100-102 and 104-107 above, and further in view of Marhauer ('770).

Tobin, Jr in view of Holt or Traynor et al discloses all of the subject matter claimed, note the above explanation, except for explicitly stating that the curved reflective element includes at least one radius of curvature in the range of about 4000 mm to about 100 mm.

Marhauer teaches it well known to select a curvature of a reflective element within the range recited by applicant in the same field of endeavor for the purpose of avoiding distortions.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the curvature of the curved reflective element of Tobin, Jr to include a value, as taught by Marhauer, in order to avoid distortions.

As to the limitations of claims 77-82, 89-91, 93 and 94, it is well known to use an a curved reflective element having downward and outward angles within the range recited by applicant in order to optimize and/or view a particular rearward field of view of interest.

Therefore, it would have been obvious and/or within the level of one of ordinary skill in the art at the time the invention was made to modify the curved reflective element of Tobin, Jr to include downward and outward angles within the range recited by applicant in order to optimize and/or view a particular rearward field of view of interest, based on user specifications.

Moreover, it would have been obvious to one of ordinary skill in the art at the time the invention was made to angle the curved reflective element of Tobin, Jr to the selected range(s) recited by applicant in order to view of particular rearward field of view of interest, since it has been held that where the general conditions of a claim are disclosed in the prior art or discovering an optimum or workable ranges involves only routine skill in the art. Note In re Aller, 105 USPQ 233 and In re Boesch, , 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

6. Claims 86-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr ('952) in view Holt ('539) or Traynor et al ('046) as applied to claims 60-62, 64-66, 69-76, 92, 95-98, 100-102 and 104-107 above, and further in view of Bauer et al ('864) or Kanazawa ('367).

Tobin, Jr in view of Holt or Traynor et al discloses all of the subject matter claimed, note the above explanation, except for the reflective element(s) being a variable reflectance (electrochromic) element.

Bauer et al and Kanazawa each teach it well known to use electrochromic mirrors in exterior side view mirrors in the same field of endeavor for the purpose of providing variable reflectance and/or reducing glare

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the reflective element(s) of Tobin, Jr to include variable reflectance (electrochromic) element(s), as taught by Bauer et al or Kanazawa, in order to reduce glare.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricky D. Shafer whose telephone number is (571) 272-2320. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RDS

March 05, 2006

RICKY D. SHAFER
PATENT EXAMINER
ART UNIT 2872

Notice of References Cited	Application/Control No. 10/817,645	Applicant(s)/Patent Under Reexamination LYNAM ET AL.	
	Examiner Ricky D. Shafer	Art Unit 2872	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-4,859,046	08-1989	Traynor et al.	359/866
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims

Application/Control No.	Applicant(s)/Patent under Reexamination
10/817,645	LYNAM ET AL.
Examiner	**Art Unit**
Ricky D. Shafer	2872

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim		Date
Final	Original	
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	11	
	12	
	13	
	14	
	15	
	16	
	17	
	18	
	19	
	20	
	21	
	22	
	23	
	24	
	25	
	26	
	27	
	28	
	29	
	30	
	31	
	32	
	33	
	34	
	35	
	36	
	37	
	38	
	39	
	40	
	41	
	42	
	43	
	44	
	45	
	46	
	47	
	48	
	49	
	50	

Claim		Date
Final	Original	3/15/2006
	51	
	52	
	53	
	54	
	55	
	56	
	57	
	58	
	59	
	(60)	√
	61	√
	62	√
	63	√
	64	√
	65	√
	66	√
	67	√
	68	√
	69	√
	70	√
	71	√
	72	√
	73	√
	74	√
	75	√
	76	√
	77	√
	78	√
	79	√
	80	√
	81	√
	82	√
	83	√
	84	√
	85	√
	86	√
	87	√
	88	√
	89	√
	90	√
	91	√
	92	√
	93	√
	94	√
	95	√
	96	√
	(97)	√
	98	√
	99	√
	100	√

Claim		Date
Final	Original	3/15/2006
	101	√
	102	√
	103	√
	104	√
	105	√
	106	√
	107	√
	(108)	√
	109	√
	110	√
	111	√
	112	√
	113	√
	114	√
	115	√
	116	√
	117	√
	118	
	119	
	120	
	121	
	122	
	123	
	124	
	125	
	126	
	127	
	128	
	129	
	130	
	131	
	132	
	133	
	134	
	135	
	136	
	137	
	138	
	139	
	140	
	141	
	142	
	143	
	144	
	145	
	146	
	147	
	148	
	149	
	150	

Search Notes	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/817,645	LYNAM ET AL.	
	Examiner	Art Unit	
	Ricky D. Shafer	2872	

SEARCHED			
Class	Subclass	Date	Examiner
SEARCH UPDATED		3/04/2006	RDS

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR

PTO/SB/06 (12-04)
Approved for use through 7/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 10/817645

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))							
SEARCH FEE (37 CFR 1.16(k), (i), or (m))							
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))							
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X =		OR	X =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X =			X =	
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
			TOTAL			TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II

ABB 2-6-06

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 58	Minus	** 58	=	X =		OR	X =	
Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	=	X =		OR	X =	
Application Size Fee (37 CFR 1.16(s))							OR		
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X =		OR	X =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X =		OR	X =	
Application Size Fee (37 CFR 1.16(s))							OR		
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

RECEIVED
CENTRAL FAX CENTER

FEB 0 6 2006

assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

a demarcation element between said first reflective element and said second reflective element, said first and second reflective elements abutting opposing sides of said demarcation element; and

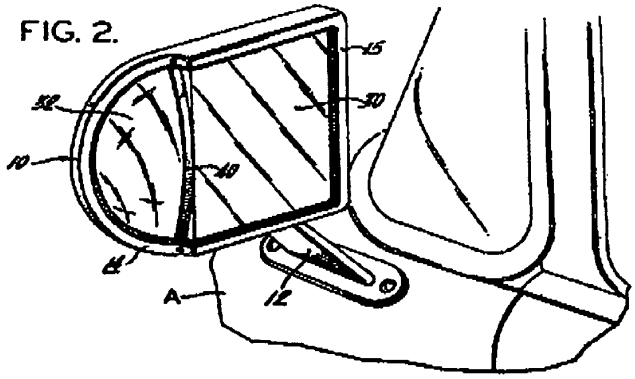
wherein the portion of said second reflective element ~~adjacent~~ abutting said demarcation element has its front surface generally coplanar with the front surface of said first reflective element substantially along the entire length that said second reflective element abuts said demarcation element.

Applicants respectfully urge that neither of Tobin, Jr. nor Holt disclose or suggest the claimed combination. With reference to Claims 60, for example, neither Tobin, Jr. nor Holt disclose or suggest and automobile exterior sideview mirror system that includes first and second reflective elements, which are supported at a support element so as to abut one another, with the first reflective element having a unit magnification and a second reflective element having a curvature, in combination with a demarcation element between the first and second reflective elements and wherein a portion of the second reflective element adjacent the demarcation element has its front surface generally coplanar with the front surface of the first reflective element substantially along the entire length that the second reflective element abuts the first reflective element. Nor would it be obvious to modify Tobin, Jr. to meet the claimed combination.

Indeed, such as clearly indicated in Figure 2, which is reproduced below, Tobin Jr. teaches away from the claimed combination.

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 17

FIG. 2.



With respect to Claims 97 and 108, Applicants respectfully urge that neither Tobin, Jr. nor Holt disclose or suggest an exterior sideview mirror system that includes first and second reflective elements, with the first reflective element having a unit magnification and a second reflective element having a curvature, in combination with a demarcation element between the first and second reflective elements with the first and second reflective elements abutting opposing sides of the demarcation element and wherein a portion of the second reflective element abutting the demarcation element has its front surface generally coplanar with the front surface of the first reflective element substantially long the entire length that the second reflective element abuts the demarcation element.

Accordingly, Applicants respectfully urge that Claims 60, 97, and 108 and their respective dependent claims, namely Claims 61-82, 84, 86-96, 98-107, and 109-117 are patentably distinguishable over Tobin, Jr. in view of Holt or any other reference of record. Furthermore, Applicants respectfully submit that none of Enomoto, Mizuta et al., Marhauer,

Bauer et al., or Kanazawa cure the deficiencies of Tobin, Jr. or Holt. Accordingly, Applicants respectfully submit that all the claims are now in condition for allowance and solicit a Notice to that effect.

Should the Examiner have any questions or comments, the Examiner is invited to contact the undersigned at (616) 975-5506.

Respectfully submitted,

NIALL R. LYNAM ET AL.

By: Van Dyke, Gardner, Linn & Burkhart, LLP

February 6, 2006
Date

Catherine S. Collins
Registration No. 37 599
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500
collins@vglb.com

CSC:lmsc

RECEIVED
CENTRAL FAX CENTER

FEB 0 6 2006

Via Facsimile No. (571) 273-8300

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicants	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Dear Sir:

AMENDMENT AFTER FINAL REJECTION (37 C.F.R. 1.116)

In response to the final Office Action mailed October 5, 2005, having a three-month period of response ending January 5, 2006, Applicants wish to amend their application as follows:

In the Claims:

Please amend Claims 60, 97, and 108 as follows:

1-59. (canceled)

60. (currently amended) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said first reflective element and said second reflective element supported at a support element and with a demarcation element between said first and second reflective elements, said first and second reflective elements abutting opposing sides of said demarcation element;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element supported on said support element adjacent to and separate from said first reflective element;

~~a demarcation element between said first reflective element and said second reflective element;~~ and

wherein the portion of said second reflective element abutting said demarcation element ~~abutting said first reflective element~~ has its front surface generally coplanar with the front surface of said first reflective element substantially along the entire length that said second reflective element abuts said demarcation element.

61. (previously presented) The exterior sideview mirror system of Claim 60, wherein said demarcation element is dark colored.

62. (previously presented) The exterior sideview mirror system of Claim 60, wherein said reflective element assembly includes a first bezel portion extending around said first reflective element, said demarcation element comprising a segment of said first bezel portion.

63. (previously presented) The exterior sideview mirror system of Claim 60, wherein said second reflective element comprises a curved reflective element comprising a bent substrate with at least one radius of curvature in the range of about 4000 mm to about 100 mm.

64. (previously presented) The exterior sideview mirror system of Claim 60, wherein said support element comprises a frame, said first and second reflective elements being mounted at said frame.

65. (previously presented) The exterior sideview mirror system of Claim 64, wherein said second reflective element is mounted at said frame at an outboard position, and said first reflective element is positioned adjacent said second reflective element and at an inboard position with respect to said second reflective element when said exterior sideview mirror assembly is mounted to an automobile.

66. (previously presented) The exterior sideview mirror system of Claim 64, wherein said first reflective element is mounted at said frame by a backing plate.

67. (previously presented) The exterior sideview mirror system of Claim 66, wherein said backing plate is adapted to mount to an actuator operable to adjust the orientation of said reflective element assembly.

68. (previously presented) The exterior sideview mirror system of Claim 67, wherein said actuator comprises an electrical actuator.

69. (previously presented) The exterior sideview mirror system of Claim 64, wherein said first reflective element and said second reflective element are adjacently attached at said frame, said frame including a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

70. (previously presented) The exterior sideview mirror system of Claim 69, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

71. (previously presented) The exterior sideview mirror system of Claim 69, wherein said second perimeter portion is angled downwardly and forwardly with respect to said first perimeter portion when said mirror assembly is mounted to an automobile.

72. (previously presented) The exterior sideview mirror system of Claim 64, wherein said second reflective element is attached at said frame by at least one of an adhesive attachment and a mechanical attachment.

73. (previously presented) The exterior sideview mirror system of Claim 66, wherein said backing plate is attached to one side of said first reflective element and said frame by one of an adhesive attachment, a welded attachment, and a mechanical attachment.

74. (previously presented) The exterior sideview mirror system of Claim 73, wherein an opposed side of said frame forms a bezel around said first reflective element.

75. (previously presented) The exterior sideview mirror system of Claim 60, wherein said first reflective element includes a rearward field of view having a principal axis different from a principal axis of the rearward field of view of said second reflective element when mounted in said exterior sideview mirror assembly.

76. (previously presented) The exterior sideview mirror system of Claim 75, wherein said principal axis of the rearward field of view of said second reflective element is directed generally outwardly and downwardly with respect to a longitudinal axis of the automobile.

77. (previously presented) The exterior sideview mirror system of Claim 76, wherein said principal axis of the rearward field of said second reflective element forms a downward angle with respect to the longitudinal axis of the automobile in the range from about 0.75° to about 5°.

78. (previously presented) The exterior sideview mirror system of Claim 77, wherein said downward angle is in a range from about 1.5° to about 3.5°.

79. (previously presented) The exterior sideview mirror system of Claim 77, wherein said downward angle is in a range of about 2° to about 3°.

80. (previously presented) The exterior sideview mirror system of Claim 76, wherein said principal axis of said second reflective element forms an outward angle with respect to the longitudinal axis of the automobile in a range of about 0.75° to about 5°.

81. (previously presented) The exterior sideview mirror system of Claim 80, wherein said outward angle is in a range of about 1° to about 3°.

82. (previously presented) The exterior sideview mirror system of Claim 81, wherein said outward angle is in a range of about 1.25° to about 2.5°.

83. (withdrawn) The exterior sideview mirror system of Claim 81, wherein said exterior sideview mirror assembly comprises a fixedly attached exterior sideview mirror assembly.

84. (previously presented) The exterior sideview mirror system of Claim 60, wherein said exterior sideview mirror assembly comprises a break-away exterior sideview mirror assembly.

85. (withdrawn) The exterior sideview mirror system of Claim 60, wherein said exterior sideview mirror assembly comprises a powerfold exterior sideview mirror assembly.

86. (previously presented) The exterior sideview mirror system of Claim 60, wherein at least one of said first reflective element and said second reflective element comprises a variable reflectance reflective element.

87. (previously presented) The exterior sideview mirror system of Claim 86, wherein each of said first reflective element and said second reflective element comprises a variable reflectance reflective element.

88. (previously presented) The exterior sideview mirror system of Claim 60, wherein said first reflective element comprises an electrochromic reflective element.

89. (previously presented) The exterior sideview mirror system of Claim 60, wherein said first reflective element has a first principal axis and said second reflective element has a second principal axis when supported on said support element, said second principal axis being angled outwardly from said first principal axis at an angle in a range of about 0.75° to about 5°.

90. (previously presented) The exterior sideview mirror system of Claim 89, wherein said second principal axis is angled outwardly from said first principal axis at an angle in a range of about 1° to about 3°.

91. (previously presented) The exterior sideview mirror system of Claim 89, wherein said second principal axis is angled outwardly from said first principal axis at an angle in a range of about 1.25° to about 2.5°.

92. (previously presented) The exterior sideview mirror system of Claim 60, wherein said second reflective element has a second principal axis that is angled downwardly from a first principal axis of said first reflective element when supported on said support element.

93. (previously presented) The exterior sideview mirror system of Claim 92, wherein said second principal axis is angled downwardly from said first principal axis at an angle in a range of approximately 0.75° to about 5°.

94. (previously presented) The exterior sideview mirror system of Claim 92, wherein said second principal axis is angled downwardly from said first principal axis at an angle in a range of about 2° to about 3°.

95. (previously presented) The exterior sideview mirror system of Claim 60, wherein said second reflective element has a second principal axis that is directed generally outwardly and downwardly with respect to a longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

96. (previously presented) The exterior sideview mirror system of Claim 60, wherein said support element includes a support surface for said second reflective element, said support surface angling a second principal axis of said second reflective element.

97. (currently amended) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

said first reflective element including a rearward field of view having a principal axis different from a principal axis of the rearward field of view of said second reflective element when mounted in said exterior sideview mirror assembly;

a demarcation element between said first reflective element and said second reflective element, said first and second reflective elements abutting opposing sides of said demarcation element; and

wherein the portion of said second reflective element ~~adjacent~~ abutting said demarcation element has its front surface generally coplanar with the front surface of said first reflective element substantially along the entire length that said second reflective element abuts said demarcation element.

98. (previously presented) The exterior sideview mirror system of Claim 97, wherein said reflective element assembly includes a first bezel portion extending around said first reflective element, said demarcation element comprising a segment of said first bezel portion.

99. (previously presented) The exterior sideview mirror system of Claim 97, wherein said second reflective element comprises a curved reflective element comprising a bent substrate with at least one radius of curvature in the range of about 4000 mm to about 100 mm.

100. (previously presented) The exterior sideview mirror system of Claim 97, further comprising a support element, said first reflective element and said second reflective element supported at said support element.

101. (previously presented) The exterior sideview mirror system of Claim 100, wherein said support element including a support surface for said second reflective element, said support surface angling said principal axis of said second reflective element.

102. (previously presented) The exterior sideview mirror system of Claim 101, wherein said principal axis of said second reflective element is directed generally outwardly and downwardly with respect to the longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

103. (previously presented) The exterior sideview mirror system of Claim 97, further comprising an actuator operable to adjust the orientation of said reflective element assembly.

104. (previously presented) The exterior sideview mirror system of Claim 97, wherein said principal axis of the rearward field of view of said second reflective element is directed generally outwardly and downwardly with respect to a longitudinal axis of the automobile.

105. (previously presented) The exterior sideview mirror system of Claim 97, wherein said principal axis of said second reflective element forms an outward angle with respect to a longitudinal axis of the automobile.

106. (previously presented) The exterior sideview mirror system of Claim 97, further comprising a frame, said first and second reflective elements being mounted at said frame, said frame including a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

107. (previously presented) The exterior sideview mirror system of Claim 106, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

108. (currently amended) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

an actuator operable to adjust the orientation of said reflective element assembly;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

a demarcation element between said first reflective element and said second reflective element, said first and second reflective elements abutting opposing sides of said demarcation element; and

wherein the portion of said second reflective element ~~adjacent~~ abutting said demarcation element has its front surface generally coplanar with the front surface of said first

reflective element substantially along the entire length that said second reflective element abuts said demarcation element.

109. (previously presented) The exterior sideview mirror system of Claim 108, wherein said first reflective element has a first principal axis and said second reflective element has a second principal axis, said second principal axis being angled outwardly from said first principal axis.

110. (previously presented) The exterior sideview mirror system of Claim 109, wherein said second principal axis is angled downwardly from said first principal axis of said first reflective element.

111. (previously presented) The exterior sideview mirror system of Claim 110, wherein said second principal axis is directed generally outwardly and downwardly with respect to a longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

112. (previously presented) The exterior sideview mirror system of Claim 110, further comprising a support element, said support element including a support surface for said second reflective element, said support surface angling said second principal axis of said second reflective element relative to said first principal axis.

113. (previously presented) The exterior sideview mirror system of Claim 112, wherein said support element comprises a frame, said first and second reflective elements being mounted at said frame.

114. (previously presented) The exterior sideview mirror system of Claim 113, wherein said second reflective element is mounted at said frame at an outboard position, and said first reflective element is positioned adjacent said second reflective element and at an inboard

position with respect to said second reflective element when said exterior sideview mirror assembly is mounted to an automobile.

115. (previously presented) The exterior sideview mirror system of Claim 114, wherein said frame includes a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

116. (previously presented) The exterior sideview mirror system of Claim 115, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

117. (previously presented) The exterior sideview mirror system of Claim 116, wherein said second perimeter portion is angled downwardly and forwardly with respect to said first perimeter portion when said mirror assembly is mounted to an automobile.

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 13

REMARKS

Applicants acknowledge the Examiner's review of the specification, claims, and drawings. In light of the above amendments and following remarks, Applicants respectfully requests reconsideration of the present application. The amendments and remarks presented herein are fully supported by the application as originally filed. No new matter has been entered.

Status of the Claims:

Claims 60-117 are pending in the application. Claims 83 and 85 have been withdrawn from consideration. Claims 1-59 were previously canceled.

Claim Rejections Under 35 U.S.C. § 103:

The Examiner rejects Claims 60-62, 64-66, 69-76, 92, 95-98, 100-102, and 104-107 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539.

The Examiner rejects Claims 67, 68, 84, 103, and 108-117 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539 and, further, in view of Enomoto '166 or Mizuta et al '302.

The Examiner rejects Claims 63, 77-82, 89-91, 93, 94, and 99 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539 and, further, in view of Marhauer '770.

The Examiner rejects Claims 86-88 under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr. '952 in view of Hold '539 and, further, in view of Bauer et al. '864 or Kanazawa '367.

Applicants respectfully traverse. Notwithstanding, Applicants have amended Claims 60, 97, and 108, which now call for:

60. An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said first reflective element and said second reflective element supported at a support element and with a demarcation element between said first and second reflective elements, said first and second reflective elements abutting opposing sides of said demarcation element;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element supported on said support element adjacent to and separate from said first reflective element;

~~a demarcation element between said first reflective element and said second reflective element;~~ and

wherein the portion of said second reflective element abutting said demarcation element ~~abutting said first reflective element~~ has its front surface generally coplanar with the front surface of said first reflective element substantially along the entire length that said second reflective element abuts demarcation element.

97. An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

said first reflective element including a rearward field of view having a principal axis different from a principal axis of the rearward field of view of said second reflective element when mounted in said exterior sideview mirror assembly;

a demarcation element between said first reflective element and said second reflective element, said first and second reflective elements abutting opposing sides of said demarcation element; and

wherein the portion of said second reflective element ~~adjacent~~ abutting said demarcation element has its front surface generally coplanar with the front surface of said first reflective element substantially along the entire length that said second reflective element abuts said demarcation element.

108. An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

an actuator operable to adjust the orientation of said reflective element assembly;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror

assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

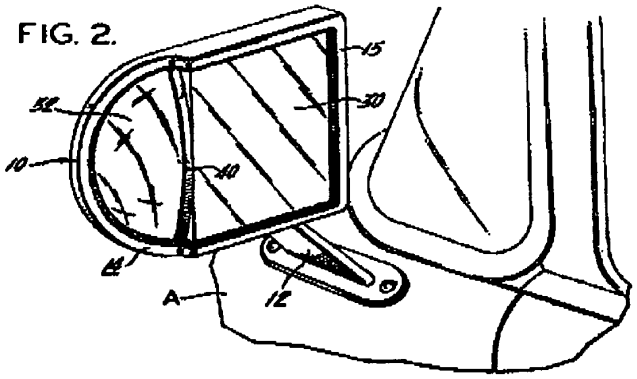
a demarcation element between said first reflective element and said second reflective element, said first and second reflective elements abutting opposing sides of said demarcation element; and

wherein the portion of said second reflective element ~~adjacent~~ abutting said demarcation element has its front surface generally coplanar with the front surface of said first reflective element substantially along the entire length that said second reflective element abuts said demarcation element.

Applicants respectfully urge that neither of Tobin, Jr. nor Holt disclose or suggest the claimed combination. With reference to Claims 60, for example, neither Tobin, Jr. nor Holt disclose or suggest and automobile exterior sideview mirror system that includes first and second reflective elements, which are supported at a support element so as to abut one another, with the first reflective element having a unit magnification and a second reflective element having a curvature, in combination with a demarcation element between the first and second reflective elements and wherein a portion of the second reflective element adjacent the demarcation element has its front surface generally coplanar with the front surface of the first reflective element substantially along the entire length that the second reflective element abuts the first reflective element. Nor would it be obvious to modify Tobin, Jr. to meet the claimed combination.

Indeed, such as clearly indicated in Figure 2, which is reproduced below, Tobin Jr. teaches away from the claimed combination.

FIG. 2.



With respect to Claims 97 and 108, Applicants respectfully urge that neither Tobin, Jr. nor Holt disclose or suggest an exterior sideview mirror system that includes first and second reflective elements, with the first reflective element having a unit magnification and a second reflective element having a curvature, in combination with a demarcation element between the first and second reflective elements with the first and second reflective elements abutting opposing sides of the demarcation element and wherein a portion of the second reflective element abutting the demarcation element has its front surface generally coplanar with the front surface of the first reflective element substantially long the entire length that the second reflective element abuts the demarcation element.

Accordingly, Applicants respectfully urge that Claims 60, 97, and 108 and their respective dependent claims, namely Claims 61-82, 84, 86-96, 98-107, and 109-117 are patentably distinguishable over Tobin, Jr. in view of Holt or any other reference of record. Furthermore, Applicants respectfully submit that none of Enomoto, Mizuta et al., Marhauer,

Bauer et al., or Kanazawa cure the deficiencies of Tobin, Jr. or Holt. Accordingly, Applicants respectfully submit that all the claims are now in condition for allowance and solicit a Notice to that effect.

Should the Examiner have any questions or comments, the Examiner is invited to contact the undersigned at (616) 975-5506.

Respectfully submitted,

NIALL R. LYNAM ET AL.

By: Van Dyke, Gardner, Linn & Burkhart, LLP

February 6, 2006
Date

Catherine S. Collins
Registration No. 37 599
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500
collins@vglb.com

CSC:lmsc

RECEIVED
CENTRAL FAX CENTER
FEB 06 2006

PTO/SB/30 (04-05)
Approved for use through 07/31/2006 OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Request for Continued Examination (RCE) Transmittal

Address to:
Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	10/817,645
Filing Date	April 2, 2004
First Named Inventor	Niall R. Lyam
Art Unit	2872
Examiner Name	Ricky D. Shafer
Attorney Docket Number	DON01 P-1148

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. Submission required under 37 CFR 1.114 Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

   a. ☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

      i. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

      ii. ☐ Other _____

   b. ☑ Enclosed

      i. ☑ Amendment/Reply

      ii. ☐ Affidavit(s)/ Declaration(s)

      iii. ☐ Information Disclosure Statement (IDS)

      iv. ☐ Other _____

2. Miscellaneous

   a. ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

   b. ☐ Other _____

3. Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

   The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to

   a ☑ Deposit Account No. 22-0190. I have enclosed a duplicate copy of this sheet.

      i. ☑ RCE fee required under 37 CFR 1.17(e)

      ii. ☑ Extension of time fee (37 CFR 1.136 and 1.17)

      iii ☐ Other _____

   b. ☐ Check in the amount of $ _____ enclosed

   c. ☐ Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature		Date	February 6, 2006
Name (Print/Type)	Catherine S. Collins	Registration No.	37 599

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Signature			
Name (Print/Type)	Catherine S. Collins	Date	February 6, 2006

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

02/07/2006 LWONDIM1 00000087 220190 10817645
01 FC:1801 790.00 DA

RECEIVED
CENTRAL FAX CENTER

FEB 06 2006

Via Facsimile No. (571) 273-8300

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicant	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Dear Sir: RESUBMISSION

CERTIFICATE OF FACSIMILE TRANSMISSION

I certify that the following papers are being facsimile transmitted to the Patent and Trademark Office on the date shown below:

Petition and Fee for Extension of Time (in duplicate);

Request for Continued Examination (RCE) Transmittal (in duplicate); and

Amendment After Final Rejection (37 C.F.R. 1.116).

YOU SHOULD RECEIVE A TOTAL OF 23 PAGES INCLUDING THIS TRANSMITTAL.

Dated: February 6, 2006.

Catherine S. Collins
Van Dyke, Gardner, Linn & Burkhart, LLP
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc
Enclosures

RECEIVED
CENTRAL FAX CENTER

FEB 0 6 2006

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicants	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Date of this Paper: February 6, 2006.

Dear Sir:

PETITION AND FEE FOR
EXTENSION OF TIME (37 C.F.R. 1.136[a])

1. This is a petition for an extension of time to respond to the final Office Action mailed October 5, 2005, for a period of one month.

2. Applicant is:

a small entity

x other than small entity

3.

Extension (months)		Fee for other than small entity	Fee for small entity
x	one month	$120.00	$60.00
	two months	$450.00	$225.00
	three months	$1,020.00	$510.00

4. An amendment:

x is filed herewith has been filed

5. Fee Payment:

x Please charge the amount of $120.00 and any additional fees required or credit any excess fee paid to Deposit Account No. 22-0190. A duplicate of this Petition is attached.

VAN DYKE, GARDNER, LINN & BURKHART, LLP

02/07/2006 LWONDIM1 00000087 220190 10817645
02 FC:1251 120.00 DA

Catherine S. Collins
Registration No. 37 599
2851 Charlevoix Drive, S.E.
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc

Substitute for Form PTO-875 — RCE | 10/817,645

CLAIMS AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE	SMALL ENTITY FEE	OR	OTHER THAN SMALL ENTITY RATE	OTHER THAN SMALL ENTITY FEE
BASIC FEE (37 CFR 1.16(a))				$	OR		$
TOTAL CLAIMS (37 CFR 1.16(c))	58 minus 20 =	*	x $ =		OR	x $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(b))	3 minus 3 =	*	x $ =		OR	x $ =	
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(d))			+ $ =		OR	+ $ =	
			TOTAL		OR	TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED – PART II

2/16/06

AMENDMENT A	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE	SMALL ENTITY ADDITIONAL FEE	OR	OTHER THAN SMALL ENTITY RATE	OTHER THAN SMALL ENTITY ADDITIONAL FEE
Total (37 CFR 1.16(i))	57	Minus	** 58	—	x $ 25 =		OR	x $ 50 =	
Independent (37 CFR 1.16(h))	3	Minus	*** 3	—	x $ 100 =		OR	x $ 200 =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))					+ $ =		OR	+ $ =	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT B	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
Total (37 CFR 1.16(i))		Minus	**	=	x $ =		OR	x $ =	
Independent (37 CFR 1.16(h))		Minus	***	=	x $ =		OR	x $ =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))					+ $ =		OR	+ $ =	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT C	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
Total (37 CFR 1.16(i))		Minus	**	=	x $ =		OR	x $ =	
Independent (37 CFR 1.16(h))		Minus	***	=	x $ =		OR	x $ =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))					+ $ =		OR	+ $ =	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you are required to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Via Facsimile No. (571) 273-8300

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicants	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Dear Sir:

AMENDMENT AFTER FINAL REJECTION (37 C.F.R. 1.116)

In response to the final Office Action mailed October 5, 2005, having a three-month period of response ending January 5, 2006, Applicants wish to amend their application as follows:

In the Claims:

Please amend Claims 60, 97, and 108 as follows:

1-59. (canceled)

60. (currently amended) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said first reflective element and said second reflective element supported at a support element and with a demarcation element between said first and second reflective elements, said first and second reflective elements abutting opposing sides of said demarcation element;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element supported on said support element adjacent to and separate from said first reflective element;

~~a demarcation element between said first reflective element and said second reflective element;~~ and

wherein the portion of said second reflective element abutting said demarcation element ~~abutting said first reflective element~~ has its front surface generally coplanar with the front surface of said first reflective element substantially along the entire length that said second reflective element abuts said demarcation element.

61. (previously presented) The exterior sideview mirror system of Claim 60, wherein said demarcation element is dark colored.

62. (previously presented) The exterior sideview mirror system of Claim 60, wherein said reflective element assembly includes a first bezel portion extending around said first reflective element, said demarcation element comprising a segment of said first bezel portion.

63. (previously presented) The exterior sideview mirror system of Claim 60, wherein said second reflective element comprises a curved reflective element comprising a bent substrate with at least one radius of curvature in the range of about 4000 mm to about 100 mm.

64. (previously presented) The exterior sideview mirror system of Claim 60, wherein said support element comprises a frame, said first and second reflective elements being mounted at said frame.

65. (previously presented) The exterior sideview mirror system of Claim 64, wherein said second reflective element is mounted at said frame at an outboard position, and said first reflective element is positioned adjacent said second reflective element and at an inboard position with respect to said second reflective element when said exterior sideview mirror assembly is mounted to an automobile.

66. (previously presented) The exterior sideview mirror system of Claim 64, wherein said first reflective element is mounted at said frame by a backing plate.

67. (previously presented) The exterior sideview mirror system of Claim 66, wherein said backing plate is adapted to mount to an actuator operable to adjust the orientation of said reflective element assembly.

68. (previously presented) The exterior sideview mirror system of Claim 67, wherein said actuator comprises an electrical actuator.

69. (previously presented) The exterior sideview mirror system of Claim 64, wherein said first reflective element and said second reflective element are adjacently attached at said frame, said frame including a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

70. (previously presented) The exterior sideview mirror system of Claim 69, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

71. (previously presented) The exterior sideview mirror system of Claim 69, wherein said second perimeter portion is angled downwardly and forwardly with respect to said first perimeter portion when said mirror assembly is mounted to an automobile.

72. (previously presented) The exterior sideview mirror system of Claim 64, wherein said second reflective element is attached at said frame by at least one of an adhesive attachment and a mechanical attachment.

73. (previously presented) The exterior sideview mirror system of Claim 66, wherein said backing plate is attached to one side of said first reflective element and said frame by one of an adhesive attachment, a welded attachment, and a mechanical attachment.

74. (previously presented) The exterior sideview mirror system of Claim 73, wherein an opposed side of said frame forms a bezel around said first reflective element.

75. (previously presented) The exterior sideview mirror system of Claim 60, wherein said first reflective element includes a rearward field of view having a principal axis different from a principal axis of the rearward field of view of said second reflective element when mounted in said exterior sideview mirror assembly.

76. (previously presented) The exterior sideview mirror system of Claim 75, wherein said principal axis of the rearward field of view of said second reflective element is directed generally outwardly and downwardly with respect to a longitudinal axis of the automobile.

77. (previously presented) The exterior sideview mirror system of Claim 76, wherein said principal axis of the rearward field of said second reflective element forms a downward angle with respect to the longitudinal axis of the automobile in the range from about 0.75° to about 5°.

78. (previously presented) The exterior sideview mirror system of Claim 77, wherein said downward angle is in a range from about 1.5° to about 3.5°.

79. (previously presented) The exterior sideview mirror system of Claim 77, wherein said downward angle is in a range of about 2° to about 3°.

80. (previously presented) The exterior sideview mirror system of Claim 76, wherein said principal axis of said second reflective element forms an outward angle with respect to the longitudinal axis of the automobile in a range of about 0.75° to about 5°.

81. (previously presented) The exterior sideview mirror system of Claim 80, wherein said outward angle is in a range of about 1° to about 3°.

82. (previously presented) The exterior sideview mirror system of Claim 81, wherein said outward angle is in a range of about 1.25° to about 2.5°.

83. (withdrawn) The exterior sideview mirror system of Claim 81, wherein said exterior sideview mirror assembly comprises a fixedly attached exterior sideview mirror assembly.

84. (previously presented) The exterior sideview mirror system of Claim 60, wherein said exterior sideview mirror assembly comprises a break-away exterior sideview mirror assembly.

85. (withdrawn) The exterior sideview mirror system of Claim 60, wherein said exterior sideview mirror assembly comprises a powerfold exterior sideview mirror assembly.

86. (previously presented) The exterior sideview mirror system of Claim 60, wherein at least one of said first reflective element and said second reflective element comprises a variable reflectance reflective element.

87. (previously presented) The exterior sideview mirror system of Claim 86, wherein each of said first reflective element and said second reflective element comprises a variable reflectance reflective element.

88. (previously presented) The exterior sideview mirror system of Claim 60, wherein said first reflective element comprises an electrochromic reflective element.

89. (previously presented) The exterior sideview mirror system of Claim 60, wherein said first reflective element has a first principal axis and said second reflective element has a second principal axis when supported on said support element, said second principal axis being angled outwardly from said first principal axis at an angle in a range of about 0.75° to about 5°.

90. (previously presented) The exterior sideview mirror system of Claim 89, wherein said second principal axis is angled outwardly from said first principal axis at an angle in a range of about 1° to about 3°.

91. (previously presented) The exterior sideview mirror system of Claim 89, wherein said second principal axis is angled outwardly from said first principal axis at an angle in a range of about 1.25° to about 2.5°.

92. (previously presented) The exterior sideview mirror system of Claim 60, wherein said second reflective element has a second principal axis that is angled downwardly from a first principal axis of said first reflective element when supported on said support element.

93. (previously presented) The exterior sideview mirror system of Claim 92, wherein said second principal axis is angled downwardly from said first principal axis at an angle in a range of approximately 0.75° to about 5°.

94. (previously presented) The exterior sideview mirror system of Claim 92, wherein said second principal axis is angled downwardly from said first principal axis at an angle in a range of about 2° to about 3°.

95. (previously presented) The exterior sideview mirror system of Claim 60, wherein said second reflective element has a second principal axis that is directed generally outwardly and downwardly with respect to a longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

96. (previously presented) The exterior sideview mirror system of Claim 60, wherein said support element includes a support surface for said second reflective element, said support surface angling a second principal axis of said second reflective element.

97. (currently amended) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

said first reflective element including a rearward field of view having a principal axis different from a principal axis of the rearward field of view of said second reflective element when mounted in said exterior sideview mirror assembly;

a demarcation element between said first reflective element and said second reflective element, said first and second reflective elements abutting opposing sides of said demarcation element; and

wherein the portion of said second reflective element ~~adjacent~~ abutting said demarcation element has its front surface generally coplanar with the front surface of said first reflective element substantially along the entire length that said second reflective element abuts said demarcation element.

98. (previously presented) The exterior sideview mirror system of Claim 97, wherein said reflective element assembly includes a first bezel portion extending around said first reflective element, said demarcation element comprising a segment of said first bezel portion.

99. (previously presented) The exterior sideview mirror system of Claim 97, wherein said second reflective element comprises a curved reflective element comprising a bent substrate with at least one radius of curvature in the range of about 4000 mm to about 100 mm.

100. (previously presented) The exterior sideview mirror system of Claim 97, further comprising a support element, said first reflective element and said second reflective element supported at said support element.

101. (previously presented) The exterior sideview mirror system of Claim 100, wherein said support element including a support surface for said second reflective element, said support surface angling said principal axis of said second reflective element.

102. (previously presented) The exterior sideview mirror system of Claim 101, wherein said principal axis of said second reflective element is directed generally outwardly and downwardly with respect to the longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

103. (previously presented) The exterior sideview mirror system of Claim 97, further comprising an actuator operable to adjust the orientation of said reflective element assembly.

104. (previously presented) The exterior sideview mirror system of Claim 97, wherein said principal axis of the rearward field of view of said second reflective element is directed generally outwardly and downwardly with respect to a longitudinal axis of the automobile.

105. (previously presented) The exterior sideview mirror system of Claim 97, wherein said principal axis of said second reflective element forms an outward angle with respect to a longitudinal axis of the automobile.

106. (previously presented) The exterior sideview mirror system of Claim 97, further comprising a frame, said first and second reflective elements being mounted at said frame, said frame including a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

107. (previously presented) The exterior sideview mirror system of Claim 106, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

108. (currently amended) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

an actuator operable to adjust the orientation of said reflective element assembly;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

a demarcation element between said first reflective element and said second reflective element, said first and second reflective elements abutting opposing sides of said demarcation element; and

wherein the portion of said second reflective element ~~adjacent~~ abutting said demarcation element has its front surface generally coplanar with the front surface of said first

reflective element substantially along the entire length that said second reflective element abuts said demarcation element.

109. (previously presented) The exterior sideview mirror system of Claim 108, wherein said first reflective element has a first principal axis and said second reflective element has a second principal axis, said second principal axis being angled outwardly from said first principal axis.

110. (previously presented) The exterior sideview mirror system of Claim 109, wherein said second principal axis is angled downwardly from said first principal axis of said first reflective element.

111. (previously presented) The exterior sideview mirror system of Claim 110, wherein said second principal axis is directed generally outwardly and downwardly with respect to a longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

112. (previously presented) The exterior sideview mirror system of Claim 110, further comprising a support element, said support element including a support surface for said second reflective element, said support surface angling said second principal axis of said second reflective element relative to said first principal axis.

113. (previously presented) The exterior sideview mirror system of Claim 112, wherein said support element comprises a frame, said first and second reflective elements being mounted at said frame.

114. (previously presented) The exterior sideview mirror system of Claim 113, wherein said second reflective element is mounted at said frame at an outboard position, and said first reflective element is positioned adjacent said second reflective element and at an inboard

position with respect to said second reflective element when said exterior sideview mirror assembly is mounted to an automobile.

115. (previously presented) The exterior sideview mirror system of Claim 114, wherein said frame includes a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

116. (previously presented) The exterior sideview mirror system of Claim 115, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

117. (previously presented) The exterior sideview mirror system of Claim 116, wherein said second perimeter portion is angled downwardly and forwardly with respect to said first perimeter portion when said mirror assembly is mounted to an automobile.

REMARKS

Applicants acknowledge the Examiner's review of the specification, claims, and drawings. In light of the above amendments and following remarks, Applicants respectfully requests reconsideration of the present application. The amendments and remarks presented herein are fully supported by the application as originally filed. No new matter has been entered.

Status of the Claims:

Claims 60-117 are pending in the application. Claims 83 and 85 have been withdrawn from consideration. Claims 1-59 were previously canceled.

Claim Rejections Under 35 U.S.C. § 103:

The Examiner rejects Claims 60-62, 64-66, 69-76, 92, 95-98, 100-102, and 104-107 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539.

The Examiner rejects Claims 67, 68, 84, 103, and 108-117 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539 and, further, in view of Enomoto '166 or Mizuta et al '302.

The Examiner rejects Claims 63, 77-82, 89-91, 93, 94, and 99 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539 and, further, in view of Marhauer '770.

The Examiner rejects Claims 86-88 under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr. '952 in view of Hold '539 and, further, in view of Bauer et al. '864 or Kanazawa '367.

Applicants respectfully traverse. Notwithstanding, Applicants have amended Claims 60, 97, and 108, which now call for:

60. An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said first reflective element and said second reflective element supported at a support element and with a demarcation element between said first and second reflective elements, said first and second reflective elements abutting opposing sides of said demarcation element;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element supported on said support element adjacent to and separate from said first reflective element;

~~a demarcation element between said first reflective element and said second reflective element;~~ and

wherein the portion of said second reflective element abutting said demarcation element ~~abutting said first reflective element~~ has its front surface generally coplanar with the front surface of said first reflective element substantially along the entire length that said second reflective element abuts demarcation element.

97. An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

said first reflective element including a rearward field of view having a principal axis different from a principal axis of the rearward field of view of said second reflective element when mounted in said exterior sideview mirror assembly;

a demarcation element between said first reflective element and said second reflective element, said first and second reflective elements abutting opposing sides of said demarcation element; and

wherein the portion of said second reflective element ~~adjacent~~ abutting said demarcation element has its front surface generally coplanar with the front surface of said first reflective element substantially along the entire length that said second reflective element abuts said demarcation element.

108. An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

an actuator operable to adjust the orientation of said reflective element assembly;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror

assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and

Via Facsimile No. (571) 273-8300

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicant	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Dear Sir:

CERTIFICATE OF FACSIMILE TRANSMISSION

I certify that the following papers are being facsimile transmitted to the Patent and Trademark Office on the date shown below:

Petition and Fee for Extension of Time (in duplicate);

Request for Continued Examination (RCE) Transmittal (in duplicate); and

Amendment After Final Rejection (37 C.F.R. 1.116).

YOU SHOULD RECEIVE A TOTAL OF 13 PAGES INCLUDING THIS TRANSMITTAL.

Dated: February 6, 2006.

Catherine S. Collins
Van Dyke, Gardner, Linn & Burkhart, LLP
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc
Enclosures

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicants	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Date of this Paper: February 6, 2006.

Dear Sir:

PETITION AND FEE FOR
EXTENSION OF TIME (37 C.F.R. 1.136[a])

1. This is a petition for an extension of time to respond to the final Office Action mailed October 5, 2005, for a period of one month.

2. Applicant is:

-a small entity

x other than small entity

3.

Extension (months)		Fee for other than small entity	Fee for small entity
x	one month	$120.00	$60.00
	two months	$450.00	$225.00
	three months	$1,020.00	$510.00

4. An amendment:

x is filed herewith has been filed

5. Fee Payment:

x Please charge the amount of $120.00 and any additional fees required or credit any excess fee paid to Deposit Account No. 22-0190. A duplicate of this Petition is attached.

VAN DYKE, GARDNER, LINN & BURKHART, LLP

Catherine S. Collins
Registration No. 37 599
2851 Charlevoix Drive, S.E.
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicants	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Date of this Paper: February 6, 2006.

Dear Sir:

PETITION AND FEE FOR
EXTENSION OF TIME (37 C.F.R. 1.136[a])

1. This is a petition for an extension of time to respond to the final Office Action mailed October 5, 2005, for a period of one month.

2. Applicant is:

   a small entity

   x other than small entity

3.

Extension (months)		Fee for other than small entity	Fee for small entity
x	one month	$120.00	$60.00
	two months	$450.00	$225.00
	three months	$1,020.00	$510.00

4. An amendment:

   x is filed herewith has been filed

5. Fee Payment:

   x Please charge the amount of $120.00 and any additional fees required or credit any excess fee paid to Deposit Account No. 22-0190. A duplicate of this Petition is attached.

VAN DYKE, GARDNER, LINN & BURKHART, LLP

Catherine S. Collins
Registration No. 37 599
2851 Charlevoix Drive, S.E.
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc

PTO/SB/30 (04-05)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Request for Continued Examination (RCE) Transmittal

Address to:
Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	10/817,645
Filing Date	April 2, 2004
First Named Inventor	Niall R. Lyam
Art Unit	2872
Examiner Name	Ricky D. Shafer
Attorney Docket Number	DON01 P-1148

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. Submission required under 37 CFR 1.114 Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

   a. ☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

      i. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

      ii. ☐ Other _____

   b. ☑ Enclosed

      i ☑ Amendment/Reply

      ii. ☐ Affidavit(s)/ Declaration(s)

      iii. ☐ Information Disclosure Statement (IDS)

      iv. ☐ Other _____

2. Miscellaneous

   a. ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

   b. ☐ Other _____

3. Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

   a. ☑ The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to Deposit Account No. 22-0190. I have enclosed a duplicate copy of this sheet.

      i. ☑ RCE fee required under 37 CFR 1.17(e)

      ii. ☑ Extension of time fee (37 CFR 1.136 and 1.17)

      iii. ☐ Other _____

   b. ☐ Check in the amount of $ _____ enclosed

   c. ☐ Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature		Date	February 6, 2006
Name (Print/Type)	Catherine S. Collins	Registration No.	37 599

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Signature			
Name (Print/Type)	Catherine S. Collins	Date	February 6, 2006

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/30 (04-05)
Approved for use through 07/31/2006 OMB 0651-0031
U S Patent and Trademark Office. U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Request for Continued Examination (RCE) Transmittal

Address to:
Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	10/817,645
Filing Date	April 2, 2004
First Named Inventor	Niall R. Lyam
Art Unit	2872
Examiner Name	Ricky D. Shafer
Attorney Docket Number	DON01 P-1148

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. Submission required under 37 CFR 1.114 Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s)

   a. ☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

      i. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

      ii. ☐ Other _____

   b. ☑ Enclosed

      i. ☑ Amendment/Reply

      ii. ☐ Affidavit(s)/ Declaration(s)

      iii. ☐ Information Disclosure Statement (IDS)

      iv ☐ Other _____

2. Miscellaneous

   a. ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

   b ☐ Other _____

3. Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

   The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to

   a. ☑ Deposit Account No. 22-0190. I have enclosed a duplicate copy of this sheet.

      i. ☑ RCE fee required under 37 CFR 1.17(e)

      ii. ☑ Extension of time fee (37 CFR 1.136 and 1.17)

      iii. ☐ Other _____

   b ☐ Check in the amount of $ _____ enclosed

   c. ☐ Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature		Date	February 6, 2006
Name (Print/Type)	Catherine S. Collins	Registration No.	37 599

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Signature			
Name (Print/Type)	Catherine S. Collins	Date	February 6, 2006

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U S Patent and Trademark Office, U.S. Department of Commerce, P O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS **SEND TO: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

RECEIVED
CENTRAL FAX CENTER

FEB 0 6 2006

Entered with RCE 2/6/06

Via Facsimile No. (571) 273-8300

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicants	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Dear Sir:

AMENDMENT AFTER FINAL REJECTION (37 C.F.R. 1.116)

In response to the final Office Action mailed October 5, 2005, having a three-month period of response ending January 5, 2006, Applicants wish to amend their application as follows:

RCE 10/877,695

CLAIMS AS FILED – PART I

	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE	SMALL ENTITY FEE	OR	OTHER THAN SMALL ENTITY RATE	OTHER THAN SMALL ENTITY FEE
FOR							
BASIC FEE (37 CFR 1.16(a))					OR		1,790.00
TOTAL CLAIMS (37 CFR 1.16(c))	58 minus 20 =	*	x $ =		OR	x $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(b))	3 minus 3 =	*	x $ =		OR	x $ =	
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(d))			+ $ =		OR	+ $ =	
* If the difference in column 1 is less than zero, enter "0" in column 2			TOTAL		OR	TOTAL	790.00

CLAIMS AS AMENDED – PART II

AMENDMENT A	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE	SMALL ENTITY ADDITIONAL FEE	OR	OTHER THAN SMALL ENTITY RATE	OTHER THAN SMALL ENTITY ADDITIONAL FEE
Total (37 CFR 1.16(i))	* 58	Minus	** 58	* —	x $ 25 =		OR	x $ 50 =	
Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	* —	x $ 100 =		OR	x $ 200 =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))					+ $ =		OR	+ $ =	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT B	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
Total (37 CFR 1.16(i))	*	Minus	**	*	x $ =		OR	x $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	*	x $ =		OR	x $ =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))					+ $ =		OR	+ $ =	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT C	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
Total (37 CFR 1.16(i))	*	Minus	**	*	x $ =		OR	x $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	*	x $ =		OR	x $ =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))					+ $ =		OR	+ $ =	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,645	04/02/2004	Niall R. Lynam	DON01 P-1148	2833

28101 7590 10/05/2005

VAN DYKE, GARDNER, LINN AND BURKHART, LLP
2851 CHARLEVOIX DRIVE, S.E.
P.O. BOX 888695
GRAND RAPIDS, MI 49588-8695

EXAMINER	
SHAFER, RICKY D	

ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/817,645	LYNAM ET AL.	
	Examiner	Art Unit	
	Ricky D. Shafer	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *60-117* is/are pending in the application.

4a) Of the above claim(s) *83 and 85* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *60-82,84 and 86-117* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's arguments filed 07/19/2005 have been fully considered but they are not persuasive.

Applicant argues that the prior art to Tobin, Jr. does not disclose a reflective element assembly having a second reflective element being disposed at an outer, upper portion of the reflective element display.

The examiner is of the opinion that the second reflective element (32) of Tobin, Jr. clearly has an outer, upper portion, as well as an outer, lower portion.

In addition, the examiner is of the opinion that the second reflective element has it's front, (center/peak) portion "generally" coplanar with the front surface of the first reflective element. See column 3, lines 42-48.

Moreover, the examiner is of the opinion that there is a demarcation element, represented by element 40, between the first and second reflective elements.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 60-62, 64-66, 69-76, 92, 95-98, 100-102 and 104-107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr ('952) in view of Holt ('539).

Tobin, Jr discloses an automobile exterior side view mirror system comprising an exterior side view mirror assembly (10) adapted for attachment to a side of an automobile;

said exterior side view mirror assembly including a reflective element assembly (30,32); said reflective element assembly including a first reflective element (30) having unit magnification and a second reflective element (32) having a curvature; said first reflective element and said second reflective element supported at a support element (35), wherein said support includes a frame (20) and a backing plate (14); said second reflective element disposed at an outer, upper portion as well as the lower portion of said reflective element assembly when said reflective element assembly is included in said exterior side view mirror assembly and when said exterior side view mirror assembly is attached to the side of an automobile; said second reflective element supported on said support element adjacent to and separate from said first reflective element; a demarcation element (40) of a dark (red) color adjacent said first reflective element and said second reflective element; and wherein the portion of said second reflective element adjacent said demarcation element has a front surface generally coplanar with the front surface of said first reflective element, wherein the second reflective element inherently includes a rearward field of view having a principal axis which is different from a principal axis of the rearward field of view of the first reflective element due to the convex characteristics of the second reflective element which generally extends the rearview field of view outwardly and downwardly with respect to a longitudinal axis of the automobile, note Fig. 4 along with the associated description thereof, except for the demarcation element positioned between first and second reflective elements.

Holt ('539) teaches it well known to use a segment of a perimeter (bezel) portion to serve as a demarcation element in the same field of endeavor for the purpose of providing a clear

dividing line and/or demarcation between first and second reflective elements so as to provide a driver of a vehicle with a two separate views.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the perimeter (bezel) portion of Tobin, Jr to include an segment (demarcation element) between the first and second reflective elements, as taught by Holt, in order to provide a clear dividing line and/or demarcation between the first and second reflective elements so as to provide a driver of a vehicle with a two separate views as well as increasing the over structural strength of the exterior side view mirror assembly.

4. Claims 67, 68, 84, 103, 108-117 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr ('952) in view Holt ('539) as applied to claims 60-62, 64-66, 69-76, 92, 95-98, 100-102 and 104-107 above, and further in view of Enomoto ('166) or Mizuta et al ('302).

Tobin, Jr in view of Holt discloses all of the subject matter claimed, note the above explanation, except for an electrical actuator to adjust the orientation of the reflective element assembly.

Enomoto ('166) and Mizuta et al ('302) each teach it well known to use electrically operated actuator(s) in the same field of endeavor for the purpose of adjusting the position and/or orientation of a reflective element.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the reflective element assembly of Tobin, Jr to include electrically operable actuator(s) as is well known and commonly used and employed in the mirror art, as

taught by Oskam or Enomoto, in order to adjust the position and/or orientation of the reflective element assembly.

Moreover, it has been held that providing automatic means to replace manual activity, which accomplishes the same result, involves only routine skill in the art. Note In Re Venner, 120 USPQ 192.

As to the limitations of claim 84, it is well known to use breakaway exterior side view mirror assemblies in the same field of endeavor for the purpose of folding the position and/or orientation of a mirror. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the exterior side view mirror assembly of Tobin, Jr to include a break-away exterior side view mirror assembly, as is well known and commonly used and employed in the mirror art, in order to fold the position and/or orientation of the reflective element(s).

5. Claims 63, 77-82, 89-91, 93, 94 and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr ('952) in view Holt ('539) as applied to claims 60-62, 64-66, 69-76, 92, 95-98, 100-102 and 104-107 above, and further in view of Marhauer ('770).

Tobin, Jr in view of Holt discloses all of the subject matter claimed, note the above explanation, except for explicitly stating that the curved reflective element includes at least one radius of curvature in the range of about 4000 mm to about 100 mm.

Marhauer ('770) teaches it well known to select a curvature of a reflective element within the range recited by applicant in the same field of endeavor for the purpose of avoiding distortions.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the curvature of the curved reflective element of Tobin, Jr to include a value, as taught by Marhauer, in order to avoid distortions.

As to the limitations of claims 77-82, 89-91, 93 and 94, it is well known to use an a curved reflective element having downward and outward angles within the range recited by applicant in order to optimize and/or view a particular rearward field of view of interest.

Therefore, it would have been obvious and/or within the level of one of ordinary skill in the art at the time the invention was made to modify the curved reflective element of Tobin, Jr to include downward and outward angles within the range recited by applicant in order to optimize and/or view a particular rearward field of view of interest, based on user specifications.

Moreover, it would have been obvious to one of ordinary skill in the art at the time the invention was made to angle the curved reflective element of Tobin, Jr to the selected range(s) recited by applicant in order to view of particular rearward field of view of interest, since it has been held that where the general conditions of a claim are disclosed in the prior art or discovering an optimum or workable ranges involves only routine skill in the art. Note In re Aller, 105 USPQ 233 and In re Boesch, , 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

6. Claims 86-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr ('952) in view Holt ('539) as applied to claims 60-62, 64-66, 69-76, 92, 95-98, 100-102 and 104-107 above, and further in view of Bauer et al ('864) or Kanazawa ('367).

Tobin, Jr in view of Holt discloses all of the subject matter claimed, note the above explanation, except for the reflective element(s) being a variable reflectance (electrochromic) element.

Bauer et al ('864) and Kanazawa ('367) each teach it well known to use electrochromic mirrors in exterior side view mirrors in the same field of endeavor for the purpose of providing variable reflectance and/or reducing glare

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the reflective element(s) of Tobin, Jr to include variable reflectance (electrochromic) element(s), as taught by Bauer et al or Kanazawa, in order to reduce glare.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricky D. Shafer whose telephone number is (571) 272-2320. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RDS

October 02, 2005

RICKY D. SHAFER
PATENT EXAMINER
ART UNIT 2872

Index of Claims

Application/Control No.	Applicant(s)/Patent under Reexamination
10/817,645	LYNAM ET AL.
Examiner	**Art Unit**
Ricky D. Shafer	2872

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim		Date
Final	Original	10/02/2005
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	11	
	12	
	13	
	14	
	15	
	16	
	17	
	18	
	19	
	20	
	21	
	22	
	23	
	24	
	25	
	26	
	27	
	28	
	29	
	30	
	31	
	32	
	33	
	34	
	35	
	36	
	37	
	38	
	39	
	40	
	41	
	42	
	43	
	44	
	45	
	46	
	47	
	48	
	49	
	50	

Claim		Date
Final	Original	10/02/2005
	51	
	52	
	53	
	54	
	55	
	56	
	57	
	58	
	59	
	60	✓
	61	✓
	62	✓
	63	✓
	64	✓
	65	✓
	66	✓
	67	✓
	68	✓
	69	✓
	70	✓
	71	✓
	72	✓
	73	✓
	74	✓
	75	✓
	76	✓
	77	✓
	78	✓
	79	✓
	80	✓
	81	✓
	82	✓
	83	✓
	84	✓
	85	✓
	86	✓
	87	✓
	88	✓
	89	✓
	90	✓
	91	✓
	92	✓
	93	✓
	94	✓
	95	✓
	96	✓
	97	✓
	98	✓
	99	✓
	100	✓

Claim		Date
Final	Original	10/02/2005
	101	✓
	102	✓
	103	✓
	104	✓
	105	✓
	106	✓
	107	✓
	108	✓
	109	✓
	110	✓
	111	✓
	112	✓
	113	✓
	114	✓
	115	✓
	116	✓
	117	✓
	118	
	119	
	120	
	121	
	122	
	123	
	124	
	125	
	126	
	127	
	128	
	129	
	130	
	131	
	132	
	133	
	134	
	135	
	136	
	137	
	138	
	139	
	140	
	141	
	142	
	143	
	144	
	145	
	146	
	147	
	148	
	149	
	150	

Search Notes	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/817,645	LYNAM ET AL.	
	Examiner	Art Unit	
	Ricky D. Shafer	2872	

SEARCHED			
Class	Subclass	Date	Examiner
SEARCH UPDATED		10/02/2005	RDS

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR

Via Facsimile No. (703) 872-9306

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicant	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Dear Sir:

CERTIFICATE OF FACSIMILE TRANSMISSION

I certify that the following papers are being facsimile transmitted to the Patent and Trademark Office on the date shown below:

Substitute Response;

Terminal Disclaimer with copy of Assignment.

YOU SHOULD RECEIVE A TOTAL OF 21 PAGES

INCLUDING THIS TRANSMITTAL.

The Commissioner is hereby authorized to charge the Terminal Disclaimer fee of $130 and any additional fees or credit any overpayment, to Deposit Account No. 22-0190.

A duplicate copy of this sheet is enclosed.

Dated: July 19, 2005.

Catherine S. Collins
Van Dyke, Gardner, Linn & Burkhart, LLP
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc
Enclosures

Via Facsimile No. (703) 872-9306

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicant	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Dear Sir:

CERTIFICATE OF FACSIMILE TRANSMISSION

I certify that the following papers are being facsimile transmitted to the Patent and Trademark Office on the date shown below:

Substitute Response;

Terminal Disclaimer with copy of Assignment.

YOU SHOULD RECEIVE A TOTAL OF 21 PAGES

INCLUDING THIS TRANSMITTAL.

The Commissioner is hereby authorized to charge the Terminal Disclaimer fee of $130 and any additional fees or credit any overpayment, to Deposit Account No. 22-0190.

A duplicate copy of this sheet is enclosed.

Dated: July 19, 2005.

Catherine S. Collins
Van Dyke, Gardner, Linn & Burkhart, LLP
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc
Enclosures

Via Facsimile No. (703) 872-9306

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicants	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Dear Sir:

SUBSTITUTE RESPONSE

In response to the Notice mailed June 29, 2005, having a one-month period of response ending July 29, 2005, Applicants submit herewith a Substitute Response for the Response filed on April 11, 2005, which corrects the deficiencies noted in the Office Communication mailed June 29, 2005.

In response to the Office Action mailed January 12, 2005, having a three-month period of response ending April 12, 2005, Applicants wish to amend their application as follows:

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 2

In the Claims:

Please amend Claims 60, 97, and 108 as follows:

1-59. (canceled)

60. (currently amended) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said first reflective element and said second reflective element supported at a support element;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element supported on said support element adjacent to and separate from said first reflective element;

a demarcation element between said first reflective element and said second reflective element; and

wherein the portion of said second reflective element adjacent said demarcation element has its [[a]] front surface generally coplanar with the front surface of said first reflective element.

61. (previously presented) The exterior sideview mirror system of Claim 60, wherein said demarcation element is dark colored.

62. (previously presented) The exterior sideview mirror system of Claim 60, wherein said reflective element assembly includes a first bezel portion extending around said first reflective element, said demarcation element comprising a segment of said first bezel portion.

63. (previously presented) The exterior sideview mirror system of Claim 60, wherein said second reflective element comprises a curved reflective element comprising a bent substrate with at least one radius of curvature in the range of about 4000 mm to about 100 mm.

64. (previously presented) The exterior sideview mirror system of Claim 60, wherein said support element comprises a frame, said first and second reflective elements being mounted at said frame.

65. (previously presented) The exterior sideview mirror system of Claim 64, wherein said second reflective element is mounted at said frame at an outboard position, and said first reflective element is positioned adjacent said second reflective element and at an inboard position with respect to said second reflective element when said exterior sideview mirror assembly is mounted to an automobile.

66. (previously presented) The exterior sideview mirror system of Claim 64, wherein said first reflective element is mounted at said frame by a backing plate.

67. (previously presented) The exterior sideview mirror system of Claim 66, wherein said backing plate is adapted to mount to an actuator operable to adjust the orientation of said reflective element assembly.

68. (previously presented) The exterior sideview mirror system of Claim 67, wherein said actuator comprises an electrical actuator.

69. (previously presented) The exterior sideview mirror system of Claim 64, wherein said first reflective element and said second reflective element are adjacently attached at said

frame, said frame including a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

70. (previously presented) The exterior sideview mirror system of Claim 69, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

71. (previously presented) The exterior sideview mirror system of Claim 69, wherein said second perimeter portion is angled downwardly and forwardly with respect to said first perimeter portion when said mirror assembly is mounted to an automobile.

72. (previously presented) The exterior sideview mirror system of Claim 64, wherein said second reflective element is attached at said frame by at least one of an adhesive attachment and a mechanical attachment.

73. (previously presented) The exterior sideview mirror system of Claim 66, wherein said backing plate is attached to one side of said first reflective element and said frame by one of an adhesive attachment, a welded attachment, and a mechanical attachment.

74. (previously presented) The exterior sideview mirror system of Claim 73, wherein an opposed side of said frame forms a bezel around said first reflective element.

75. (previously presented) The exterior sideview mirror system of Claim 60, wherein said first reflective element includes a rearward field of view having a principal axis different from a principal axis of the rearward field of view of said second reflective element when mounted in said exterior sideview mirror assembly.

76. (previously presented) The exterior sideview mirror system of Claim 75, wherein said principal axis of the rearward field of view of said second reflective element is directed generally outwardly and downwardly with respect to a longitudinal axis of the automobile.

77. (previously presented) The exterior sideview mirror system of Claim 76, wherein said principal axis of the rearward field of said second reflective element forms a downward angle with respect to the longitudinal axis of the automobile in the range from about 0.75° to about 5°.

78. (previously presented) The exterior sideview mirror system of Claim 77, wherein said downward angle is in a range from about 1.5° to about 3.5°.

79. (previously presented) The exterior sideview mirror system of Claim 77, wherein said downward angle is in a range of about 2° to about 3°.

80. (previously presented) The exterior sideview mirror system of Claim 76, wherein said principal axis of said second reflective element forms an outward angle with respect to the longitudinal axis of the automobile in a range of about 0.75° to about 5°.

81. (previously presented) The exterior sideview mirror system of Claim 80, wherein said outward angle is in a range of about 1° to about 3°.

82. (previously presented) The exterior sideview mirror system of Claim 81, wherein said outward angle is in a range of about 1.25° to about 2.5°.

83. (withdrawn) The exterior sideview mirror system of Claim 81, wherein said exterior sideview mirror assembly comprises a fixedly attached exterior sideview mirror assembly.

84. (previously presented) The exterior sideview mirror system of Claim 60, wherein said exterior sideview mirror assembly comprises a break-away exterior sideview mirror assembly.

85. (withdrawn) The exterior sideview mirror system of Claim 60, wherein said exterior sideview mirror assembly comprises a powerfold exterior sideview mirror assembly.

86. (previously presented) The exterior sideview mirror system of Claim 60, wherein at least one of said first reflective element and said second reflective element comprises a variable reflectance reflective element.

87. (previously presented) The exterior sideview mirror system of Claim 86, wherein each of said first reflective element and said second reflective element comprises a variable reflectance reflective element.

88. (previously presented) The exterior sideview mirror system of Claim 60, wherein said first reflective element comprises an electrochromic reflective element.

89. (previously presented) The exterior sideview mirror system of Claim 60, wherein said first reflective element has a first principal axis and said second reflective element has a second principal axis when supported on said support element, said second principal axis being angled outwardly from said first principal axis at an angle in a range of about 0.75° to about 5°.

90. (previously presented) The exterior sideview mirror system of Claim 89, wherein said second principal axis is angled outwardly from said first principal axis at an angle in a range of about 1° to about 3°.

91. (previously presented) The exterior sideview mirror system of Claim 89, wherein said second principal axis is angled outwardly from said first principal axis at an angle in a range of about 1.25° to about 2.5°.

92. (previously presented) The exterior sideview mirror system of Claim 60, wherein said second reflective element has a second principal axis that is angled downwardly from a first principal axis of said first reflective element when supported on said support element.

93. (previously presented) The exterior sideview mirror system of Claim 92, wherein said second principal axis is angled downwardly from said first principal axis at an angle in a range of approximately 0.75° to about 5°.

94. (previously presented) The exterior sideview mirror system of Claim 92, wherein said second principal axis is angled downwardly from said first principal axis at an angle in a range of about 2° to about 3°.

95. (previously presented) The exterior sideview mirror system of Claim 60, wherein said second reflective element has a second principal axis that is directed generally outwardly and downwardly with respect to a longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

96. (previously presented) The exterior sideview mirror system of Claim 60, wherein said support element includes a support surface for said second reflective element, said support surface angling a second principal axis of said second reflective element.

97. (currently amended) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

said first reflective element including a rearward field of view having a principal axis different from a principal axis of the rearward field of view of said second reflective element when mounted in said exterior sideview mirror assembly;

a demarcation element between said first reflective element and said second reflective element; and

wherein the portion of said second reflective element adjacent said demarcation element has its [[a]] front surface generally coplanar with the front surface of said first reflective element.

98. (previously presented) The exterior sideview mirror system of Claim 97, wherein said reflective element assembly includes a first bezel portion extending around said first reflective element, said demarcation element comprising a segment of said first bezel portion.

99. (previously presented) The exterior sideview mirror system of Claim 97, wherein said second reflective element comprises a curved reflective element comprising a bent substrate with at least one radius of curvature in the range of about 4000 mm to about 100 mm.

100. (previously presented) The exterior sideview mirror system of Claim 97, further comprising a support element, said first reflective element and said second reflective element supported at said support element.

101. (previously presented) The exterior sideview mirror system of Claim 100, wherein said support element including a support surface for said second reflective element, said support surface angling said principal axis of said second reflective element.

102. (previously presented) The exterior sideview mirror system of Claim 101, wherein said principal axis of said second reflective element is directed generally outwardly and downwardly with respect to the longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

103. (previously presented) The exterior sideview mirror system of Claim 97, further comprising an actuator operable to adjust the orientation of said reflective element assembly.

104. (previously presented) The exterior sideview mirror system of Claim 97, wherein said principal axis of the rearward field of view of said second reflective element is directed generally outwardly and downwardly with respect to a longitudinal axis of the automobile.

105. (previously presented) The exterior sideview mirror system of Claim 97, wherein said principal axis of said second reflective element forms an outward angle with respect to a longitudinal axis of the automobile.

106. (previously presented) The exterior sideview mirror system of Claim 97, further comprising a frame, said first and second reflective elements being mounted at said frame, said frame including a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

107. (previously presented) The exterior sideview mirror system of Claim 106, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

108. (currently amended) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

an actuator operable to adjust the orientation of said reflective element assembly;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

a demarcation element between said first reflective element and said second reflective element; and

wherein the portion of said second reflective element adjacent said demarcation element has its [[a]] front surface generally coplanar with the front surface of said first reflective element.

109. (previously presented) The exterior sideview mirror system of Claim 108, wherein said first reflective element has a first principal axis and said second reflective element has a second principal axis, said second principal axis being angled outwardly from said first principal axis.

110. (previously presented) The exterior sideview mirror system of Claim 109, wherein said second principal axis is angled downwardly from said first principal axis of said first reflective element.

111. (previously presented) The exterior sideview mirror system of Claim 110, wherein said second principal axis is directed generally outwardly and downwardly with respect to a longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

112. (previously presented) The exterior sideview mirror system of Claim 110, further comprising a support element, said support element including a support surface for said second reflective element, said support surface angling said second principal axis of said second reflective element relative to said first principal axis.

113. (previously presented) The exterior sideview mirror system of Claim 112, wherein said support element comprises a frame, said first and second reflective elements being mounted at said frame.

114. (previously presented) The exterior sideview mirror system of Claim 113, wherein said second reflective element is mounted at said frame at an outboard position, and said first reflective element is positioned adjacent said second reflective element and at an inboard position with respect to said second reflective element when said exterior sideview mirror assembly is mounted to an automobile.

115. (previously presented) The exterior sideview mirror system of Claim 114, wherein said frame includes a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

116. (previously presented) The exterior sideview mirror system of Claim 115, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 12

117. (previously presented) The exterior sideview mirror system of Claim 116, wherein said second perimeter portion is angled downwardly and forwardly with respect to said first perimeter portion when said mirror assembly is mounted to an automobile.

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 13

REMARKS

Applicants acknowledge the Examiner's review of the specification, claims, and drawings. In light of the above amendments and following remarks, Applicants respectfully requests reconsideration of the present application. No new matter has been entered.

Double Patenting Rejection:

The Examiner rejects Claims 60, 61, 64, 66-68, 72, 73, 75, 76, 84, 92, 95, 96, 97, 100-105, and 108-113 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claim 3 of U.S. Pat. No. 6,522,451. In response, Applicants respectfully submit herewith a Terminal Disclaimer, which is now believed to overcome the double patenting rejection. Accordingly, Applicants respectfully request that the double patenting rejection of Claims 60, 61, 64, 66-68, 72, 73, 75, 76, 84, 92, 95, 96, 97, 100-105, and 108-113 be reconsidered and withdrawn.

Status of the Claims:

Claims 60-117 are pending in the application. Claims 83 and 85 have been withdrawn from consideration as being drawn to a non-elected species. Claims 1-59 were previously canceled without prejudice. Claims 60, 97, and 108 have been amended as set forth above. All claims stand rejected.

Claim Rejections:

The Examiner rejects Claims 60-62, 64-66,69-76, 92, 95-98, and 100-102 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539.

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 14

The Examiner rejects Claims 67, 68, 84, 103, and 108-117 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539 and, further, in view of Mizuta et al '302.

The Examiner rejects Claims 67, 68, 84, 103, and 108-117 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539 and, further, in view of Marhauer '770.

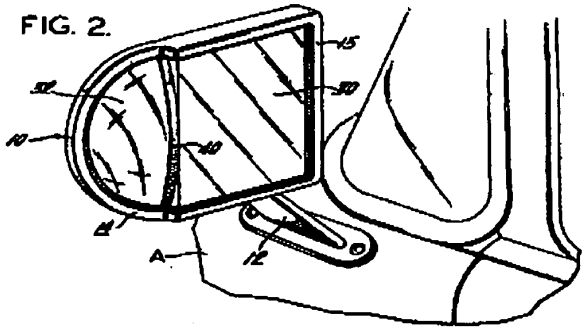
Applicants respectfully traverse the rejections under 35 U.S.C. §103(a) for the reasons set forth below.

Applicants have amended Claims 60, 97, and 108 to clarify the claimed invention. Claim 60 ha been amended as follows:

> An automobile exterior sideview mirror system comprising:
>
> an exterior sideview mirror assembly adapted for attachment to a side of an automobile;
>
> said exterior sideview mirror assembly including a reflective element assembly;
>
> said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;
>
> said first reflective element and said second reflective element supported at a support element;
>
> said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;
>
> said second reflective element supported on said support element adjacent to and separate from said first reflective element;
>
> a demarcation element between said first reflective element and said second reflective element; and
>
> wherein the portion of said second reflective element adjacent said demarcation element has its front surface generally coplanar with the front surface of said first reflective element.

Claims 97 and 108 have been similarly amended. Applicants respectfully urge that Tobin does not disclose or suggest the claimed combination, and that none of Holt '539, Mizuta et al. '302, and Marhauer '770 cures the deficiencies of Tobin. For example, Tobin does not disclose or suggest an exterior sideview system that includes a reflective element assembly with a first reflective element having unit magnification and a second reflective element having a curvature, with the first reflective element and the second reflective element supported at a support element, and with the second reflective element disposed at an outer, upper portion of the reflective element assembly and supported on the support element adjacent to and separate from the first reflective element with a demarcation element between the first reflective element and the second reflective element and wherein the portion of the

FIG. 2.



second reflective element adjacent the demarcation element has its front surface generally coplanar with the front surface of the first reflective element. In contrast, Tobin teaches that the "convex section 32 is coextensive with and abuts a side edge of the planar mirror section" (Col. 3, lines37-42). As clearly shown in FIG. 2 of the Tobin patent, which is reproduced below, the portion of the convex section 32 adjacent the planar mirror section does not have its front surface generally coplanar with the front surface of the planar mirror section. As

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 16

such, Applicant respectfully urges that Tobin teaches away from the combination as clarified in the current amendment.

Accordingly, Applicants respectfully urge it would not be obvious to modify Tobin to meet the claimed combination. Further, even when combined the references do not teach or suggest all the limitations of the claimed combination. Applicants, therefore, respectfully submit that none of Tobin, Holt '539, Mizuta et al '302, and Marhauer '770 alone or in combination or in combination with any other references discloses, teaches, suggests or renders obvious any of the claims of the present invention. Reconsideration and withdrawal of the rejections of the claims is respectfully requested.

Should the Examiner have any questions or comments, the Examiner is invited to contact the undersigned at (616) 975-5506.

Respectfully submitted,

NIALL R. LYNAM ET AL.

By: Van Dyke, Gardner, Linn & Burkhart, LLP

July 19, 2005
Date

Catherine S. Collins
Registration No. 37 599
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500
collins@vglb.com

CSC:lmsc

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicant	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Dear Sir:

TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION [37 CFR 1.321]

The undersigned disclaimant, Niall R. Lynam, is the Senior Vice President and Chief Technical Officer of the Assignee and represents that he is empowered to act on behalf of the Assignee identified below.

The Assignee of record, Donnelly Corporation, 414 East Fortieth Street, Holland, Michigan 49423 is the Assignee and owner of the entire right, title and interest in and to the above-identified application and invention. This application is a continuation of U.S. Pat. Application Ser. No. 09/745,172, filed Dec. 20, 2000, now U.S. Pat. No. 6,717,712, which his a continuation-in-part of application Serial No. 09/478,315, which was filed on January 16, 2000, and is now Pat. No. 6,522,451. The Assignment to Petitioner was recorded on February 21, 2002, at Reel 012577, Frame 0113. A copy of the Assignment is attached.

The Disclaimant states that the evidentiary document, namely the Assignment, has been reviewed, and Disclaimant hereby certifies that, to the best of his knowledge and belief, title is in the Assignee seeking to take the below action.

The Assignee, Donnelly Corporation, hereby disclaims, except as provided below, the terminal part of any patent granted on the above-identified application, which would extend beyond the expiration of the full statutory term, as presently shortened by any

07/20/2005 ZJUHAR1 00000012 220190 10817645
01 FC:1814 130.00 DA

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 2

terminal disclaimer, of U.S. Pat. No. 6,522,451, which issued on February 18, 2003, and hereby agrees that any patent so granted on the above-identified application shall be enforceable only for and during such period that the legal title to said patent shall be the same as the legal title to U.S. Patent No. 6,522,451, this agreement to run with any patent on the above-identified application and to be binding upon the grantor, its successors or assignees.

Assignee does not disclaim the terminal part of any patent granted on the above-identified application prior to the expiration date of the full statutory term of U.S. Patent No. 6,522,451 in the event that it later: 1) expires for failure to pay a maintenance fee; 2) is held unenforceable or found invalid by a court of competent jurisdiction; 3) is statutorily disclaimed in whole or is found terminally disclaimed under 37 CFR 1.321(a); 4) has all claims canceled by a re-examination certificate; 5) is reissued; or 6) is otherwise terminated prior to expiration of its statutory term as presently shortened by any terminal disclaimer, except for the separation of legal title stated above.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that the statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, as set under Section 1001, Title 18, of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

DONNELLY CORPORATION

Date: July 18 2005

Niall R. Lynam
Senior Vice President and Chief Technical Officer

ASSIGNMENT

WHEREAS, Niall R. Lynam, John O. Lindahl and Hahns Yoachim Fuchs, residing at 248 Foxdown, Holland, Michigan 49424; Forty South 7th Street, Fruitport, Michigan 49415; and Gartenstrasse 1A, Dorftrozelten, Germany 97904, respectively (hereinafter referred to as Assignors), have invented certain new and useful improvements in EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY for which an application for United States Letters Patent was executed on December 20, 2000, Serial No. 09/745,172.

WHEREAS, Donnelly Corporation, a corporation of the State of Michigan, having a place of business at 414 East Fortieth Street, Holland, Michigan 49423 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, in consideration of the sum of one dollar ($1.00), the receipt of which is hereby acknowledged, and for other good and valuable considerations, Assignor hereby sells, assigns and transfers unto said Assignee the full and exclusive right, title and interest to the said invention in the United States and in all foreign countries and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and in any and all foreign countries and in and to any and all divisions, reissues, continuations, continuation-in-part, and extensions thereof including the full right to claim for any such applications the benefits of the International Convention.

Assignors hereby authorize and request the Patent Office Officials in the United States and in any and all foreign countries to issue any and all of said Letters Patent, when granted, to said Assignee as the owner of the entire right, title and interest in and to the same, for the sole use and behoof of said Assignee, its successors and assigns.

FURTHER, Assignors agree to communicate to said Assignee or its representatives any facts known to Assignors respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, continuation-in-part, substitution, renewal, and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said Assignee, make all rightful oaths and generally do everything possible to aid said Assignee, its successors and assigns, to obtain and enforce proper protection for said invention in the United States and in any and all foreign countries.

IN TESTIMONY WHEREOF, we have hereunto set our hands on the date appearing next to our signature.

Witness:	Inventors:	Date:
Barbara Ritter	Niall R. Lynam	12/10/01
Barbara Ritter	John O. Lindahl	12-11-01
L. Wayne Romoz	Hahns Yoachim Fuchs	01/08/02

PATENT APPLICATION FEE DETERMINATION RECORD
Effective October 1, 2003

Application or Docket Number: 10817645

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	58	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	58 minus 20=	* 38
INDEPENDENT CLAIMS	3 minus 3 =	* 0
MULTIPLE DEPENDENT CLAIM PRESENT	☐	

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐			OR	OTHER THAN SMALL ENTITY	
RATE	FEE			RATE	FEE
BASIC FEE	385.00		OR	BASIC FEE	770.00
XS 9=			OR	XS18=	684.00
X43=			OR	X86=	
+145=			OR	+290=	
TOTAL			OR	TOTAL	1454

CLAIMS AS AMENDED - PART II

Pre Amdt

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	* 58	Minus	** 58	* —
Independent	* 3	Minus	*** 3	* —
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM	☐			

SMALL ENTITY			OR	OTHER THAN SMALL ENTITY	
RATE	ADDITIONAL FEE			RATE	ADDITIONAL FEE
X$ 9=	—		OR	XS18=	—
X43=	—		OR	X86=	—
+145=	—		OR	+290=	—
TOTAL ADDIT. FEE	—		OR	TOTAL ADDIT. FEE	—

AMENDMENT B

4/11/05	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	* 58	Minus	** 58	*
Independent	* 3	Minus	*** 3	*
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM	☐			

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	XS18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C

9/19/05	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	* 58	Minus	** 58	* 11
Independent	* 3	Minus	*** 3	* 11
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM	☐			

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	XS18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/817,645	LYNARM ET AL.	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed : 07/19/05	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:
Tredelle Jackson 2800

U.S. Patent and Trademark Office

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,645	04/02/2004	Niall R. Lynarm	DON01 P-1148	2833

28101 7590 06/29/2005

VAN DYKE, GARDNER, LINN AND BURKHART, LLP
2851 CHARLEVOIX DRIVE, S.E.
P.O. BOX 888695
GRAND RAPIDS, MI 49588-8695

EXAMINER	
SHAFER, RICKY D	
ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450

10/817,645

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.

EXAMINER	
ART UNIT	PAPER
	20050627

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

See Attachment.

PTO-90C (Rev.04-03)

1. The reply filed on 04/11/2005 is not fully responsive to the prior Office Action because of the following omission(s) or matter(s): Applicant failed to reply to every ground of rejection in the prior Office action. Applicant failed to address and/or properly respond to the obviousness-type double patenting rejection (i.e. claims 60, 61, 64, 66-68, 72, 73, 75, 76, 84, 92, 95, 96, 97, 100-105 and 108-113), set forth as item 9, on pages 7 and 8 of the last Office action mailed on January 12, 2005. See 37 CFR 1.111. Since the above-mentioned reply appears to be *bona fide*, applicant is given **ONE (1) MONTH or THIRTY (30) DAYS** from the mailing date of this notice, whichever is longer, within which to supply the omission or correction in order to avoid abandonment. EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136(a).

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricky D. Shafer whose telephone number is (571) 272-2320. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RDS

June 27, 2005

RICKY D. SHAFER
PATENT EXAMINER
ART UNIT 2872

Via Facsimile No. (703) 872-9306

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicants	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Commissioner for Patents
P.P. Box 1450
Alexandria VA 22313-1450

Dear Sir:

RESPONSE

In response to the Office Action mailed January 12, 2005, having a three-month period of response ending April 12, 2005, Applicants wish to amend their application as follows:

Via Facsimile No. (703) 872-9306

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicant	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

Commissioner for Patents
P.P. Box 1450
Alexandria VA 22313-1450

Dear Sir:

CERTIFICATE OF FACSIMILE TRANSMISSION

I certify that the following papers are being facsimile transmitted to the Patent and Trademark Office on the date shown below:

Response

YOU SHOULD RECEIVE A TOTAL OF 17 PAGES

INCLUDING THIS TRANSMITTAL.

Dated: April 11, 2005.

Catherine S. Collins
Van Dyke, Gardner, Linn & Burkhart, LLP
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc
Enclosures

In the Claims:

Please amend Claims 60, 97, and 108 as follows:

1-59. (canceled)

60. (currently amended) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said first reflective element and said second reflective element supported at a support element;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element supported on said support element adjacent to and separate from said first reflective element;

a demarcation element between said first reflective element and said second reflective element; and

wherein the portion of said second reflective element adjacent said demarcation element has its [[a]] front surface generally coplanar with the front surface of said first reflective element.

61. (previously presented) The exterior sideview mirror system of Claim 60, wherein said demarcation element is dark colored.

62. (previously presented) The exterior sideview mirror system of Claim 60, wherein said reflective element assembly includes a first bezel portion extending around said first reflective element, said demarcation element comprising a segment of said first bezel portion.

63. (previously presented) The exterior sideview mirror system of Claim 60, wherein said second reflective element comprises a curved reflective element comprising a bent substrate with at least one radius of curvature in the range of about 4000 mm to about 100 mm.

64. (previously presented) The exterior sideview mirror system of Claim 60, wherein said support element comprises a frame, said first and second reflective elements being mounted at said frame.

65. (previously presented) The exterior sideview mirror system of Claim 64, wherein said second reflective element is mounted at said frame at an outboard position, and said first reflective element is positioned adjacent said second reflective element and at an inboard position with respect to said second reflective element when said exterior sideview mirror assembly is mounted to an automobile.

66. (previously presented) The exterior sideview mirror system of Claim 64, wherein said first reflective element is mounted at said frame by a backing plate.

67. (previously presented) The exterior sideview mirror system of Claim 66, wherein said backing plate is adapted to mount to an actuator operable to adjust the orientation of said reflective element assembly.

68. (previously presented) The exterior sideview mirror system of Claim 67, wherein said actuator comprises an electrical actuator.

69. (previously presented) The exterior sideview mirror system of Claim 64, wherein said first reflective element and said second reflective element are adjacently attached at said

frame, said frame including a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

70. (previously presented) The exterior sideview mirror system of Claim 69, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

71. (previously presented) The exterior sideview mirror system of Claim 69, wherein said second perimeter portion is angled downwardly and forwardly with respect to said first perimeter portion when said mirror assembly is mounted to an automobile.

72. (previously presented) The exterior sideview mirror system of Claim 64, wherein said second reflective element is attached at said frame by at least one of an adhesive attachment and a mechanical attachment.

73. (previously presented) The exterior sideview mirror system of Claim 66, wherein said backing plate is attached to one side of said first reflective element and said frame by one of an adhesive attachment, a welded attachment, and a mechanical attachment.

74. (previously presented) The exterior sideview mirror system of Claim 73, wherein an opposed side of said frame forms a bezel around said first reflective element.

75. (previously presented) The exterior sideview mirror system of Claim 60, wherein said first reflective element includes a rearward field of view having a principal axis different from a principal axis of the rearward field of view of said second reflective element when mounted in said exterior sideview mirror assembly.

76. (previously presented) The exterior sideview mirror system of Claim 75, wherein said principal axis of the rearward field of view of said second reflective element is directed generally outwardly and downwardly with respect to a longitudinal axis of the automobile.

77. (previously presented) The exterior sideview mirror system of Claim 76, wherein said principal axis of the rearward field of said second reflective element forms a downward angle with respect to the longitudinal axis of the automobile in the range from about 0.75° to about 5°.

78. (previously presented) The exterior sideview mirror system of Claim 77, wherein said downward angle is in a range from about 1.5° to about 3.5°.

79. (previously presented) The exterior sideview mirror system of Claim 77, wherein said downward angle is in a range of about 2° to about 3°.

80. (previously presented) The exterior sideview mirror system of Claim 76, wherein said principal axis of said second reflective element forms an outward angle with respect to the longitudinal axis of the automobile in a range of about 0.75° to about 5°.

81. (previously presented) The exterior sideview mirror system of Claim 80, wherein said outward angle is in a range of about 1° to about 3°.

82. (previously presented) The exterior sideview mirror system of Claim 81, wherein said outward angle is in a range of about 1.25° to about 2.5°.

83. (withdrawn) The exterior sideview mirror system of Claim 81, wherein said exterior sideview mirror assembly comprises a fixedly attached exterior sideview mirror assembly.

84. (previously presented) The exterior sideview mirror system of Claim 60, wherein said exterior sideview mirror assembly comprises a break-away exterior sideview mirror assembly.

85. (withdrawn) The exterior sideview mirror system of Claim 60, wherein said exterior sideview mirror assembly comprises a powerfold exterior sideview mirror assembly.

86. (previously presented) The exterior sideview mirror system of Claim 60, wherein at least one of said first reflective element and said second reflective element comprises a variable reflectance reflective element.

87. (previously presented) The exterior sideview mirror system of Claim 86, wherein each of said first reflective element and said second reflective element comprises a variable reflectance reflective element.

88. (previously presented) The exterior sideview mirror system of Claim 60, wherein said first reflective element comprises an electrochromic reflective element.

89. (previously presented) The exterior sideview mirror system of Claim 60, wherein said first reflective element has a first principal axis and said second reflective element has a second principal axis when supported on said support element, said second principal axis being angled outwardly from said first principal axis at an angle in a range of about 0.75° to about 5°.

90. (previously presented) The exterior sideview mirror system of Claim 89, wherein said second principal axis is angled outwardly from said first principal axis at an angle in a range of about 1° to about 3°.

91. (previously presented) The exterior sideview mirror system of Claim 89, wherein said second principal axis is angled outwardly from said first principal axis at an angle in a range of about 1.25° to about 2.5°.

92. (previously presented) The exterior sideview mirror system of Claim 60, wherein said second reflective element has a second principal axis that is angled downwardly from a first principal axis of said first reflective element when supported on said support element.

93. (previously presented) The exterior sideview mirror system of Claim 92, wherein said second principal axis is angled downwardly from said first principal axis at an angle in a range of approximately 0.75° to about 5°.

94. (previously presented) The exterior sideview mirror system of Claim 92, wherein said second principal axis is angled downwardly from said first principal axis at an angle in a range of about 2° to about 3°.

95. (previously presented) The exterior sideview mirror system of Claim 60, wherein said second reflective element has a second principal axis that is directed generally outwardly and downwardly with respect to a longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

96. (previously presented) The exterior sideview mirror system of Claim 60, wherein said support element includes a support surface for said second reflective element, said support surface angling a second principal axis of said second reflective element.

97. (currently amended) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

said first reflective element including a rearward field of view having a principal axis different from a principal axis of the rearward field of view of said second reflective element when mounted in said exterior sideview mirror assembly;

a demarcation element between said first reflective element and said second reflective element; and

wherein the portion of said second reflective element adjacent said demarcation element has <u>its</u> [[a]] front surface generally coplanar with the front surface of said first reflective element.

98. (previously presented) The exterior sideview mirror system of Claim 97, wherein said reflective element assembly includes a first bezel portion extending around said first reflective element, said demarcation element comprising a segment of said first bezel portion.

99. (previously presented) The exterior sideview mirror system of Claim 97, wherein said second reflective element comprises a curved reflective element comprising a bent substrate with at least one radius of curvature in the range of about 4000 mm to about 100 mm.

100. (previously presented) The exterior sideview mirror system of Claim 97, further comprising a support element, said first reflective element and said second reflective element supported at said support element.

101. (previously presented) The exterior sideview mirror system of Claim 100, wherein said support element including a support surface for said second reflective element, said support surface angling said principal axis of said second reflective element.

102. (previously presented) The exterior sideview mirror system of Claim 101, wherein said principal axis of said second reflective element is directed generally outwardly and downwardly with respect to the longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

103. (previously presented) The exterior sideview mirror system of Claim 97, further comprising an actuator operable to adjust the orientation of said reflective element assembly.

104. (previously presented) The exterior sideview mirror system of Claim 97, wherein said principal axis of the rearward field of view of said second reflective element is directed generally outwardly and downwardly with respect to a longitudinal axis of the automobile.

105. (previously presented) The exterior sideview mirror system of Claim 97, wherein said principal axis of said second reflective element forms an outward angle with respect to a longitudinal axis of the automobile.

106. (previously presented) The exterior sideview mirror system of Claim 97, further comprising a frame, said first and second reflective elements being mounted at said frame, said frame including a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

107. (previously presented) The exterior sideview mirror system of Claim 106, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

108. (currently amended) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

an actuator operable to adjust the orientation of said reflective element assembly;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

a demarcation element between said first reflective element and said second reflective element; and

wherein the portion of said second reflective element adjacent said demarcation element has its [[a]] front surface generally coplanar with the front surface of said first reflective element.

109. (previously presented) The exterior sideview mirror system of Claim 108, wherein said first reflective element has a first principal axis and said second reflective element has a second principal axis, said second principal axis being angled outwardly from said first principal axis.

110. (previously presented) The exterior sideview mirror system of Claim 109, wherein said second principal axis is angled downwardly from said first principal axis of said first reflective element.

111. (previously presented) The exterior sideview mirror system of Claim 110, wherein said second principal axis is directed generally outwardly and downwardly with respect to a longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

112. (previously presented) The exterior sideview mirror system of Claim 110, further comprising a support element, said support element including a support surface for said second reflective element, said support surface angling said second principal axis of said second reflective element relative to said first principal axis.

113. (previously presented) The exterior sideview mirror system of Claim 112, wherein said support element comprises a frame, said first and second reflective elements being mounted at said frame.

114. (previously presented) The exterior sideview mirror system of Claim 113, wherein said second reflective element is mounted at said frame at an outboard position, and said first reflective element is positioned adjacent said second reflective element and at an inboard position with respect to said second reflective element when said exterior sideview mirror assembly is mounted to an automobile.

115. (previously presented) The exterior sideview mirror system of Claim 114, wherein said frame includes a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

116. (previously presented) The exterior sideview mirror system of Claim 115, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

117. (previously presented) The exterior sideview mirror system of Claim 116, wherein said second perimeter portion is angled downwardly and forwardly with respect to said first perimeter portion when said mirror assembly is mounted to an automobile.

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 13

REMARKS

Applicants acknowledge the Examiner's review of the specification, claims, and drawings. In light of the above amendments and following remarks, Applicants respectfully requests reconsideration of the present application. No new matter has been entered.

Status of the Claims:

Claims 60-117 are pending in the application. Claims 83 and 85 have been withdrawn from consideration as being drawn to a non-elected species. Claims 1-59 were previously canceled without prejudice. Claims 60, 97, and 108 have been amended as set forth above. All claims stand rejected.

Claim Rejections:

The Examiner rejects Claims 60-62, 64-66,69-76, 92, 95-98, and 100-102 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539.

The Examiner rejects Claims 67, 68, 84, 103, and 108-117 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539 and, further, in view of Mizuta et al '302.

The Examiner rejects Claims 67, 68, 84, 103, and 108-117 under 35 U.S.C. §103(a) as being unpatentable over Tobin, Jr. '952 in view of Holt '539 and, further, in view of Marhauer '770.

Applicants respectfully traverse the rejections under 35 U.S.C. §103(a) for the reasons set forth below.

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 14

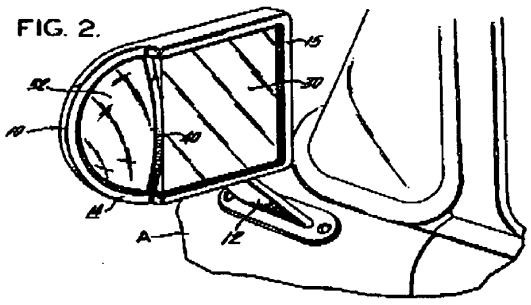
Applicants have amended Claims 60, 97, and 108 to clarify the claimed invention. Claim 60 ha been amended as follows:

> An automobile exterior sideview mirror system comprising:
> an exterior sideview mirror assembly adapted for attachment to a side of an automobile;
> said exterior sideview mirror assembly including a reflective element assembly;
> said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;
> said first reflective element and said second reflective element supported at a support element;
> said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;
> said second reflective element supported on said support element adjacent to and separate from said first reflective element;
> a demarcation element between said first reflective element and said second reflective element; and
> wherein the portion of said second reflective element adjacent said demarcation element has its front surface generally coplanar with the front surface of said first reflective element.

Claims 97 and 108 have been similarly amended. Applicants respectfully urge that Tobin does not disclose or suggest the claimed combination, and that none of Holt '539, Mizuta et al. '302, and Marhauer '770 cures the deficiencies of Tobin. For example, Tobin does not disclose or suggest an exterior sideview system that includes a reflective element assembly with a first reflective element having unit magnification and a second reflective element having a curvature, with the first reflective element and the second reflective element supported at a support element, and with the second reflective element disposed at an outer, upper portion of the reflective element assembly and supported on the support element

adjacent to and separate from the first reflective element with a demarcation element between the first reflective element and the second reflective element and wherein the portion of the second reflective element adjacent the demarcation element has its front surface generally coplanar with the front surface of the first reflective element. In contrast, Tobin teaches that the "convex section 32 is coextensive with and abuts a side edge of the planar mirror section" (Col. 3, lines37-42). As clearly shown in FIG. 2 of the Tobin patent, which is reproduced below, the portion of the convex section 32 adjacent the planar mirror section does not have its front surface generally coplanar with the front surface of the planar mirror section. As such, Applicant respectfully urges that Tobin teaches away from the combination as clarified in the current amendment.

FIG. 2.



Accordingly, Applicants respectfully urge it would not be obvious to modify Tobin to meet the claimed combination. Further, even when combined the references do not teach or suggest all the limitations of the claimed combination. Applicants, therefore, respectfully submit that none of Tobin, Holt '539, Mizuta et al '302, and Marhauer '770 alone or in combination or in combination with any other references discloses, teaches, suggests or

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 16

renders obvious any of the claims of the present invention. Reconsideration and withdrawal of the rejections of the claims is respectfully requested.

Should the Examiner have any questions or comments, the Examiner is invited to contact the undersigned at (616) 975-5506.

Respectfully submitted,

NIALL R. LYNAM ET AL.

By: Van Dyke, Gardner, Linn & Burkhart, LLP

April 11, 2005
Date

Catherine S. Collins
Registration No. 37 599
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500
collins@vglb.com

CSC:lmsc

PATENT APPLICATION FEE DETERMINATION RECORD
Effective October 1, 2003

Application or Docket Number: 10817645

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	58	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	58 minus 20=	* 38
INDEPENDENT CLAIMS	3 minus 3 =	* 0
MULTIPLE DEPENDENT CLAIM PRESENT		☐

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐			OTHER THAN SMALL ENTITY	
RATE	FEE		RATE	FEE
BASIC FEE	385.00	OR	BASIC FEE	770.00
XS 9=		OR	XS18=	684.00
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL		OR	TOTAL	1454

Pre Amdt

CLAIMS AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
	A			
Total	* 58	Minus	** 58	* —
Independent	* 3	Minus	*** 3	* —
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

SMALL ENTITY			OTHER THAN SMALL ENTITY	
RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=	—	OR	X$18=	—
X43=	—	OR	X86=	—
+145=	—	OR	+290=	—
TOTAL ADDIT. FEE	—	OR	TOTAL ADDIT. FEE	—

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
	4/11/05			
Total	* 58	Minus	** 58	*
Independent	* 3	Minus	*** 3	*
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	*
Independent	*	Minus	***	*
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Index of Claims

Application No.	Applicant(s)	
10/817,645	LYNAM ET AL.	
Examiner	**Art Unit**	
Ricky D. Shafer	2872	

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim		Date
Final	Original	1/10/2005
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	11	
	12	
	13	
	14	
	15	
	16	
	17	
	18	
	19	
	20	
	21	
	22	
	23	
	24	
	25	
	26	
	27	
	28	
	29	
	30	
	31	
	32	
	33	
	34	
	35	
	36	
	37	
	38	
	39	
	40	
	41	
	42	
	43	
	44	
	45	
	46	
	47	
	48	
	49	
	50	

Claim		Date
Final	Original	1/10/2005
	51	
	52	
	53	
	54	
	55	
	56	
	57	
	58	
	59	
	(60)	✓
	61	✓
	62	✓
	63	✓
	64	✓
	65	✓
	66	✓
	67	✓
	68	✓
	69	✓
	70	✓
	71	✓
	72	✓
	73	✓
	74	✓
	75	✓
	76	✓
	77	✓
	78	✓
	79	✓
	80	✓
	81	✓
	82	✓
	83	✓
	84	✓
	85	✓
	86	✓
	87	✓
	88	✓
	89	✓
	90	✓
	91	✓
	92	✓
	93	✓
	94	✓
	95	✓
	96	✓
	(97)	✓
	98	✓
	99	✓
	100	✓

Claim		Date
Final	Original	1/10/2005
	101	✓
	102	✓
	103	✓
	104	✓
	105	✓
	106	✓
	107	✓
	(108)	✓
	109	✓
	110	✓
	111	✓
	112	✓
	113	✓
	114	✓
	115	✓
	116	✓
	117	✓
	118	
	119	
	120	
	121	
	122	
	123	
	124	
	125	
	126	
	127	
	128	
	129	
	130	
	131	
	132	
	133	
	134	
	135	
	136	
	137	
	138	
	139	
	140	
	141	
	142	
	143	
	144	
	145	
	146	
	147	
	148	
	149	
	150	

A-1

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,645	04/02/2004	Niall R. Lynarm	DON01 P-1148	2833

28101 7590 01/12/2005

VAN DYKE, GARDNER, LINN AND BURKHART, LLP
2851 CHARLEVOIX DRIVE, S.E.
P.O. BOX 888695
GRAND RAPIDS, MI 49588-8695

EXAMINER	
SHAFER, RICKY D	
ART UNIT	**PAPER NUMBER**
2872	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)	
	10/817,645	LYNAM ET AL.	
	Examiner	Art Unit	
	Ricky D. Shafer	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *60-117* is/are pending in the application.

4a) Of the above claim(s) *83 and 85* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *60-82,84 and 86-117* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *04/02/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election of species "B" in the reply filed on 10/22/2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 83 and 85 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/22/2004.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 60-62, 64-66, 69-76, 92, 95-98, 100-102 and 104-107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr ('952) in view of Holt ('539).

Tobin, Jr discloses an automobile exterior side view mirror system comprising an exterior side view mirror assembly (10) adapted for attachment to a side of an automobile; said exterior side view mirror assembly including a reflective element assembly (30,32); said reflective element assembly including a first reflective element (30) having unit magnification and a second reflective element (32) having a curvature; said first reflective element and said second reflective element supported at a support element (35), wherein said support includes a frame (20) and a backing plate (14); said second reflective element disposed

at an outer, upper portion as well as the lower portion of said reflective element assembly when said reflective element assembly is included in said exterior side view mirror assembly and when said exterior side view mirror assembly is attached to the side of an automobile; said second reflective element supported on said support element adjacent to and separate from said first reflective element; a demarcation element (40) of a dark (red) color adjacent said first reflective element and said second reflective element; and wherein the portion of said second reflective element adjacent said demarcation element has a front surface generally coplanar with the front surface of said first reflective element, wherein the second reflective element inherently includes a rearward field of view having a principal axis which is different from a principal axis of the rearward field of view of the first reflective element due to the convex characteristics of the second reflective element which generally extends the rearview field of view outwardly and downwardly with respect to a longitudinal axis of the automobile, note Fig. 4 along with the associated description thereof, except for the demarcation element positioned between first and second reflective elements.

Holt ('539) teaches it well known to use a segment of a perimeter (bezel) portion to serve as a demarcation element in the same field of endeavor for the purpose of providing a clear dividing line and/or demarcation between first and second reflective elements so as to provide a driver of a vehicle with a two separate views.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the perimeter (bezel) portion of Tobin, Jr to include an segment (demarcation element) between the first and second reflective elements, as taught by Holt, in order to provide a clear dividing line and/or demarcation between the first and second reflective

elements so as to provide a driver of a vehicle with a two separate views as well as increasing the over structural strength of the exterior side view mirror assembly.

5. Claims 67, 68, 84, 103, 108-117 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr ('952) in view Holt ('539) as applied to claims 60-62, 64-66, 69-76, 92, 95-98, 100-102 and 104-107 above, and further in view of Enomoto ('166) or Mizuta et al ('302).

Tobin, Jr in view of Holt discloses all of the subject matter claimed, note the above explanation, except for an electrical actuator to adjust the orientation of the reflective element assembly.

Enomoto ('166) and Mizuta et al ('302) each teach it well known to use electrically operated actuator(s) in the same field of endeavor for the purpose of adjusting the position and/or orientation of a reflective element.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the reflective element assembly of Tobin, Jr to include electrically operable actuator(s) as is well known and commonly used and employed in the mirror art, as taught by Oskam or Enomoto, in order to adjust the position and/or orientation of the reflective element assembly.

Moreover, it has been held that providing automatic means to replace manual activity, which accomplishes the same result, involves only routine skill in the art. Note In Re Venner, 120 USPQ 192.

As to the limitations of claim 84, it is well known to use breakaway exterior side view mirror assemblies in the same field of endeavor for the purpose of folding the position and/or

orientation of a mirror. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the exterior side view mirror assembly of Tobin, Jr to include a break-away exterior side view mirror assembly, as is well known and commonly used and employed in the mirror art, in order to fold the position and/or orientation of the reflective element(s).

6. Claims 63, 77-82, 89-91, 93, 94 and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr ('952) in view Holt ('539) as applied to claims 60-62, 64-66, 69-76, 92, 95-98, 100-102 and 104-107 above, and further in view of Marhauer ('770).

Tobin, Jr in view of Holt discloses all of the subject matter claimed, note the above explanation, except for explicitly stating that the curved reflective element includes at least one radius of curvature in the range of about 4000 mm to about 100 mm.

Marhauer ('770) teaches it well known to select a curvature of a reflective element within the range recited by applicant in the same field of endeavor for the purpose of avoiding distortions.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the curvature of the curved reflective element of Tobin, Jr to include a value, as taught by Marhauer, in order to avoid distortions.

As to the limitations of claims 77-82, 89-91, 93 and 94, it is well known to use an a curved reflective element having downward and outward angles within the range recited by applicant in order to optimize and/or view a particular rearward field of view of interest.

Therefore, it would have been obvious and/or within the level of one of ordinary skill in the art at the time the invention was made to modify the curved reflective element of Tobin, Jr to

include downward and outward angles within the range recited by applicant in order to optimize and/or view a particular rearward field of view of interest, based on user specifications.

Moreover, it would have been obvious to one of ordinary skill in the art at the time the invention was made to angle the curved reflective element of Tobin, Jr to the selected range(s) recited by applicant in order to view of particular rearward field of view of interest, since it has been held that where the general conditions of a claim are disclosed in the prior art or discovering an optimum or workable ranges involves only routine skill in the art. Note In re Aller, 105 USPQ 233 and In re Boesch, , 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

7. Claims 86-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobin, Jr ('952) in view Holt ('539) as applied to claims 60-62, 64-66, 69-76, 92, 95-98, 100-102 and 104-107 above, and further in view of Bauer et al ('864) or Kanazawa ('367).

Tobin, Jr in view of Holt discloses all of the subject matter claimed, note the above explanation, except for the reflective element(s) being a variable reflectance (electrochromic) element.

Bauer et al ('864) and Kanazawa ('367) each teach it well known to use electrochromic mirrors in exterior side view mirrors in the same field of endeavor for the purpose of providing variable reflectance and/or reducing glare

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the reflective element(s) of Tobin, Jr to include variable reflectance (electrochromic) element(s), as taught by Bauer et al or Kanazawa, in order to reduce glare.

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969). A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 60, 61, 64, 66-68, 72, 73, 75, 76, 84, 92, 95, 96, 97, 100-105 and 108-113 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 3 of U.S. Patent No. 6,522,451.

U.S. Patent 6,522,451 to Lynam discloses all of the subject matter claimed, note claim 3, except for explicitly stating that the portion of the second reflective element adjacent the demarcation element has a front surface generally coplanar with the front surface of the first reflective element.

It well known to arrange the front surfaces of first and second reflective elements to be substantially coplanar in the same field of endeavor for the purpose of reducing distortions.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the front surfaces of the first and second reflective elements to be substantially coplanar, as is well known the mirror art, in order to reduce distortions.

As to the limitations of claim 68, it well known to use electrically-operated actuator(s) in the same field of endeavor for the purpose of adjusting the position and/or orientation of a reflective element.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the actuator of U.S. Patent 6,522,451 to Lynam to include electrically operable actuator(s) as is well known and commonly used and employed in the mirror art in order to adjust the position and/or orientation of the reflective element assembly.

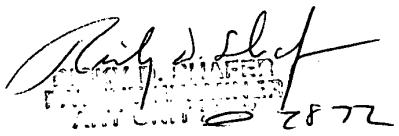
Moreover, it has been held that providing automatic means to replace manual activity, which accomplishes the same result, involves only routine skill in the art. Note In Re Venner, 120 USPQ 192.

As to the limitations of claim 84, it is well known to use breakaway exterior side view mirror assemblies in the same field of endeavor for the purpose of folding the position and/or orientation of a mirror. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the exterior side view mirror assembly of U.S. Patent 6,522,451 to Lynam to include a break-away exterior side view mirror assembly, as is well known and commonly used and employed in the mirror art, in order to fold the position and/or orientation of the reflective element(s).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricky D. Shafer whose telephone number is (571) 272-2320. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RDS

January 10, 2005



Notice of References Cited	Application/Control No. 10/817,645	Applicant(s)/Patent Under Reexamination LYNAM ET AL.	
	Examiner Ricky D. Shafer	Art Unit 2872	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-2,890,539	06-1959	Holt	----
	B	US-4,306,770	12-1981	Marhauer, Friedrich	359/864
	C	US-4,555,166	11-1985	Enomoto, Masao	359/874
	D	US-4,727,302	02-1988	Mizuta et al.	318/567
	E	US-5,005,962	04-1991	Edelman, Karl W.	359/864
	F	US-6,717,712	04-2004	Lynam et al.	359/265
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (Rev. 2-32) PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. DON01 P-1148	SERIAL NO.
	APPLICANT(S) Niall R. Lynam, John O. Lindahl and Hahns Yoachim Fuchs	
	FILING DATE	GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER							DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPRO-PRIATE
RDS		5	7	5	1	4	8	9	05/12/98	Caskey et al.	359	603	
RDS		5	9	1	0	8	5	4	06/08/99	Varaprasad et al	359	273	
RDS		5	7	2	4	1	8	7	03/03/98	Varaprasad et al	359	608	
RDS		5	6	6	8	6	6	3	09/16/97	Varaprasad et al	359	608	
RDS		5	5	5	0	6	7	7	08/27/96	Schofield et al.	359	604	
RDS		5	2	3	9	4	0	5	08/24/93	Varaprasad et al	359	272	
RDS		4	4	4	9	7	8	6	05/22/84	McCord	350	293	
RDS		4	2	6	8	1	2	0	05/19/81	Jitsumori	350	302	
RDS		3	3	7	5	0	5	3	03/26/68	W. W. Ward	350	293	
RDS		6	1	5	4	3	0	6	11/28/00	Varaprasad et al.	359	273	
RDS		3	3	3	8	6	5	5	08/1967	Young			
RDS		3	3	8	9	9	5	2	06/1968	Tobin, Jr.			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER							DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLA-TION	
													Y	N
RDS	FR	2	6	2	8	0	4	2	09/1929	France	B 60 R 1	06	X	
RDS	DT	2	4	0	9	7	4	8	09/04/75	Germany	B60r-01	02	X	
RDS		1	1	8	6	4	4	3	07/25/89	Japan	B60R1	06	X	
RDS	EP	0	3	1	0	2	6	1 A1	09/88	EPC	B60R 1	08	X	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIAL		

EXAMINER RDS	DATE CONSIDERED 1/06/2005
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

(Form PTO-1449 [6-4])

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (Rev. 2-32) PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. DON01 P-1148	SERIAL NO.
	APPLICANT(S) Niall R. Lynam, John O. Lindahl and Hahns Yoachim Fuchs	
	FILING DATE	GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER							DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE
RDS		4	6	7	8	2	9	4	07/1987	Van Nostrand			
RDS		4	9	1	7	4	8	5	04/1990	Baldwin, Sr.			
RDS		5	4	1	2	5	1	2	05/1995	ZeBold et al.			
RDS		5	5	5	7	4	6	7	09/1996	McColgan t al.			
RDS		5	6	2	1	5	7	7	04/1997	Lang et al.			
RDS		5	7	8	4	2	1	1	07/1998	Mingledorff			
RDS		5	7	9	3	5	4	2	08/1998	Kondo et al.			
RDS		5	8	0	5	3	6	7	09/1998	Kanazawa			
RDS		6	1	1	6	7	4	3	09/2000	Hoek			
RDS		6	5	1	1	1	9	2	01/2003	Henion et al.			
RDS		6	5	2	2	4	5	1	02/2003	Lynam			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER							DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION Y	TRANSLATION N
													Y	N
RDS		2	0	9	2	5	4	3	08/1982	UK				
RDS		3	6	2	0	2	2	8	12/1987	Germany			X	
RDS		4	0	2	6	5	7	8	04/1992	Germany			Abstract only	
RDS		0	7	2	9	8	6	4	09/1996	EPO				
RDS		0	9	1	7	9	8	7	05/1999	EPO				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIAL		

EXAMINER RDS	DATE CONSIDERED 1/06/2005

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(Form PTO-1449 [6-4])

Index of Claims

Application No.	Applicant(s)
10/817,645	LYNAM ET AL.
Examiner	**Art Unit**
Ricky D. Shafer	2872

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim		Date
Final	Original	1/10/2005
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	11	
	12	
	13	
	14	
	15	
	16	
	17	
	18	
	19	
	20	
	21	
	22	
	23	
	24	
	25	
	26	
	27	
	28	
	29	
	30	
	31	
	32	
	33	
	34	
	35	
	36	
	37	
	38	
	39	
	40	
	41	
	42	
	43	
	44	
	45	
	46	
	47	
	48	
	49	
	50	

Claim		Date
Final	Original	1/10/2005
	51	
	52	
	53	
	54	
	55	
	56	
	57	
	58	
	59	
	60	✓
	61	✓
	62	✓
	63	✓
	64	✓
	65	✓
	66	✓
	67	✓
	68	✓
	69	✓
	70	✓
	71	✓
	72	✓
	73	✓
	74	✓
	75	✓
	76	✓
	77	✓
	78	✓
	79	✓
	80	✓
	81	✓
	82	✓
	83	✓
	84	✓
	85	✓
	86	✓
	87	✓
	88	✓
	89	✓
	90	✓
	91	✓
	92	✓
	93	✓
	94	✓
	95	✓
	96	✓
	97	✓
	98	✓
	99	✓
	100	✓

Claim		Date
Final	Original	1/10/2005
	101	✓
	102	✓
	103	✓
	104	✓
	105	✓
	106	✓
	107	✓
	108	✓
	109	✓
	110	✓
	111	✓
	112	✓
	113	✓
	114	✓
	115	✓
	116	✓
	117	✓
	118	
	119	
	120	
	121	
	122	
	123	
	124	
	125	
	126	
	127	
	128	
	129	
	130	
	131	
	132	
	133	
	134	
	135	
	136	
	137	
	138	
	139	
	140	
	141	
	142	
	143	
	144	
	145	
	146	
	147	
	148	
	149	
	150	

Search Notes

Application No.	Applicant(s)	
10/817,645	LYNAM ET AL.	
Examiner	**Art Unit**	
Ricky D. Shafer	2872	

SEARCHED			
Class	Subclass	Date	Examiner
359	841	1/06/2005	RDS
359	850	"	"
359	851	"	"
359	854	"	"
359	864	"	"
359	865	"	"
359	866	"	"
359	868	"	"
359	872	"	"
359	877	"	"
359	265	"	"
359	267	"	"
248	549	"	"
248	900	1/06/2005	RDS

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR

RECEIVED
CENTRAL FAX CENTER
OCT 22 2004

Via Facsimile No. (703) 872-9318

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicant	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY

Commissioner for Patents
P.P. Box 1450
Alexandria VA 22313-1450

Dear Sir:

CERTIFICATE OF FACSIMILE TRANSMISSION

I certify that the following papers are being facsimile transmitted to the Patent and Trademark Office on the date shown below:

Election

YOU SHOULD RECEIVE A TOTAL OF 3 PAGES

INCLUDING THIS TRANSMITTAL.

Dated: October 22, 2004.

Catherine S. Collins
Van Dyke, Gardner, Linn & Burkhart, LLP
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc
Enclosures

Via Facsimile No. (703) 872-9318

PATENT
DON01 P-1148

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Ricky D. Shafer
Group	:	2872
Applicant	:	Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs
Serial No.	:	10/817,645
Filed	:	April 2, 2004
For	:	EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY

Commissioner for Patents
P.P. Box 1450
Alexandria VA 22313-1450

Dear Sir:

ELECTION

In response to the Restriction Requirement mailed September 23, 2004, having a one-month period of response ending October 23, 2004, Applicants wish to enter the following election:

Applicants provisionally elect the break-away exterior sideview mirror assembly species.

Applicants : Niall R. Lynam et al.
Serial No. : 10/817,645
Page : 2

REMARKS

The Examiner requires election between three species, namely a fixedly attached exterior side view mirror assembly; a break-away exterior side view mirror assembly; and a power-folded exterior side view mirror assembly. As noted above, Applicants provisionally elect the break-away exterior side view mirror assembly for prosecution on the merits. The claims readable on the elected species include Claims 60-82 and 84 and 86-117. Furthermore, Applicants respectfully note that at least Claims 60-82 and 86-117 are generic to all the species. An early and favorable action on the merits is respectfully solicited.

Applicants respectfully advise the Examiner that an Information Disclosure Statement was submitted with the application when originally filed on April 2, 2004.

Should the Examiner have any questions or comments, the Examiner is invited to contact the undersigned at (616) 975-5506.

Respectfully submitted,

NIALL R. LYNAM ET AL.

By: Van Dyke, Gardner, Linn & Burkhart, LLP

October 22, 2004
Date

Catherine S. Collins
Registration No. 37 599
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500
collins@vglb.com

CSC:lmsc

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,645	04/02/2004	Niall R. Lynarm	DON01 P-1148	2833

28101 7590 09/23/2004

VAN DYKE, GARDNER, LINN AND BURKHART, LLP
2851 CHARLEVOIX DRIVE, S.E.
P.O. BOX 888695
GRAND RAPIDS, MI 49588-8695

EXAMINER	
SHAFER, RICKY D	

ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/817,645	LYNARM ET AL.	
	Examiner	Art Unit	
	Ricky D. Shafer	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 April 2004*.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *60-117* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *60-117* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

A). The mirror assembly being a fixedly attached exterior side view mirror assembly;

B). The mirror assembly being a break-away exterior side view mirror assembly; and

C). The mirror assembly being a power-folded exterior side view mirror assembly.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, several claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP§ 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricky D. Shafer whose telephone number is (571) 272-2320. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RDS

September 20, 2004

/Ricky D. Shafer/
e 2872

Index of Claims

Application No.	Applicant(s)	
10/817,645	LYNARM ET AL.	
Examiner	**Art Unit**	
Ricky D. Shafer	2872	

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	+	Restricted	I	Interference	O	Objected

Claim		Date
Final	Original	9/20/2004
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	11	
	12	
	13	
	14	
	15	
	16	
	17	
	18	
	19	
	20	
	21	
	22	
	23	
	24	
	25	
	26	
	27	
	28	
	29	
	30	
	31	
	32	
	33	
	34	
	35	
	36	
	37	
	38	
	39	
	40	
	41	
	42	
	43	
	44	
	45	
	46	
	47	
	48	
	49	
	50	

Claim		Date
Final	Original	9/20/2004
	51	
	52	
	53	
	54	
	55	
	56	
	57	
	58	
	59	
	(60)	+
	61	+
	62	+
	63	+
	64	+
	65	+
	66	+
	67	+
	68	+
	69	+
	70	+
	71	+
	72	+
	73	+
	74	+
	75	+
	76	+
	77	+
	78	+
	79	+
	80	+
	81	+
	82	+
	83	+
	84	+
	85	+
	86	+
	87	+
	88	+
	89	+
	90	+
	91	+
	92	+
	93	+
	94	+
	95	+
	96	+
	(97)	+
	98	+
	99	+
	100	+

Claim		Date
Final	Original	9/20/2004
	101	+
	102	+
	103	+
	104	+
	105	+
	106	+
	(107)	+
	108	+
	109	+
	110	+
	111	+
	112	+
	113	+
	114	+
	115	+
	116	+
	117	+
	118	
	119	
	120	
	121	
	122	
	123	
	124	
	125	
	126	
	127	
	128	
	129	
	130	
	131	
	132	
	133	
	134	
	135	
	136	
	137	
	138	
	139	
	140	
	141	
	142	
	143	
	144	
	145	
	146	
	147	
	148	
	149	
	150	

PATENT APPLICATION FEE DETERMINATION RECORD
Effective October 1, 2003

Application or Docket Number: 10817645

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	58	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	58 minus 20=	* 38
INDEPENDENT CLAIMS	3 minus 3 =	* 0
MULTIPLE DEPENDENT CLAIM PRESENT		☐

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐		OR	OTHER THAN SMALL ENTITY	
RATE	FEE		RATE	FEE
BASIC FEE	385.00	OR	BASIC FEE	770.00
XS 9=		OR	XS18=	684.00
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL		OR	TOTAL	1454

Pre Amdt

CLAIMS AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
A				
Total	* 58	Minus	** 58	= —
Independent	* 3	Minus	*** 3	= —
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=	—	OR	X$18=	—
X43=	—	OR	X86=	—
+145=	—	OR	+290=	—
TOTAL ADDIT. FEE	—	OR	TOTAL ADDIT. FEE	—

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

PATENT
DON01 P-1148
Express Mail No. EL994418005US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs

For : EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY

Mail Stop Patent Application
Commissioner for Patents
P.P. Box 1450
Alexandria VA 22313-1450

Dear Sir:

REQUEST FOR FILING CONTINUATION APPLICATION UNDER 37 CFR 1.53(b)

This is a request for filing a continuation application under 37 CFR 1.53 of U.S. Pat. application Ser. No. 09/745,172, filed on Dec. 20, 2000, by Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs, entitled EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY, now U.S. Pat. No. 6,717,712, which is a continuation-in-part of U.S. Pat. application Ser. No. 09/478,315, filed January 6, 2000, now U.S. Pat. No. 6,522,451.

1. Copy of Prior Application as Filed Which is Attached

I hereby verify that the attached papers are a copy of what is shown in my records to be the above-identified prior application, including the Declaration as originally filed (37 CFR 1.53). No amendments referred to in any Declaration filed to complete the prior application introduced new matter in that application.

The copy of the papers of the prior application as filed which is attached includes 31 pages of specification, 9 pages of claims (59 claims), 1 page of Abstract, 13 sheets of drawings, and signed Declaration and Power of Attorney.

2. Amendments

A Preliminary Amendment is enclosed including new Claims 60-117, which have been numbered consecutively beginning with the number next succeeding the last claim in the parent application.

3. Patent Application Bibliographic Data Form

A copy of the Patent Application Bibliographic Data Form is enclosed.

4. Filing Fee and Calculation

Basic Fee		$770.00
Additional Fees		
Each independent claim in excess of three, times $86.	$ .00	
Number of claims in excess of twenty, times $18.00	$684.00	
Filing multiple dependent claims per application $280.00	$ .00	
Total Filing Fee		$1,454.00

A check in the amount of $1,454.00 for the filing fee is enclosed herewith.

The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 22-0190.

The Commissioner is hereby authorized to charge the following fees during the pendency of this application, or credit any overpayment, to Deposit Account No. 22-0190. A duplicate copy of this sheet is enclosed.

a) Any filing fees under 37 CFR 1.16 for presentation of extra claims for which full payment has not been tendered.

b) Any patent application processing fees under 37 CFR 1.17 for which full payment has not been tendered.

5. Drawings

Thirteen (13) sheets of drawings are enclosed and are copies of those filed in the parent application.

6. Disclosure Statement

Applicants respectfully request that information cited in the prior parent application, Serial No. 09/745,172 be considered in the present application. A disclosure statement is enclosed along with copies of forms PTO-1449 listing all of the information from the prior parent application.

7. Inventorship Statement

With respect to the prior co-pending U.S. application from which this application claims benefit under 35 USC 120, the inventors in this application are the same, namely, Niall R. Lynam, John O. Lindahl, and Hahns yoachim Fuchs.

8. Assignment

The prior application is assigned to Donnelly Corporation, a corporation of the State of Michigan, located and doing business at 414 East Fortieth Street, Holland, Michigan 49423. That Assignment was recorded in the United States Patent and Trademark Office on February 12, 2002, at Reel 012577, Frame 0113.

9. Power of Attorney

The original Power of Attorney in the parent application Serial No. 09/745,172 is to Van Dyke, Gardner, Linn & Burkhart, LLP and the individual attorneys and agents at said address, consisting of Daniel Van Dyke, Reg. No. 25 046; Donald S. Gardner, Reg. No. 25 975; Terence J. Linn, Reg. No. 30 283; Frederick S. Burkhart, Reg. No. 29 288; Catherine S. Collins, Reg. No. 37 599; Matthew L. Goska, Reg. No. 42 594; Anthony A. Bisulca, Reg. No. 40 913; and Timothy A. Flory, Reg. No. 42 540.

Please address all future correspondence to:

Catherine S. Collins
Van Dyke, Gardner, Linn & Burkhart, LLP
2851 Charlevoix Drive, S.E.
P.O. Box 888695
Grand Rapids, MI 49588-8695
Ph: (616) 975-5500
Fax: (616) 975-5505

10. Verification

I hereby declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectfully submitted,

NIALL R. LYNAM ET AL.

By: Van Dyke, Gardner, Linn & Burkhart, LLP

April 2, 2004
Date

Catherine S. Collins
Registration No. 37 599
2851 Charlevoix Drive, S.E.
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc

PATENT
DON01 P-1148
Express Mail No. EL994418005US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs

For : EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Dear Sir:

CERTIFICATE OF EXPRESS MAIL

I certify that the attached return postcard, Request for Filing Continuation Application Under 37 CFR 1.53(b) (in duplicate); Patent Application Bibliographic Data Form; a copy of the parent application as originally filed consisting of 31 pages of Specification, 9 pages of Claims (59 claims), 1 page of Abstract, Declaration and Power of Attorney, and 13 sheets of formal drawings (in duplicate); Preliminary Amendment; Information Disclosure Sheet; Forms PTO-1449; and a check in the amount of $1,454.00 for the filing fee are being deposited with the United States Postal Service as Express Mail in an envelope having Express Mail Label Number EL994418005US addressed to:

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

on April 2, 2004.

Catherine S. Collins
Van Dyke, Gardner, Linn & Burkhart, LLP
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc
Enclosures

PATENT
DON01 P-1148
Express Mail No. EL994418005US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs

For : EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY

Mail Stop Patent Application
Commissioner for Patents
P.P. Box 1450
Alexandria VA 22313-1450

Dear Sir:

REQUEST FOR FILING CONTINUATION APPLICATION UNDER 37 CFR 1.53(b)

This is a request for filing a continuation application under 37 CFR 1.53 of U.S. Pat. application Ser. No. 09/745,172, filed on Dec. 20, 2000, by Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs, entitled EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY, now U.S. Pat. No. 6,717,712, which is a continuation-in-part of U.S. Pat. application Ser. No. 09/478,315, filed January 6, 2000, now U.S. Pat. No. 6,522,451.

1. Copy of Prior Application as Filed Which is Attached

I hereby verify that the attached papers are a copy of what is shown in my records to be the above-identified prior application, including the Declaration as originally filed (37 CFR 1.53). No amendments referred to in any Declaration filed to complete the prior application introduced new matter in that application.

The copy of the papers of the prior application as filed which is attached includes 31 pages of specification, 9 pages of claims (59 claims), 1 page of Abstract, 13 sheets of drawings, and signed Declaration and Power of Attorney.

2. Amendments

A Preliminary Amendment is enclosed including new Claims 60-117, which have been numbered consecutively beginning with the number next succeeding the last claim in the parent application.

3. Patent Application Bibliographic Data Form

A copy of the Patent Application Bibliographic Data Form is enclosed.

4. Filing Fee and Calculation

Basic Fee	$770.00	
Additional Fees		
Each independent claim in excess of three, times $86.	$ .00	
Number of claims in excess of twenty, times $18.00	$684.00	
Filing multiple dependent claims per application $280.00	$ .00	
Total Filing Fee		$1,454.00

A check in the amount of $1,454.00 for the filing fee is enclosed herewith.

The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 22-0190.

The Commissioner is hereby authorized to charge the following fees during the pendency of this application, or credit any overpayment, to Deposit Account No. 22-0190. A duplicate copy of this sheet is enclosed.

a) Any filing fees under 37 CFR 1.16 for presentation of extra claims for which full payment has not been tendered.

b) Any patent application processing fees under 37 CFR 1.17 for which full payment has not been tendered.

5. Drawings

Thirteen (13) sheets of drawings are enclosed and are copies of those filed in the parent application.

6. Disclosure Statement

Applicants respectfully request that information cited in the prior parent application, Serial No. 09/745,172 be considered in the present application. A disclosure statement is enclosed along with copies of forms PTO-1449 listing all of the information from the prior parent application.

7. Inventorship Statement

With respect to the prior co-pending U.S. application from which this application claims benefit under 35 USC 120, the inventors in this application are the same, namely, Niall R. Lynam, John O. Lindahl, and Hahns yoachim Fuchs.

8. Assignment

The prior application is assigned to Donnelly Corporation, a corporation of the State of Michigan, located and doing business at 414 East Fortieth Street, Holland, Michigan 49423. That Assignment was recorded in the United States Patent and Trademark Office on February 12, 2002, at Reel 012577, Frame 0113.

9. Power of Attorney

The original Power of Attorney in the parent application Serial No. 09/745,172 is to Van Dyke, Gardner, Linn & Burkhart, LLP and the individual attorneys and agents at said address, consisting of Daniel Van Dyke, Reg. No. 25 046; Donald S. Gardner, Reg. No. 25 975; Terence J. Linn, Reg. No. 30 283; Frederick S. Burkhart, Reg. No. 29 288; Catherine S. Collins, Reg. No. 37 599; Matthew L. Goska, Reg. No. 42 594; Anthony A. Bisulca, Reg. No. 40 913; and Timothy A. Flory, Reg. No. 42 540.

Please address all future correspondence to:

Catherine S. Collins
Van Dyke, Gardner, Linn & Burkhart, LLP
2851 Charlevoix Drive, S.E.
P.O. Box 888695
Grand Rapids, MI 49588-8695
Ph: (616) 975-5500
Fax: (616) 975-5505

10. Verification

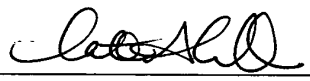
I hereby declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectfully submitted,

NIALL R. LYNAM ET AL.

By: Van Dyke, Gardner, Linn & Burkhart, LLP

April 2, 2004
Date



Catherine S. Collins
Registration No. 37 599
2851 Charlevoix Drive, S.E.
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc

PATENT
DON01 P-1148
Express Mail No. EL994418005US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs

For : EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Dear Sir:

CERTIFICATE OF EXPRESS MAIL

I certify that the attached return postcard, Request for Filing Continuation Application Under 37 CFR 1.53(b) (in duplicate); Patent Application Bibliographic Data Form; a copy of the parent application as originally filed consisting of 31 pages of Specification, 9 pages of Claims (59 claims), 1 page of Abstract, Declaration and Power of Attorney, and 13 sheets of formal drawings (in duplicate); Preliminary Amendment; Information Disclosure Sheet; Forms PTO-1449; and a check in the amount of $1,454.00 for the filing fee are being deposited with the United States Postal Service as Express Mail in an envelope having Express Mail Label Number EL994418005US addressed to:

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

on April 2, 2004.

Catherine S. Collins
Van Dyke, Gardner, Linn & Burkhart, LLP
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc
Enclosures

EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY

This is a continuation-in-part of U.S. Pat. application Ser. No. 09/478,315, filed Jan. 6, 2000, entitled "EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY", which is incorporated by reference herein in its entirety.

TECHNICAL FIELD AND BACKGROUND OF THE INVENTION

The present invention relates to exterior sideview mirror assemblies suitable for use on an automobile, and more specifically, to plano-auxiliary reflective element assemblies for use in automobile exterior sideview mirror assemblies.

Automobiles are typically equipped with an interior rearview mirror assembly (adapted for providing a rearward field of view immediately rearward of the vehicle, typically principally in the road lane the vehicle is traveling in) and at least one exterior sideview mirror assembly attached to the side of the vehicle (typically adjacent a front side window portion). The exterior side view mirror assembly typically comprises a reflective element adapted to provide a rearward field of view of the side lane adjacent the vehicle so as to allow the driver see whether a side approaching vehicle is present when the driver is contemplating a lane change. Conventionally, automobiles are equipped with a driver-side exterior mirror assembly and, very often, with a passenger-side exterior sideview mirror assembly mounted to the side of the automobile body opposite to that of the driver-side assembly. While the combination of an interior rearview mirror with a driver-side exterior mirror (and especially in a three-mirror system comprising an interior rearview mirror with a driver-side exterior mirror and a passenger-side exterior mirror) works well in many driving situations, rear vision blind spots present a potential safety hazard while driving. A rear vision blind spot is an area adjacent the side of an automobile where a view of another vehicle (overtaking on that side) is not captured in the rearward field of view of the exterior mirror reflector on that side. This presents a potential safety hazard as the driver, upon checking the view in the exterior sideview mirror and seeing no overtaking vehicle therein, may deem it safe to initiate a lane change, unaware that there is a vehicle immediately adjacent in a blind-spot of the exterior mirror reflector.

Various attempts have been made conventionally to minimize and/or eliminate exterior mirror blind-spots on vehicles. One approach is to make the exterior mirror reflector larger, and particularly wider with respect to the vehicle body. By increasing the width of the exterior mirror reflector, it has a wider field of view rearwards, and hence the reflector blind-spot is reduced. While use of a wide exterior mirror reflector is an option for trucks, buses and commercial vehicles, increasing the width of the reflector used in an exterior sideview mirror assembly mounted on automobiles (such as sedans, station wagons, sports cars, convertibles, minivans, sports utility vehicles, pick-up trucks and similar passenger carrying automobiles) is often not an option. In such domestic automobiles, increasing the width of the exterior mirror reflector increases the size of the exterior sideview mirror assembly with a concomitant increase in aerodynamic drag, increase in fuel consumption, increased difficulty in parking in tight parking spaces, and increased reflector vibration. Use of a non-flat, curved exterior mirror reflector is commonly used to increase rearward field of view without increasing reflector size.

While working well to increase field of view, use of a curved reflector (such as a convex, spherically-curved reflector) has disadvantages. The field of view rearward increases as the degree of curvature of the bent substrate increases (i.e., the field of view rearward increases as the radius of curvature of the bent substrate decreases). However, such wide-angle mirrors have non-unit magnification and distance perception rearward is distorted. For this reason, convex (spherically-bent) exterior mirror reflectors are required in some countries (such as the United States) to carry a safety warning "OBJECTS IN MIRROR ARE CLOSER THAN THEY APPEAR". Distance perception is particularly important for a driver-side exterior mirror. Indeed, Federal Vehicle Safety Standard No: 111 in the United States (the entire disclosure of which is hereby incorporated by reference herein) requires that the driver-side exterior mirror reflector exhibit unit magnification, and places restrictions on the radius of curvature allowed for any bent passenger-side mirror as well as requiring a safety warning be placed thereon. As an improvement over spherically bent/convex mirror reflectors, aspherical or multiradius mirror reflectors (such as are disclosed in U.S. Pat. Nos. 4,449,786 and 5,724,187, the entire disclosures of which are hereby incorporated by reference herein) have been developed. Such mirrors are widely used in Europe and Asia for both driver-side exterior mirror reflectors and for passenger-side exterior mirror reflectors. The aspherical or multiradius mirror reflectors typically have a less curved (larger radius of

curvature) reflective region that is inboard or closest to the driver when mounted on a vehicle and, usually separated by a demarcation line or the like, have a more curved (smaller radius of curvature) region that is outboard or farthest from the driver when mounted on a vehicle. However, such aspherical or multiradius reflectors do not have unit magnification and so cannot be used when unit magnification is mandated (such as by FMVSS 111, referenced above).

To supplement a flat driver-side exterior mirror reflector, an auxiliary and separate bent reflector is sometimes incorporated into the driver-side exterior sideview mirror assembly. However, this is often not suitable for passenger automobiles because of the extra space required in the sideview mirror assembly to accommodate an auxiliary reflector element. Also, in most passenger automobiles, the position of the side view mirror reflector is adjustable by the driver (such as by a hand-adjust, or by a manually adjustable cable such as a Bowden cable or by an electrically operable actuator, as known in the art) in order to provide to that driver his or her desired rearward field of view, which ill-suits use of a separate, auxiliary reflector. Likewise, addition of stick-on blind-spot mirror reflectors (such as are commonly sold in automotive parts stores and the like) onto an automobile exterior sideview mirror reflector has disadvantages, including obscuring field of view of the automobile mirror reflector and adding to mirror element vibration.

There is thus a need to provide an automobile exterior sideview reflective element, and particularly a driver-side automobile exterior sideview reflective element, that overcomes the disadvantages above and that provides the driver of the automobile with a distortion-free field of view with unit magnification that is supplemented with a wide-angle view of a side lane blind spot, and there is a need that this be provided in a unitary reflective element assembly module suitable to mount onto, and be adjusted by, the mirror reflector adjustment mechanism (such as an electrically operated, motorized actuator) provided in the exterior sideview mirror assembly.

SUMMARY OF THE INVENTION

According to the present invention, an automobile exterior sideview mirror system includes an exterior sideview mirror assembly having a reflective element assembly. The reflective element assembly includes a first reflective element and a second reflective element, which together provide an increased field of view for the exterior side mirror assembly.

In one form of the invention, an automobile exterior side mirror system includes an exterior side mirror assembly, which is adapted for attachment to a side of an automobile. The exterior sideview mirror assembly includes a reflective element assembly having a plano reflective element, which forms a first reflective element, and a multiradiused reflective element which forms a second reflective element. The reflective element assembly is mounted to an actuator, which moves the reflective element assembly to position the rearward field of view of the reflective element assembly. The reflective element assembly further includes a frame element assembly to which the first and second reflective elements are mounted and which orients the second reflective element such that it has a viewing range which spans outwardly and downwardly with respect to the first reflective element to thereby provide an increased field of view for the exterior sideview mirror assembly.

In one aspect, the first reflective element and the second reflective element are adjacently attached to the frame element assembly at a joint. The reflective element assembly further includes a demarcation element disposed at its joint to form a demarcation between the first and second reflective elements that is visible to the driver. In a further aspect, the frame element assembly includes a bezel portion which extends around the first reflective element, with the demarcation element comprising a segment of the first bezel portion.

In another aspect, the second reflective element comprises a bent glass substrate with radii of curvature in the range of about 4000 mm to about 100 mm.

In yet another aspect, the frame element assembly includes a frame, with the first and second reflective elements being mounted in the frame. The multiradiused reflective element is mounted to the frame at an outboard position, with the plano reflective element being positioned adjacent the multiradiused reflective element and at an inboard position with respect to the multiradiused reflective element when the exterior side mirror assembly is mounted to an automobile. In a further aspect, the plano reflective element is mounted to the frame by a backing plate, which is preferably adapted to mount to the actuator.

In other aspects, the first reflective element includes a rearward field of view having a principal axis, which is different from and angled to a principal axis of the rearward field of view of the second reflective element when the reflective element assembly is mounted in the exterior sideview mirror assembly. The principal axis of the rearward field of view of the second reflective element is directed generally outwardly and downwardly with respect to a longitudinal axis of the automobile when the exterior side mirror system is

mounted to an automobile. For example, the principal axis of the rearward field of view of the second reflective element may form a downward angle with respect to the principal axis of the rearward field of view of the first reflective element in the range from about .75° to about 5°, or in a range of about 1.5° to about 3.5°, in a range of about 2° to about 3°.

In other aspects, the principal axis of the second reflective element forms an outward angle with respect to the principal axis of the rearward field of view of the first reflective element in a range of about 0.75° to about 5°, or in a range of about 1° to about 3°, or in a range of about 1.25° to about 2.5°.

According to another form of the invention, an automobile exterior side mirror system includes an exterior side mirror assembly, which is adapted for attachment to a side of an automobile. The exterior side mirror assembly includes a mirror casing, a reflective element assembly, and an actuator. The reflective element assembly includes a frame element assembly, a first reflective element having a unit magnification, and a second reflective element having a multiradiused curvature. The frame element assembly mounts the first reflective element and the second reflective element in the mirror casing and is adapted to mount to the actuator, which adjusts the orientation of the reflective element assembly. The first reflective element has a first rearward field of view with a first principal axis, and the second reflective element has a second rearward field of view with a second principal axis, with the second principal axis being angled outwardly and downwardly with respect to the first principal axis.

In one aspect, the second principal axis is angled outwardly from the first principal axis at an angle in a range of about 0.75° to about 5°, or in a range of approximately 1° to about 3°, or at an angle in a range of about 1.25° to about 2.5°.

In another aspect, the second principal axis is angled downwardly from the first principal axis at an angle in a range of approximately 0.75° to about 5°, or in a range of about 1.5° to about 3.5°, or at an angle in a range of about 2° to about 3°.

In another aspect, the frame includes a support surface for the second reflective element, with the support surface angling the second principal axis of the second reflective element.

In yet another form of the invention, an automobile exterior sideview mirror system includes an exterior sideview mirror assembly, which is adapted for attachment to a side of an automobile. The mirror assembly includes an actuator and a reflective element

assembly. The reflective element assembly includes a frame element assembly, a first reflective element, and a second reflective element. The frame element assembly is adapted to mount to the actuator and includes a frame and a support surface for the second reflective element. The actuator adjusts the position of the reflective element assembly to thereby adjust the viewing angle of the sideview mirror system. The support surface angles the second reflective element downwardly and forwardly of the first reflective element when the mirror assembly is mounted to an automobile whereby the second reflective element provides a viewing range which spans outwardly and downwardly with respect to the automobile to thereby provide an increased field of view for the exterior sideview mirror assembly.

In one aspect, the support surface is provided by a plate element, for example a solid plate element or a foraminous plate element. In other aspects, the support surface is provided by a frame.

In further aspects, the frame includes a first bezel portion and a second bezel portion, with the first bezel portion extending around the first reflective element, and the second bezel portion extending around the second reflective element. In one form, the second bezel portion is angled forwardly with respect to the first bezel portion when said exterior sideview mirror assembly is mounted to a side of an automobile.

In another aspect, the second reflective element is located outboard of the first reflective element.

These and other advantages, features, and modifications will become more apparent when reviewed in conjunction with the drawings and the detailed description which follows.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of an automobile equipped with exterior sideview mirror assemblies according to this present invention;

FIG. 2 is a top plan partial fragmentary view of the driver's side exterior rearview mirror assembly of FIG. 1;

FIG. 3 is an enlarged sectional view of a plano-multiradius reflective element assembly of the mirror assembly in FIG. 2;

FIG. 4 is an enlarged sectional view of a demarcation element of the plano-multiradius reflective element assembly of FIG. 3;

FIG. 5A-5H illustrate views of various locations for a plano reflective element and an auxiliary reflective element according to this present invention;

FIG. 6 is a sectional view of a second embodiment of a plano reflective element assembly according to the present invention including a demarcation element formed as a dividing wall in a backing plate element;

FIG. 6A is a cross-section taken along line XX of FIG.6;

FIG. 6B is a cross-sectional view taken along line YY of FIG.6;

FIG. 7 is a schematic of a third embodiment of a plano-auxiliary reflective element assembly according to this present invention;

FIG. 8 is a front elevation view of another embodiment of a plano reflective element assembly according to the present invention;

FIG. 9 is an exploded perspective view of the plano reflective element assembly of FIG. 8;

FIG. 10 is an end view of the plano reflective element assembly of FIG. 8 as viewed from line X-X of FIG. 8;

FIG. 11 is a top view of the plano reflective element assembly of FIG. 8 as viewed from line XI-XI of FIG. 8;

FIG. 12 is a schematic representation of the plano reflective element assembly of FIG. 8 illustrating the orientation of the reflective element;

FIG. 13 is another schematic representation of the orientation of the reflective elements of the plano reflective element in FIG. 8;

FIG. 14 is a diagram illustrating the range of viewing of the reflective elements of the plano reflective element assembly of FIG. 8; and

FIG. 15 is a perspective view of another embodiment of an exterior rearview mirror system of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

As illustrated in FIG. 1, passenger automobile 10 (which may be a sedan, a station-wagon, a sports car, a convertible, a minivan, a sports utility vehicle, a pick-up truck or a similar passenger carrying non-commercial, personal transportation automobile) includes an interior rearview mirror assembly 18 positioned within interior vehicle cabin 25. Interior vehicle cabin 25 further includes a steering wheel 16, a driver seat 20 positioned at

steering wheel 16, a front passenger seat 21 adjacent to driver seat 20 in the front portion of cabin 25, and a rear passenger seat 23 in the rear portion of cabin 25. Automobile 10 further includes a driver-side exterior sideview mirror assembly 12 and a passenger-side exterior sideview mirror assembly 14, each adapted for attachment to opposing sides of automobile body 11, most preferably adjacent to the seating position of the driver seated in driver seat 20 for driver-side assembly 12 and adjacent to the front passenger seat 21 for passenger-side assembly 14. Exterior sideview mirrors, mounted as shown in FIG. 1 close to the driver seating location, are commonly referred to as door-mounted exterior sideview mirror assemblies. Driver-side exterior sideview mirror assembly 12 includes, as illustrated in FIG. 2, a plano-multiradius exterior sideview reflective element assembly 30. Plano-multiradius reflective element assembly 30 is mounted to a reflective element positioning actuator 36. The orientation of plano-multiradius reflective element assembly 30, and hence its rearward field of view, is adjustable by actuator 36 in response to control 37. Control 37 can comprise a handset control that allows the driver manually move the orientation of plano-multiradius reflective element assembly 30 within exterior mirror housing 40 (such as by a lever control or by a cable control) and hence reposition the rearward field of view of plano-multiradius reflective element assembly 30. Alternately, when actuator 36 comprises an electrically actuated actuator that is electrically operable incorporating at least one motor, control 37 can comprise a switch (which, preferably, is operable under control of the driver seated in cabin 25) or control 37 can comprise a memory controller, as known in the automotive mirror art, that controls actuator 36 to move the position of plano-multiradius reflective element assembly 30 to a pre-set orientation that suits the rearward field of view preference of an individual driver. Actuator 36 is mounted to bracket 38 which attaches to vehicle body side 11. Plano-multiradius reflective element assembly 30 is positionable by actuator 36 within exterior mirror housing 40.

Plano-multiradius reflective element assembly 30, as shown in FIG. 3, comprises a plano element 50 and a separate multiradius element 55. Preferably, plano element 50 is adjacent to multiradius element at a joint. At their joint, plano element 50 and separate multiradius element 55 can touch leaving substantially no gap or space therebetween, or plano element 50 and separate multiradius element 55 can be spaced apart at their joint by a space or gap, as in FIG. 3. Plano element 50 and multiradius element 55 are both mounted to surface 59 of, and are both supported by, a single backing plate element 60. Plano element

50 and multiradius element 55 are demarcated apart by demarcation element 65. Surface 61 of backing plate element 60 is preferably adapted to attach, such as by attachment member 64, to actuator 36 when plano-multiradius reflective element assembly 30 is mounted in driver-side exterior sideview mirror assembly 12 (and/or in passenger-side exterior side view mirror assembly 14) such that plano element 50 and multiradius element 55 are adjusted and positioned in tandem and simultaneously when the driver (or alternatively, when a mirror memory system, as is conventional in the rearview mirror arts) activates actuator 36 to reposition the rearward field of view of plano-multiradius reflective element assembly 30. Thus, since elements 50, 55 are part of plano-multiradius reflective element assembly 30, movement of plano-multiradius reflective element assembly 30 by actuator 36 simultaneously and similarly moves plano element 50 and multiradius element 55.

Plano element 50 preferably comprises a flat reflector-coated glass substrate having unit magnification, and comprises a reflective surface through which the angular height and width of the image of an object is equal to the angular height and width of the object when viewed at the same distance (except for flaws that do not exceed normal manufacturing tolerances). Plano element 50 may comprise a conventional fixed reflectance mirror reflector or it may comprise a variable reflectance mirror reflector whose reflectivity is electrically adjustable. For example, plano element 50 may comprise a flat glass substrate coated with a metallic reflector coating such as a chromium coating, a titanium coating, a rhodium coating, a metal alloy coating, a nickel-alloy coating, a silver coating, an aluminum coating (or any alloy or combination of these metal reflectors). The metal reflector coating of plano element 50 may be a first surface coating (such as on surface 66) or a second surface coating (such as on surface 67), as such terms are known in the mirror art. The reflector coating on plano element 50 may also comprise a dielectric coating, or a multilayer of dielectric coatings, or a combination of a metal layer and a dielectric layer to form automotive mirror reflectors as known in the automotive mirror art. If a variable reflectance reflector element, plano element 50 preferably comprises an electro-optic reflector element and, most preferably, an electrochromic reflector element.

When mounted into exterior side view mirror assembly 12 and/or 14, plano-multiradius reflective element assembly 30 is preferably orientated so that at least a portion of (more preferably a substantial portion of) the reflector surface of plano element 50 is positioned closer to the vehicle body (and hence to the driver) than any portion of the

reflector surface of multiradius element 55. Thus, and referring to FIG. 3, side A of plano element 50 of plano-multiradius reflective element assembly 30 is positioned closer to the driver than side D of multiradius element 55 when plano-multiradius reflective element assembly 30 is mounted on an automobile. Also, when mounted into exterior side view mirror assembly 12 and/or 14, surfaces 66, 68 of plano-multiradius reflective element assembly 30 face rearwardly in terms of the direction of vehicle travel.

Multiradius element 55 of plano-multiradius reflective element assembly 30 preferably comprises a curved/bent mirrored glass substrate. The degree of curvature preferably increases (and hence the local radius of curvature decreases) across the surface of multiradius element 55 with the least curvature (largest radius of curvature) occurring at the side of multiradius element 55 (side C in FIG. 3) positioned adjacent its joint to plano element 50 when both are mounted on backing plate element 60. Thus, and referring to FIG. 3, the local radius of curvature at side C of multiradius element 55, when mounted on backing plate element 60, is larger than at side D. Also, the local radius of curvature preferably progressively decreases across multiradius element 55 from side C to side D. Preferably, the local radius of curvature at side C of multiradius element 55 is at least about 1000 mm; more preferably is at least about 2000 mm and most preferably is at least about 3000 mm whereas the local radius of curvature at side D of multiradius element 55 is, preferably, less than about 750 mm, more preferably less than about 350 mm; most preferably less than about 150 mm. Preferably, multiradius element 55 comprises a bent glass substrate with radii of curvature in the range of from about 4000 mm to about 50 mm. The multiradius prescription for the multiradius element to be used in a particular exterior mirror assembly can vary according to the specific field of view needs on a specific automobile model.

The total field of view rearwardly of the automobile of the plano-auxiliary reflective element assembly (which is a combination of the field of view of the plano reflective element and of the auxiliary reflective element) preferably generally subtends an angle of at least about 20° (and more preferably, generally subtends an angle of at least about 25° and most preferably, generally subtends an angle of at least about 30°) with respect to the side of an automobile to which is attached an exterior sideview mirror assembly equipped with the plano-auxiliary reflective element assembly.

Multiradius element 55 may comprise a conventional fixed reflectance mirror reflector or it may comprise a variable reflectance mirror reflector whose reflectivity is

electrically adjustable. For example, multiradius element 55 may comprise a flat glass substrate coated with a metallic reflector coating such as a chromium coating, a titanium coating, a rhodium coating, a metal alloy coating, a nickel-alloy coating, a silver coating, an aluminum coating (or any alloy or combination of these metal reflectors). The metal reflector coating of multiradius element 55 may be a first surface coating (such as on surface 68) or a second surface coating (such as on surface 69), as such terms are known in the mirror art. The reflector coating on multiradius element 55 may also comprise a dielectric coating, or a multilayer of dielectric coatings, or a combination of a metal layer and a dielectric layer to form automotive mirror reflectors as known in the automotive mirror art. If a variable reflectance reflector element, multiradius element 55 preferably comprises an electro-optic reflector element and, most preferably, an electrochromic reflector element.

Also, it is preferable that the thickness of plano element 50 and multiradius element 55 be substantially the same in dimension so that their respective outer surfaces, 66 and 68, are substantially coplanar so that a driver can readily view images in either or both elements. The thickness dimension of elements 50, 55 is determined by the thickness of the substrate (or in the case of laminate-type electrochromic reflective elements, the thickness of the two substrates between which the electrochromic medium is disposed). For example, plano element 50 and/or multiradius element 55 can comprise a reflector coated glass substrate or panel of thickness preferably equal to or less than about 2.3 mm, more preferably equal to or less than about 1.6 mm, most preferably equal to or less than about 1.1 mm. Use of a thinner substrate is beneficial in terms of improving the overall stability/vibration performance of the image seen in plano-multiradius reflective element assembly 30 when mounted to an automobile.

The reflector area of plano element 50 is preferably larger than that of multiradius element 55. Preferably, the width dimension of plano element 50 is larger than the width dimension of multiradius element 55 (both width dimensions measured at their respective widest dimension and with the width of the respective element being gauged with the respective element oriented as it would be orientated when mounted on the automobile). Thus, and referring to FIG. 3, the distance from side A to side B of plano element 50 is larger than the distance from side C to side D of multiradius element 55. Thus, the ratio of the width of plano element 50 to the width of multiradius element 55 is preferably greater than 1; more preferably greater than 1.5; most preferably greater than 2.5 in order to provide a large,

unit magnification plano element 50 as the principal rear viewing portion of plano-multiradius reflective element assembly 30 and providing multiradius element 55 as a smaller, auxiliary, separate, wide-angle viewing portion of plano-multiradius reflective element assembly 30. For plano-multiradius reflective element assemblies to be mounted to the exterior sideview assemblies of passenger automobiles used non-commercially and for non-towing purpose, the width of plano element 50 (at its widest dimension) is preferably in the range of from about 50 mm to about 225 mm; more preferably in the range of from about 75 mm to about 175 mm; most preferably in the range of from about 100 mm to about 150 mm.

Backing plate element 60 is preferably a rigid polymeric substrate capable of supporting plano element 50 and multiradius element 55. Backing plate element 60 comprises a flat portion (generally between E and F as shown in FIG. 3) that corresponds to and is aligned with plano element 50. Backing plate element 60 also comprises a curved portion (generally between G and H as shown in FIG. 3) that corresponds to and is aligned with multiradius element 55. Preferably, curved portion G-H of multiradius element 55 is fabricated with a multiradius prescription that is substantially the same as the multiradius prescription of multiradius element 55. Backing plate element 60 is formed as a single element to which elements 50 and 55 are separately attached. Preferably, backing plate element 60 is formed by injection molding of a thermoplastic or a thermosetting polymer resin. Materials suitable to use for backing plate element 60 include unfilled or filled polymeric materials such as glass and/or mineral filled nylon or glass and/or mineral filled polypropylene, ABS, polyurethane and similar polymeric materials. For example, backing plate element 60 can be formed of ABS in an injection molding operation. Plano element 50 can be cut from a stock lite of flat chromium mirror-coated 1.6 mm thick glass. Multiradius element 55 can be cut from a stock lite of multiradiusly-bent chromium mirror-coated 1.6 mm thick glass. Plano element 50 and multiradius element 55 can then be attached (such as by an adhesive attachment such as an adhesive pad or by mechanical attachment such by clips, fasteners or the like) to the already molded backing plate element 60. Alternatively, plano element 50 and multiradius element 55 can each by individually loaded into an injection molding tool. Once loaded, a polymeric resin (or the monomers to form a polymeric resin) can be injected into the mold in order to integrally form backing plate element 60 with elements 50, 55 integrally molded thereto. Integral molding of the backing plate element to

plano element 50 and multiradius element 55 (along with any other elements such as the demarcation element 65) in a single integral molding operation, is a preferred fabrication process for plano-multiradius reflective element assembly 30.

Plano-multiradius reflective element assembly 30 further preferably includes demarcation element 65 that functions to delineate and demarcate the plano region of the assembly from the wide-angle, multiradius region and also preferably functions to prevent ingress of debris, dirt, water and similar contaminants (such as road splash, car wash spray, rain, snow, ice, leaves, bugs and similar items that plano-multiradius reflective element assembly 30 would be subject to when mounted and used on an automobile) into any gap between plano element 50 and multiradius element 55 when both are attached to backing plate element 60. Optionally, at least a portion of demarcation element 65 can be disposed in any gap between plano element 50 and multiradius element 55 at their joint on backing plate element 60. Preferably, demarcation element 65 is formed of a polymeric material that is dark colored (such as black or dark blue or dark brown or dark grey or a similar dark color) such as a dark colored polypropylene resin or a dark colored nylon resin or a dark colored polyurethane resin or a dark colored polyvinyl chloride resin or a dark colored silicone material. Most preferably demarcation element 65 is formed of an at least partially elastomeric material (such as silicone, or EPDM, or plasticized PVC or the like) in order to provide a degree of vibration dampening for elements 50, 55. As shown in FIG. 4, demarcation element 65 optionally includes a crown portion 70 that includes wing portions 73, 73'and a stem portion 71. Stem portion 71 preferably has a cross-sectional width CCC of less than about 4 mm, more preferably less than about 3 mm and, most preferably less than about 2 mm. Crown portion 70 preferably is dimensioned to not protrude substantially beyond surfaces 66, 68 of elements 50, 55 when demarcation element 65 is installed between elements 50 and 55. Also, wings 73, 73' are preferably dimensioned to protrude (most preferably slightly) onto surfaces 66, 68 of elements 50, 55 when demarcation element 65 is installed between elements 50 and 55 in order to provide a weather barrier seal and/or to at least partially accommodate any dimensional tolerances of elements 50, 55 that could lead to variation in the inter-element gap between sides C and B. While the demarcation element shown in FIG. 4 is one embodiment, other constructions are possible including a demarcation element that has minimal or no crown portion. Likewise, a demarcation element can have little or no stem portion, especially when the joint between plano element 50 and multiradius

element 55 includes no gap to receive a stem. Also, where a gap at the plano to multiradius joint exists, any stem of the demarcation element can at least partially be disposed in such gap so as to at least partially fill the gap (or it can optionally substantially fill the gap). Optionally, demarcation element 65 is fabricated by injection molding of a polymeric resin. After plano element 50 and multiradius element 55 have been attached to backing plate element 60, a separately formed demarcation element 65 can then be inserted (and secured such as by an adhesive or by a mechanical attachment such as by a fastener) into a space between elements 50 and 55. Note that, optionally, side B of plano element 50 and side C of multiradius element 55 can touch (leaving substantially no gap or space therebetween). In such a situation, demarcation element 65 can comprise a dark colored strip such as of a tape or of a plastic film that covers the joint between elements 50 and 55. Alternatively, demarcation element 65 can comprise a preferably dark-colored paint, lacquer, caulk or similar material that can be applied to, and that can preferably fill into, the joint between elements 50 and 55. The width of the portion of demarcation element 65 that is visible to the driver is preferably less than about 4 mm, more preferably less than about 3 mm and most preferably less than about 2 mm, but is equal to or greater than about 0.5 mm, more preferably is equal to or greater than about 0.75 mm, most preferably is equal to or greater than about 1 mm in order to provide adequate demarcation of the plano region from the multiradius radius region without unduly obscuring the rearward field of view of the respective elements. Optionally, demarcation element 65 can be formed as part of backing plate element 60 such as by forming demarcation element 65 as a wall structure of the backing plate element that partitions backing plate element 60 into two regions: A first region adapted to receive plano reflective element 50 and a separate and adjacent second region adapted to receive multiradius reflective element 55.

Thus, and referring to FIG. 6, a second embodiment of plano-multiradius reflective element assembly 130 may include a backing plate element 160 which comprises a plate molded from a polymer resin (such as a polyolefin such as polypropylene or such as ABS or nylon) with a demarcation element 165 that is molded as a wall structure that partitions backing plate element 165 into a first region (from CC to BB) adapted to receive and accommodate plano reflective element 150 and into a second region (from BB to AA) adapted to receive and accommodate wide-angle optic multiradius reflective element 155. Note that section AA to BB of backing plate element 160 is angled to section BB to CC.

Such angling of the auxiliary reflective element relative to the plano element can be advantageous in allowing the auxiliary reflective element view a portion of the road adjacent the automobile that is in a blind spot of the plano reflective element. In this regard, it is preferable that the multiradius element be angled away from the plane of the plano element, as shown in FIG. 6 by the angling of section AA to BB to section BB to CC.

Preferably, demarcation element 65 is formed in an integral molding operation, along with formation of backing plate element 60, and attachment of elements 50, 55 thereto. For example, plano element 50 and multiradius element 55 can each by individually loaded into an injection molding tool. Once loaded, a polymeric resin (or the monomers to form a polymeric resin) can be injected into the mold in order to integrally form backing plate element 60 with elements 50, 55 integrally molded thereto and, in the same molding operation and in the same tool, also form by molding the demarcation element. Integral molding of the backing plate element to plano element 50 and multiradius element 55 along with creation in the single molding operation of demarcation element 65 (along with any other elements such as attachment member 64) in a single integral molding operation, is a preferred fabrication process for plano-multiradius reflective element assembly 30. By loading all the sub components of plano-multiradius reflective element assembly 30 into a molding tool, and then injecting polymeric resin to form the backing plate, demarcation member and any attachment member, a substantially complete or fully complete plano-multiradius reflective element assembly can be unloaded from the tool at the completion of the integral molding operation (as known in the molding art), thus enabling economy in manufacturing and accommodation of any dimensional tolerances in the sub components. Where integral molding is so used, it is preferable to use a reactive molding operation such as reactive injection molding of a urethane as such reactive injection molding operations occur at relatively modest temperatures.

Plano element 50 and/or multiradius element 55 can comprise a heater element, as known in the automotive mirror art, that is operable to deice/demist surfaces 66, 68. Such heater elements are conventional and can comprise a positive temperature coefficient heater pad, a resistive heater element and/or a conductive coating. Plano element 50 and/or multiradius element 55 can also optionally comprise a scatterproofing member, as known in the automotive mirror art, such as an adhesive tape, to enhance safety in an accident.

Also, plano element 50 and/or multiradius element 55 can comprise a variable reflectance electro-optic element such as an electrochromic mirror reflector. Thus, both element 50 and element 55 can comprise an electrochromic mirror element or either of element 50 and element 55 can comprise an electrochromic mirror element and the other can comprise a fixed reflectance non-variable reflectance mirror element such as a metal reflector coated glass panel such as a chromium coated glass substrate. Also, if both plano element 50 and multiradius element 55 comprise an electro-optic element such as an electrochromic mirror element capable of electrically dimmable reflectivity, both elements 50, 55 can dim together and in tandem under control of a common dimming control signal (typically provided by an electro-optic automatic dimming interior mirror assembly mounted in the cabin of the automobile and equipped with photosensors to detect incident glare and ambient light). Alternately, if both plano element 50 and multiradius element 55 comprise an electro-optic element such as an electrochromic mirror element capable of electrically dimmable reflectivity, element 50 can dim independently of element 55 (such as is disclosed in U.S. Pat. No. 5,550,677, the entire disclosure of which is hereby incorporated by reference herein). If either or both of elements 50, 55 comprise an electrochromic element, preferably, the electrochromic reflective element comprises a front substrate and a rear substrate with an electrochromic medium disposed between, such as a solid polymer matrix electrochromic medium such as is disclosed in U.S. Pat. application Ser. No. 09/350,930, filed July 12, 1999, entitled "ELECTROCHROMIC POLYMERIC SOLID FILMS, MANUFACTURING ELECTROCHROMIC DEVICES USING SUCH FILMS, AND PROCESSES FOR MAKING SUCH SOLID FILMS AND DEVICES" to Desaraju V. Varaprasad et al., or such as is disclosed in U.S. Pat. Nos. 5,668,663; 5,724,187; 5,910,854; and 5,239,405, the entire disclosures of which are hereby incorporated by reference herein. Most preferably, in such laminate-type electrochromic mirror reflective elements, the front substrate comprises a glass plate of thickness less than about 1.6 mm, most preferably about 1.1 mm thickness or lower, and the rear substrate comprises a glass plate of thickness equal to or greater than about 1.6mm, more preferably greater than about 1.8 mm thickness, most preferably equal to or greater than about 2.0 mm thickness. The rearmost surface of the rear substrate (the fourth surface as known in the mirror art) is reflector coated with a high reflecting metal film such as of aluminum or silver, or an alloy of aluminum or silver. Most preferably, the front-most surface of the rear substrate (the third surface as known in the mirror art) is reflector coated

with a high reflecting metal film such as of aluminum or silver, or an alloy of aluminum or silver.

Backing plate element 65 of plano-multiradius reflective element assembly 30 is optionally equipped on its rearmost surface with attachment member 64 to facilitate attachment to the reflector-positioning actuator of the exterior sideview mirror assembly that plano-multiradius reflective element assembly 30 is mounted to. Attachment of plano-multiradius reflective element assembly 30 to the actuator can be by mechanical attachment such as by a tab, clip or fastener, or may be by adhesive attachment such as by a silicone adhesive, a urethane adhesive or a similar adhesive material such as a tape coated on both surfaces with a pressure sensitive adhesive to form a "double-sticky" tape. The exterior sideview mirror assembly, on whose mirror reflector-positioning actuator the plano-multiradius reflective element assembly is mounted, can be a fixedly attached exterior sideview mirror assembly, a break-away exterior sideview mirror assembly and a powerfold exterior sideview mirror assembly, as known in the automotive mirror art.

FIGS. 5A-5H shows various arrangements of multiradius reflective element 55 relative to its adjacent plano reflective element 50 (with demarcation element 65 disposed at their joint). In FIGS. 5A, 5B, 5C, 5E and 5F, plano element 50 is mounted wholly inboard of multiradius element 55. Thus, in FIGS. 5A, 5B, 5C, 5E and 5F, plano element 50 would be disposed closer to the vehicle body (and hence to the driver) than multiradius element 55 when plano-multiradius reflective element assembly 30 was mounted in an exterior sideview mirror attached to a side of an automobile. Therefore, in FIGS. 5A, 5B, 5C, 5E and 5F, plano element 50 would be mounted inboard relative to the side of the automobile and multiradius element 55 would be mounted outboard relative to the side of the automobile. In general, the location of the multiradius reflective element in the outboard, upper portion of the plano-multiradius reflective element assembly, as in FIGS. 5B and 5E, is preferred as this allows the plano portion provide a desired rearward field of view along the side of the vehicle. The configuration as shown in FIG. 5G (where the multiradius reflective element is along the inboard side of the assembly) is also desirable as this allows the driver view the side of the vehicle (something many drivers desire in order to have a frame of reference for their rearward field of view) while facilitating having a wide field of view for the plano portion.

Unlike trucks, busses and commercial vehicles the size of an exterior sideview mirror assembly suitable for use on an automobile (and especially when the automobile is not

towing a trailer or the like) is restricted. Automobiles generally are non-commercial vehicles intended for personal transportation. Automobiles typically carry 5 passengers or less, although minivans and large sports utility vehicles (which are classified herein as automobiles) can have seat accommodation for up to 10 passengers (although accommodation for 7 passengers or less is more common). The tandem mounting of a plano element of unit magnification and a separate auxiliary element onto a common, single backing plate element, and the mounting of this backing plate element onto an actuator of an exterior sideview mirror assembly so that a driver can simultaneously and similarly move the auxiliary element and the plano element so as to position their respective rearward fields of view, and to achieve this within the relatively restricted space available in a standard automobile-sized exterior sideview mirror assembly is an important element of this present invention. By utilizing a plano element of unit magnification in the plano-multiradius reflective element assembly, and by sizing the reflector area of the plano element larger than the reflector area of the multiradius element and, preferably, by sizing the reflector area of the plano element at a sufficiently large size that the rearward field of view provided by the plano element alone meets and satisfies the minimum field of view requirement mandated by an automaker specification and/or a government regulation, the need to provide a safety warning indicia such as "OBJECTS IN MIRROR ARE CLOSER THAN THEY APPEAR" in the plano element and/or in the multiradius element can be obviated. Preferably, the plano element comprises a reflector surface area of a size sufficient, when mounted as part of a plano-multiradius reflective element assembly in a driver-side exterior sideview mirror assembly on an automobile, to provide the driver of the automobile a view of a level road surface extending to the horizon from a line, perpendicular to a longitudinal plane tangent to the driver's side of the automobile at the widest point, extending 8 feet out from the tangent plane 35 feet behind the driver's eyes (at a nominal location appropriate for any 95th percentile male driver or at the driver's eye reference points established in Federal Motor Vehicle Standard No. 104), with the driver seated in the driver's seat and with the driver's seat in the rearmost position. Also, preferably, the aspect ratio of the plano-multiradius reflective element assembly (defined as the ratio of its largest vertical dimension to its largest horizontal dimension, measured with the plano-multiradius reflective element assembly oriented as it would be oriented when mounted in an exterior sideview mirror assembly on an automobile, and with "horizontal" being generally parallel with the road surface the automobile travels on

and "vertical" being generally perpendicular to the road surface the automobile travels on) is preferably less than 1, more preferably less than 0.8, most preferably less than 0.6. Further, it is preferable that the multiradius element be disposed outboard (relative to the side of the vehicle and with the plano-multiradius reflective element assembly oriented as it would be when mounted in an exterior sideview mirror assembly on an automobile) on the plano-multiradius reflective element assembly so that the multiradius element is positioned to provide an auxiliary, wide-angle view of a "blind-spot" region in an adjacent sidelane while the more inboard-disposed plano element with unit magnification provides the principal sideview image to the driver.

Also, it is preferable that the principal axis of the rearward field of view of the multiradius element be different from and angled to the principal axis of the rearward field of view of the plano element when both are attached to the backing plate element of the plano-multiradius reflective element assembly and when the plano-multiradius reflective element assembly is mounted and operated in an exterior sideview mirror assembly on an automobile. Preferably, the principal axis of the rearward field of view of the plano element is directed generally parallel to the road that the automobile equipped with the plano-multiradius reflective element assembly is travelling on (i.e. generally parallel to the longitudinal axis of the automobile) so as to provide the driver with a long-distance view of approaching vehicles in the side lane that the plano element views). However, preferably the principal axis of the rearward field of view of the multiradius element of, for example, a door-mounted driver-side (or passenger-side) exterior sideview mirror assembly in which the plano-multiradius reflective element assembly is mounted is directed generally downwardly towards the road surface adjacent to the driver seating location and/or several feet (such as about 1 foot to about 24 feet; more preferably, about 1 foot to about 12 feet; most preferably about 1 foot to about 8 feet in distance) to its rear (in order to capture a field of view of a rear approaching vehicle that is approaching to overtake, or is about to overtake, or is overtaking the automobile equipped with the plano-multiradius reflective element assembly). Thus, preferably, the principal axis of the rearward field of view of the multiradius element is angled and directed generally downwardly with respect to the longitudinal axis of the automobile and thus is at an angle to the principal axis of the rearward field of view of the plano element. For example, multiradius element 155 when attached to surface 173 of backing plate 160 (see FIG. 6B) would have its principal axis of rearward view as indicated

by 180 as in FIG. 6B, and as such would be canted towards the road surface when mounted in an exterior sideview mirror assembly attached to the side of an automobile. By contrast, plano element 150 when attached to surface 174 of backing plate 160 (see FIG. 6A) would have a principal axis as indicated by 185 as in FIG. 6A and, as such, would be generally parallel to the road surface when mounted in an exterior sideview mirror assembly attached to the side of an automobile. Having the multiradius element canted somewhat downwards towards the road surface assists visual detection by the driver of overtaking vehicles in the traditional "blind-spot" in the adjacent side lane. The angle that the multiradius element is angled on the backing plate element of the plano-multiradius reflective element assembly relative to the plane of the plano reflective element will vary from automobile model to model, but generally is preferred to be in the about 1° to about 10° range; about 2° to about 8° range more preferred; and about 3° to about 6° range most preferred. In order to conveniently achieve an angling of the multiradius portion with respect to the plano portion (and preferably a downward angling), the portion of the backing plate element that the multiradius reflective element is attached to can be angled relative to the adjacent portion of the backing plate element that the plano reflective portion is attached to. Thus, and referring to FIG. 6, plano-multiradius reflective element assembly 130 includes a molded polymeric backing plate element 160 comprising a generally flat portion 162 (between BB and CC in FIG. 6) and an adjacent curved portion 161 (between AA and BB). As indicated by 190 and 195, portion AA to BB of backing plate element 160 is generally angled to portion BB to CC of backing plate 160. Preferably, the portion of backing plate element 160 to which the auxiliary reflective element attaches is angled towards the front (compared to the angling of plano reflective element) of an automobile equipped with the plano-auxiliary reflective element assembly of the present invention. FIG. 6 is a view of plano-multiradius reflective element assembly 130 as it would appear from above the vehicle as it would be orientated in use (with portion 162 closer to the driver than portion 161). The wall section, section XX in FIG. 6, taken through section 162 of backing plate element 160 is of substantially constant dimension (as illustrated in FIG. 6A) whereas the wall section, section YY in FIG. 6B, taken through section 161 of backing plate element 160 is of varying dimension and is angled. Plano reflective element 150 and multiradius reflective element 155 (for example, plano element 150 can comprise an electrochromic mirror element and multiradius element 155 can comprise a chrome coated glass reflector) are attached to portions 162 and 161, respectively. By being supported on the

angled face 173 (see FIG. 6B) of portion 161, the principal viewing axis of multiradius reflector element 155 is angled downwards towards the road surface, as compared to the more horizontal-viewing principal viewing axis of plano element 150, when plano-multiradius reflective element 130 is mounted in an exterior sideview mirror assembly on an automobile. Demarcation element 165 is preferably molded in the same molding tool as is used to mold backing plate element 160, and so demarcation element 165 is formed as an integral part of backing plate element 160, forming a wall thereof that partitions the surface of backing plate element 160 into a region for receiving the plano reflective element 150 and a region for receiving the auxiliary reflective element 155. Also, end-caps 170 and 171 are optionally provided. Plano reflective element 150 can attach into the cavity formed between demarcation element 165 and end-cap 171; multiradius reflective element 155 can attach into the cavity formed between demarcation element 165 and end-cap 170. Note that the portion of the backing plate element where the wide-angle optic multiradius element attaches can have a thicker wall thickness than that of the portion of the backing plate element where the unit magnification optic element attaches in order to allow for the angling of the multiradius element downwardly relative to the angle of the plano element, as illustrated in FIGS. 6A-B. As illustrated in FIGS. 6A-B, the angle downwards to the longitudinal axis of the vehicle of the multiradius element can generally be set by an angling of a surface of the backing plate element in order to ensure that the principal axis of the rearward field of view of the plano element is directed generally parallel to the longitudinal axis of an automobile equipped with the plano-multiradius reflective element assembly and that the principal axis of the rearward field of view of the multiradius element is directed generally at an angle downwards to the longitudinal axis of the automobile.

Note that the provision of the plano-multiradius reflective element assembly of this invention as a unitary module has manufacturing advantages, particularly for exterior sideview mirror assembly manufacturers who can procure a plano-multiradius reflective element assembly module from a mirror reflector supplier and then mount the plano-multiradius reflective element assembly module onto an actuator.

Referring to FIG. 7, a third embodiment 230 of a plano-multiradius reflective element assembly is illustrated. Plano-multiradius reflective element assembly 230 includes a plano reflective element 250 and a separate multiradius reflective element assembly 255, both individually attached to a backing plate element, and with demarcation element 265 disposed

at their joint. Plano-multiradius reflective element assembly 230 is about 8.5 inches wide and about 4.25 inches tall (aspect ratio of 0.5), at their largest dimension. Shown as the shaded triangle 240 in plano reflective element 250 is the image of a triangular target object set about 35 feet rearward and of width about 8 feet and of height of about 4.1 feet as would be seen were plano-multiradius reflective element assembly 230 mounted in a driver-side exterior sideview mirror assembly in an automobile such as a sports utility vehicle. In general, it is desirable that the plano reflective element be dimensioned and configured so as to have its rearward field of view capture an image (that is visible, by reflection in the plano reflective element, to a driver seated in the driver's seat in an automobile to which is attached an exterior sideview mirror assembly equipped with the plano-auxiliary reflective element assembly according to this present invention) of a triangular shaped target located about 35 feet rearward of the driver seating location, extending about 8 feet out from the plane defined by the side of the automobile and reaching a height of between about 4 feet and about 5 feet from the road surface at that location 35 feet rearward of the automobile. The total field of view rearwardly of the vehicle of plano-multiradius reflective element assembly 230 (which is a combination of the field of view of plano reflective element 250 and of the auxiliary multiradius reflective element 255) preferably generally subtends an angle of at least about 30° (and more preferably, generally subtends an angle of at least about 35° and most preferably, generally subtends an angle of at least about 40°) with respect to the side of an automobile to which is attached an exterior sideview mirror assembly equipped with plano-multiradius reflective element assembly 230.

Referring to FIG. 8, another embodiment 310 of the plano-auxiliary reflective element assembly of the present invention is illustrated. Plano-auxiliary reflective element assembly 310 includes a first reflective element 312 and a second or auxiliary, separate reflective element 314 which are together supported in a frame element assembly 316. As will be more fully described below, frame element assembly 316 is adapted such that when reflective elements 312 and 314 are placed, or otherwise positioned, in frame element assembly 316, the angular orientation of each reflective element is pre-established such that during assembly, the assembler need simply place the reflective elements in frame element assembly 316.

In the illustrated embodiment, frame element assembly 316 includes a frame 318 with a forward facing open portion 318a (FIG. 9) (and thus when frame element

assembly 316 is mounted in a vehicle-mounted exterior sideview mirror assembly, the forward facing open portion (318a) is facing to the front of the vehicle) through which a reflective element subassembly 317a, which includes reflective element 312, is positioned in frame element assembly 316 and a rearward facing open portion 318b (FIG. 8) (which faces the rear of the vehicle when frame element assembly 316 is mounted in a vehicle mounted exterior sideview mirror assembly) in which a second reflective element subassembly 317b, which includes reflective element 314, is positioned in frame element assembly 316. Frame 318 preferably comprises a molded member formed from a plastic material, such as a reinforced nylon.

In preferred form, first reflective element 312 comprises a plano reflective element 350, such as a flat reflector coated glass substrate, with a reflective surface through which the angular height and width of an image of an object is equal to the angular height and width of the object when viewed to the same distance (except for flaws that do not exceed normal manufacturing tolerances) so as to have a unit magnification. Similar to the previous embodiment, plano reflective element 350 may comprise a conventional fixed reflectance reflective element or may comprise a variable reflectance reflective element who's reflectivity is electrically adjustable, as is known in the art. For example, plano reflective element 350 may comprise a flat glass substrate coated with metallic reflector coating, such as a chromium coating, titanium coating, rhodium coating, metal alloy coating, nickel alloy coating, silver coating, aluminum coating, or any alloy or composition of these metal reflectors. For further details of plano reflective element 350, reference is made to the previous embodiments.

In the illustrated embodiment, reflective element 312 comprises an electrochromic reflective element and includes a first substrate 312a and a second substrate 312b with an electrochromic medium 312c disposed between first and second substrates 312a, 312b. Such suitable electrochromic media include, for example, a solid polymer matrix electrochromic medium as noted in reference to the previous embodiments. Electrical connectors 320a and 320b are coupled to the electrochromic medium 312c to provide a potential across the electrochromic medium which induces the electrochromic medium to darken, as is known in the art. In the illustrated embodiment, reflective element subassembly 317a also includes an optional heater pad 322, which is disposed behind reflective element 312, and a vibration reducing element, such as a foam pad 326, positioned behind heater pad 322, which absorbs vibration of reflective element 312.

Referring again to FIG. 9, frame 318 is adapted to receive and support reflective element subassembly 317a, which is mounted to frame 318 by a backing plate 324, such as a plastic backing plate. In the illustrated embodiment, backing plate 324 mounts to the inner perimeter portion of frame 318 using conventional techniques, such as by adhesive bonding, heatstaking, snap-fit coupling, welding, or the like, to form part of frame element assembly 316. Alternatively, backing plate 324 may mount onto foam pad 326, for example, by an adhesive attachment, such as double sided sticky tape. In which case, reflective element 312 may be mounted to an inner surface of frame 318, such as by an adhesive attachment, including for example a silicone adhesive, with heater pad 322 mounted to reflective element 312, such as by an adhesive attachment, and foam pad 326 mounted to heater pad 322, such as by an adhesive attachment including, for example, double-sided sticky tape.

Frame element assembly 316 mounts reflective element assembly 310 in the mirror casing and preferably on an actuator, such as an electric actuator, which permits adjustment to the orientation of reflective element assembly 310 about one or more axis. Examples of suitable actuators are described in U.S. Pat. Nos. 5,900,999; 5,986,364; 6,132,052; 6,037,689; and 6,094,027 and copending applications Ser. No. 09/277,632, filed Mar. 26, 1999, and Ser. No. 09/408,867, filed Sept. 29, 1999, which are incorporated herein by reference in their entireties. Optionally and preferably, backing plate 324 is adapted to engage or be engaged by the actuator for repositioning of plano-auxiliary reflective element assembly 310 about one or more axes. In this manner, the orientation of both reflective element 312 and reflective element 314 are simultaneously adjusted by the actuator. As best seen in FIG. 9, forward facing side 324a of backing plate 324 includes mounting structures 324b which are engaged by the actuator to thereby mount reflective element assembly 310 in the mirror casing.

Referring again to FIG. 8, frame 318 is a unitary frame and includes a first bezel portion 330 which extends around reflective element 312 and a second bezel portion 332 which extends around reflective element 314 to provide styling utility as well as functional utility. In this manner, a portion of forward facing side of frame 318 forms a support surface for reflective element 312, while a portion of rearward facing side of frame 318 forms first bezel portion 330. Similarly, another portion of the rearward facing side of frame provides support for reflective element 314 and also provides bezel portion 332. In

addition, a portion of frame 318 forms a demarcation element at the juncture of reflective elements 312 and 314. In the illustrated embodiment, the demarcation element is formed by a section or portion of bezel portion 330, which will be described in greater detail in reference to bezel portion 330. Thus, frame element assembly 316 provides a support function, a positioning function, including an angling function, while also serving to provide styling utility and a demarcation function.

Second reflective element 314 comprises a radiused reflective element and, more preferably, a multiradiused reflective element 355 having a multiradiused curvature. For example, the radii of curvature of reflective element 314 may range from about 4000 mm to about 100 mm and, preferably, range from about 3000 mm to about 150 mm, and, most preferably, range from about 2000 mm to about 200 mm. In addition, reflective element 314 may comprise a fixed reflectance reflective element or may comprise a variable reflectance reflective element who's reflectivity is electrically adjustable. Preferably, reflective elements 312 and 314 include glass substrates, with at least the outer surface of each reflective element comprising glass. However, metalized plastic reflectors may also be used which is especially suitable for reflective element 314. In which case, the reflective element (314) would be especially suitable for molding in or along with frame 318, with the preformed metalized substrate forming reflective element 314 being placed into the mold forming frame 318. For further details of other suitable reflective elements, reference is made to the previous embodiments. In addition to reflective element 314, reflective element subassembly 317b includes a vibration reducing element, such as a foam pad 314a, which is positioned behind reflective element 314. Similar to reflective element 312, foam pad 314a is attached to reflective element 314 by an adhesive attachment, such as a double-sided sticky tape and, similarly, is attached to frame 318 as will be more fully described below.

As noted above, frame 318 includes a first bezel portion 330 and a second bezel portion 332. In addition, frame 318 includes an auxiliary support element 320 that provides a mounting surface or support surface for reflective element subassembly 317b. As best seen in FIGS. 9 and 10, support element 320 includes a recessed support surface 328 which is angled to provide an angled support surface for reflective element subassembly 317b. Thus, when reflective subassembly 317b is positioned on and mounted on support surface 328, such as by an adhesive attachment between foam pad 314a and support surface 328, the orientation of reflective element 314 is established by the angle of the support

surface. Optionally, support element 320 includes gussets 321a and 321b which project forwardly from the forward facing side of frame 318 to thereby reinforce support surface 328.

Referring to FIG. 8, first bezel portion 330 includes an upper portion 330a, two side portions 330b and 330c, and a lower portion 330d. Side portion 330b forms an acute angle with respect to the lower portion 330d and an obtuse angle with respect to upper portion 330a and together with upper portion 330a, side portion 330c, and lower portion 330d form a perimeter around reflective element 312 to thereby form a styling feature. Second bezel portion 332 extends outwardly from upper portion 330a and downwardly to lower portion 330d of first perimeter portion 330 and together with side portion 330b forms a perimeter around second reflective element 314. Support element 320 extends behind and between side portion 330b and second bezel portion 332 so that reflective element 314 is recessed behind side portion 330b and bezel portion 332.

As best seen in FIG. 10, upper portion 330a, side portions 330b and 330a, and lower portion 330d are substantially coplanar and together define an outer surface below which reflective element 312 is recessed when reflective element 312 is mounted in frame 318. In contrast, perimeter portion 332 is angled forwardly with respect to the plane in which upper portion 330a, side portions 330b and 330c, and lower portion 330d lie. It should be understood that the terms "forwardly", "rearwardly" and "downwardly", are used in reference to when the mirror system is mounted in an automobile. Therefore, "forwardly" is a direction heading toward the front of the automobile, "rearwardly" is a direction heading to the rear of the automobile, "outwardly" is a direction away from the side of the vehicle on which the mirror assembly is mounted, and "downwardly" is a direction heading toward the surface on which the vehicle is positioned (such as a ground or road surface). Similarly as noted above, reflective element 314 is recessed below an outer surface of perimeter portion 332 and also below the outer surface of side portion 330b when mounted in frame 318.

As would be understood from FIGS. 9-11, support surface 328 is also angled forwardly with respect to back plate 324 and/or reflective element 312 when frame element assembly 316 is mounted in an automobile mounted exterior sideview mirror system. In addition, support surface 328 is also angled or tilted downwardly with respect to reflective element 312 and/or backing plate 324 such that when reflective element 314 is supported on support surface 328, reflective element 314 provides an increased field of view extending

laterally or outwardly from the longitudinal axis of the automobile and also downwardly of the longitudinal axis of the automobile.

Referring to FIGS. 13 and 14, support surface 328 is configured such that reflective element 314 is tilted forwardly at an angle α with respect to the X-axis of reflective element 312. In one form, angle α is in a range of about 0.75° to about 5°. In another form, angle α is in a range of about 1° to about 3°. In yet another form, angle α is in a range of about 1.25° to about 2.5°. Reflective element 314 is also tilted downwardly with respect to the Y-axis of reflective element 312 at an angle β. In one form, angle β is in a range of about 0.75° to about 5°. In another form, angle β is in a range of about 1.5° to about 3.5°. In yet another form, angle β is in a range of about 2° to about 3°. With the tilted orientation of reflective element 314, reflective element 314 provides a field of view with a principal axis that sweeps outwardly and downwardly with respect to the principal axis of the field of view of reflective element 312.

In the illustrated embodiment, support surface 328 is provided by a plate member 321. Plate member 321 may comprise a solid plate member or a foraminous plate member. In the illustrated embodiment, plate member 321 is integrally formed with perimeter portions 330 and 332 during the molding process of frame 318. As previously noted, frame 318 includes a rearwardly facing opening 318b through which reflective element 314 is inserted for placement on support surface 328. For example, reflective element 314 may be positioned in frame 318 on support surface 328 during the molding process of frame 318, such as by insert molding, or may be inserted into frame 318 before the plastic material forming frame 318 is fully cured and is still pliable. In which case, reflective element subassembly 317b is mounted to auxiliary support 320 by an adhesive attachment or a mechanical attachment. Alternatively, support surface 328 may be formed by peripheral flange or a frame. In this manner, reflective element subassembly 317b may be placed in frame 318 from its forward facing side.

Referring to FIG. 14, when reflective element assembly 310 is mounted in a vehicle reflective element 312 has a field of view 360 which forms an angle A with respect to the longitudinal center line of the vehicle in a range of about 8° to about 20°. In another form, angle A is in a range of about 10° to about 18°. In yet another form, angle A is in a range of about 12° to about 16°. Similarly, reflective element 314 has a field of view 362

which forms an angle C in range of about 15° to about 50°. In another form, angle C is in a range of about 15° to about 35°. In yet another form, angle C is in a range of about 15° to about 25°. Consequently, the overall field of view of reflective elements 312 and 314 extends over an angle B, which ranges from about 8° to about 50° in one form, about 10° to about 35° in another form, and about 12° to about 25° in yet another form. Furthermore, field of views 360 and 362 overlap over a range having angle D in a range of about 20° to about 2°, or in a range of about 15° to about 5°. In another form, angle D is in a range of about 10° to about 8°.

From the foregoing, it can be appreciated that reflective elements 312 and 314 provide a wider field of view than a wholly planar rearview mirror element that fully accommodates an equivalent frame having similar dimensions. In addition, because reflective elements 312 and 314 have overlapping field of views, an image in the field of view of reflective element 314 will transition or move between the reflective elements and appear in both reflective elements during the transition to thereby enable the driver of the automobile to view or be conscious of the object continuously. In the illustrated embodiment, reflective element 314 is positioned in an outboard position relative to reflective element 312; therefore, when a vehicle or object that is approaching the automobile from the rear and to some extent from the side, the image of the approaching object will first appear in reflective element 312, then appear in both reflective elements 314 and 312, and then move to reflective element 314 so that the driver will be initially aware of the approaching object when its image first appears in reflective element 312 and continue to be aware of the object as it moves closer to the automobile, thus increasing the range of viewing of the driver. Since the image transitions smoothly from reflective element 312 to reflective element 314, the driver's awareness of the object is continuous and, further, the driver is not distracted from sudden transitions that often occur with conventional spotter mirrors. Typically, when an object "falls" or "drops" out, a driver's consciousness of the object reduces significantly, if not ceases, which is one of the causes of many automobile blind spot accidents. Hence, when combined with the field of view of an interior rearview mirror system, the present invention reduces, if not eliminates, an automobile's blind spot. For further discussion of blind spots in vehicle rearview mirror systems, reference is made to copending U.S. provisional application entitled VEHICULAR REARVIEW MIRROR SYSTEM, filed November 20, 2000 by Robert E. Schnell, David K. Willmore, and Richard J. Weber (Attorney Docket DON01 P-840), which is herein

incorporated by reference in its entirety. Thus, the plano-auxiliary reflective element assembly provides a seamless rearvision function whereby the image of a side approaching/side overtaking other vehicle is substantially seamlessly maintained as the image of the overtaking or approaching vehicle transitions from being principally and substantially viewed by the driver of the vehicle (the vehicle mounted with the mirror system of the present invention) in the plano reflective element to be seen in the auxiliary reflective element.

Referring to FIG. 15, the numeral 410 generally designates yet another embodiment of an automobile exterior sideview mirror system of the present invention. Exterior sideview mirror system 410 includes a housing 412, a first reflective element 414, and a second or auxiliary, separate reflective element 416, which together provide an increase field of view over conventional planar reflectors mounted in a frame of equivalent dimensions to the combined lateral dimensions of reflective element 414 and 416.

Housing 412 includes a mirror casing 417 and a sail 418, which mounts casing 412 to a side of an automobile. Though illustrated as a fixed mounting arrangement, it should be understood that mirror system 410, like the previous embodiments, may comprise a break-away mirror system or a powerfold mirror system.

In the illustrated embodiment, reflective element 414 comprises a plano reflective element having a unit magnification, similar to the plano reflective elements described in reference to the previous embodiments. Reflective element 416 preferably comprises a wide-angle reflector, such as a convex or aspheric reflector, and may include a multiradiused curvature. For further description of suitable reflectors, reference is made to the previous embodiment.

In the illustrated embodiment, reflective element 416 is mounted in an outboard position relative to reflective element 414 and is fixedly mounted to bezel 420 of mirror casing 417. In addition, reflective element 416 is preferably angled downwardly and forwardly relative to first reflective element 414 when mirror system 410 is mounted to an automobile to thereby increase the field of view of mirror system 410. Optionally and preferably, reflective element 416 is detachably mounted to bezel 420, such as by mechanical fasteners, including clips, so that reflective element 416 can be removed, such as for replacement.

Reflective element 414 preferably comprises an independently positionable reflective element and is mounted by a backing member, such as a backing plate, to an

actuator, which provides multi-axis positioning of reflective element 414. In this manner, reflective element 414 and reflective element 416 are separately and independently mounted in housing 412. In addition, reflective element 414 optionally extends behind reflective element 416 in order to maintain the overlap of the field of views of reflective elements 414 and 416 even when reflective element 414 is moved by the actuator. Similar to the previous embodiment, when an object moves toward the automobile, in which mirror system 410 is mounted, from the rear of the automobile or laterally with respect to the automobile, the image of the object will appear initially in reflective element 414. As the object moves closer to the automobile, the image of the object will move from reflective element 414 to reflective element 416 such that when the image transitions between reflective element 414 and reflective element 416, the image will appear in both reflective elements.

Also, although it is preferable to utilize a multiradius or compound curvature reflective element, such as an aspherical element or a compound curvature element, for the second or auxiliary mirror element adjacent the plano or first reflective element (as this enables least discontinuity in image at the joint between the adjacent elements of the assembly), a spherical reflective element (that has substantially only one radius of curvature and, as such, is a section from a sphere) can optionally be used adjacent the plano reflective element instead of, or in addition to, the multiradius reflective element. Also, a plano auxiliary mirror such as a flat mirrored substrate can be used, less preferably, as a substitute for a multiradius reflective element in those embodiments where the auxiliary reflective element is angled relative to the plane of the principal, plano reflective element so as to view a blind spot region of the principal plano element. Also, the plano-multiradius reflective element assembly can optionally be fixedly attached to an exterior sideview mirror assembly housing that is not movable, or, alternately, the exterior sideview mirror assembly housing to which the plano-multiradius reflective element assembly is fixedly attached can itself be actuated to move, such as by motor action, so that by moving the exterior sideview mirror assembly housing, the field of rearward view of the plano-multiradius reflective element assembly fixedly attached thereto can correspondingly move and be repositioned to suit the field of view need of a particular driver seated in the automobile cabin.

The above description is considered that of the preferred embodiments only. Modification of the invention will occur to those skilled in the art and to those who make or use the invention. Therefore, it is understood that the embodiments shown in the drawings

and described above are merely for illustrative purposes and are not intended to limit the scope of the invention, which is defined in the following claims as interpreted according to the principles of patent law, including the doctrine of equivalents.

We claim:

1. An exterior sideview mirror system suitable for use in an automobile, said exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly having a rearward field of view when attached to said side of the automobile;

wherein said reflective element assembly comprises a plano reflective element having unit magnification and a separate multiradius reflective element having a multiradius curvature; and

said reflective element assembly further including a frame element assembly, said plano reflective element and said multiradius reflective element of said plano-multiradius reflective element assembly being mounted to said frame element assembly, said frame element assembly mounting to an actuator and movable by said actuator in order to position said rearward field of view, and said frame element assembly being adapted to orient said multiradius reflective element such that said multiradius reflective element has a viewing range which fans outwardly and downwardly with respect to a viewing range of said plano reflective element to thereby provide an increased field of view for said exterior sideview mirror assembly.

2. The exterior sideview mirror system of Claim 1, wherein said plano reflective element and said multiradius reflective element are adjacently attached to said frame element assembly at a joint, and wherein said reflective element assembly includes a demarcation element, said demarcation element disposed at said joint to form a demarcation between said plano reflective element and said multiradius reflective element, said demarcation element having a portion visible to a driver of the automobile.

3. The exterior sideview mirror system of Claim 2, wherein said demarcation element is dark colored.

4. The exterior sideview mirror system of Claim 3, wherein said frame element assembly includes a first bezel portion extending around said plano reflective element, said demarcation element comprising a segment of said first bezel portion.

5. The exterior sideview mirror system of Claim 4, wherein said multiradiused reflective element comprises a bent glass substrate with radii of curvature in the range of about 4000 mm to about 100 mm.

6. The exterior sideview mirror system of Claim 1, wherein said frame element assembly includes a frame, said first and second reflective elements being mounted in said frame.

7. The exterior sideview mirror system of Claim 6, wherein said multiradiused reflective element is mounted to said frame at an outboard position, and said plano reflective element is positioned adjacent said multiradiused reflective element and at an inboard position with respect to said multiradiused reflective element when said exterior sideview mirror assembly is mounted to an automobile.

8. The exterior sideview mirror system of Claim 7, wherein said plano reflective element is mounted to said frame by a backing plate.

9. The exterior sideview mirror system of Claim 8, wherein said backing plate is adapted to mount to said actuator.

10. The exterior sideview mirror system of Claim 9, wherein said actuator comprises an electrical actuator.

11. The exterior sideview mirror system of Claim 6, wherein said plano reflective element and said multiradiused reflective element are adjacently attached to said frame, said frame including a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said plano reflective element, and said second perimeter portion extending around said multiradiused reflective element.

12. The exterior sideview mirror system of Claim 11, wherein a side portion of said first perimeter portion of said frame provides a demarcation between said plano reflective element and said multiradiused reflective element.

13. The exterior sideview mirror system of Claim 11, wherein said second perimeter portion is angled downwardly and forwardly with respect to said first perimeter portion when said mirror assembly is mounted to an automobile.

14. The exterior sideview mirror system of Claim 6, wherein said multiradiused reflective element is attached to said frame by at least one of an adhesive attachment and a mechanical attachment.

15. The exterior sideview mirror system of Claim 6, wherein said backing plate is attached to one side of said first reflective element and said frame by one of an adhesive attachment, a welded attachment, and a mechanical attachment.

16. The exterior sideview mirror system of Claim 15, wherein an opposed side of said frame forms a bezel around said plano reflective element.

17. The exterior sideview mirror system of Claim 1, wherein said plano reflective element includes a rearward field of view having a principal axis different from and angled to a principal axis of the rearward field of view of said multiradiused reflective element when mounted in said exterior sideview mirror assembly.

18. The exterior sideview mirror system of Claim 17, wherein said principal axis of the rearward field of view of said multiradiused reflective element is directed generally outwardly and downwardly with respect to a longitudinal axis of the automobile.

19. The exterior sideview mirror system of Claim 18, wherein said principal axis of the rearward field of said multiradiused reflective element forms a downward angle with respect to the longitudinal axis of the automobile in the range from about .75° to about 5°.

20. The exterior sideview mirror system of Claim 19, wherein said downward angle is in a range from about 1.5° to about 3.5°.

21. The exterior sideview mirror system of Claim 20, wherein said downward angle is in a range of about 2° to about 3°.

22. The exterior sideview mirror system of Claim 18, wherein said principal axis of said multiradiused reflective element forms an outward angle with respect to the longitudinal axis of the automobile in a range of about 0.75° to about 5°.

23. The exterior sideview mirror system of Claim 22, wherein said outward angle is in a range of about 1° to about 3°.

24. The exterior sideview mirror system of Claim 23, wherein said outward angle is in a range of about 1.25° to about 2.5°.

25. The exterior sideview mirror system of Claim 1, wherein said exterior sideview mirror assembly comprises a fixedly attached exterior sideview mirror assembly.

26. The exterior sideview mirror system of Claim 1, wherein said exterior sideview mirror assembly comprises a break-away exterior sideview mirror assembly.

27. The exterior sideview mirror system of Claim 1, wherein said exterior sideview mirror assembly comprises a powerfold exterior sideview mirror assembly.

28. The exterior sideview mirror system of Claim 1, wherein at least one of said plano reflective element and said multiradiused reflective element comprises a variable reflectance reflective element.

29. The exterior sideview mirror system of Claim 28, wherein each of said plano reflective element and said multiradiused reflective element comprises a variable reflectance reflective element.

30. The exterior sideview mirror system of Claim 1, wherein said plano reflective element comprises an electrochromic reflective element.

31. An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a mirror casing, a reflective element assembly, and an actuator; and

said reflective element assembly including a frame element assembly, a first reflective element having unit magnification, and a second reflective element having a multiradiused curvature, said frame element assembly mounting said first reflective element and said second reflective element in said mirror casing and being adapted to mount to said actuator, said actuator adjusting the orientation of said reflective element assembly, said first reflective element having a first rearward field of view with a first principal axis, said second reflective element having a second rearward field of view with a second principal axis, and said frame element assembly angling said second principal axis outwardly and downwardly with respect to said first principal axis.

32. The exterior sideview mirror system of Claim 31, wherein said second principal axis is angled outwardly from said first principal axis at an angle in a range of about 0.75° to about 5°.

33. The exterior sideview mirror system of Claim 32, wherein said second principal axis is angled outwardly from said first principal axis at an angle in a range of about 1° to about 3°.

34. The exterior sideview mirror system of Claim 33, wherein said second principal axis is angled outwardly from said first principal axis at an angle in a range of about 1.25° to about 2.5°.

35. The exterior sideview mirror system of Claim 31, wherein said second principal axis is angled downwardly from said first principal axis at an angle in a range of approximately 0.75° to about 5°.

36. The exterior sideview mirror system of Claim 35, wherein said second principal axis is angled downwardly from said first principal axis at an angle in a range of about 1.5° to about 3.5°.

37. The exterior sideview mirror system of Claim 36, wherein said second principal axis is angled downwardly from said first principal axis at an angle in a range of about 2° to about 3°.

38. The exterior sideview mirror system of Claim 31, wherein said second principal axis is directed generally outwardly and downwardly with respect to a longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

39. The exterior sideview mirror system of Claim 31, wherein said frame element assembly includes a support surface for said second reflective element, said support surface angling said second principal axis of said second reflective element.

40. The exterior sideview mirror system of Claim 31, wherein said second reflective element is outboard of said first reflective element.

41. The exterior sideview mirror system of Claim 31, wherein frame element assembly includes a first open portion and a second open portion, said first open portion receiving said first reflective element, and said second open portion receiving said second reflective element.

42. The exterior sideview mirror system of Claim 41, wherein said second open portion comprises a rearwardly facing open portion when said mirror assembly is mounted to the automobile.

43. The exterior sideview mirror system of Claim 42, wherein said first open portion comprises a forwardly facing open portion when said mirror assembly is mounted to the automobile.

44. The exterior sideview mirror system of Claim 31, wherein at least one of said reflective elements comprises a variable reflectance reflective element.

45. The exterior sideview mirror system of Claim 31, wherein at least one of said first reflective element and said second reflective element comprises an electro-optic reflective element.

46. An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile; and

said exterior sideview mirror assembly including an actuator and a reflective element assembly, said reflective element assembly having a frame element assembly, a first reflective element, and a second reflective element, said first reflective element comprising a plano reflective element, said second reflective element comprising a multiradiused reflective element having a multiradiused curvature, said frame element assembly being adapted to mount to said actuator and including a frame and a support surface for said second reflective element, said actuator adjusting an orientation of said reflective element assembly, said support surface orienting said second reflective element downwardly and forwardly of said first reflective element when said mirror assembly is mounted to an automobile whereby said second reflective element provides a viewing range which spans outwardly and downwardly with respect to the automobile to thereby provide an increased field of view for said exterior sideview mirror assembly.

47. The exterior sideview mirror system of Claim 46, wherein said frame forms a bezel portion around said first reflective element.

48. The exterior sideview mirror system of Claim 47, wherein said frame forms a bezel portion around said second reflective element.

49. The exterior sideview mirror system of Claim 46, wherein a portion of said frame forms a demarcation between said first and second reflective elements.

50. The exterior sideview mirror system of Claim 46, wherein said support surface comprises a plate element.

51. The exterior sideview mirror system of Claim 50, wherein said plate element comprises a solid plate element.

52. The exterior sideview mirror system of Claim 50, wherein said plate element comprises a foraminous plate element.

53. The exterior sideview mirror system of Claim 46, wherein said support surface comprises a frame.

54. The exterior sideview mirror system of Claim 46, wherein said frame includes a first bezel portion and a second bezel portion, said first bezel portion extending around said first reflective element, and said second bezel portion extending around said second reflective element.

55. The exterior sideview mirror system of Claim 54, wherein said second bezel portion is angled forwardly with respect to said first bezel portion when said exterior sideview mirror assembly is mounted to a side of an automobile.

56. The exterior sideview mirror system of Claim 46, wherein said first reflective has a substantially unit magnification.

57. The exterior sideview mirror system of Claim 46, wherein said frame includes a forward facing open portion and a rearward facing open portion when said mirror assembly is mounted to an automobile, said first forward facing open portion receiving said first reflective element, and said rearward facing open portion receiving said second reflective element.

58. The exterior sideview mirror system of Claim 57, wherein a rearward facing side of said forward facing open portion defining a bezel around said first reflective element.

59. The exterior sideview mirror system of Claim 58, wherein said frame includes a bezel around said second reflective element at said rearward facing open portion.

EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY

ABSTRACT

This invention provides a reflective element assembly suitable for use in an exterior sideview mirror assembly mounted to the side body of an automobile. The reflective element assembly includes a first reflective element and a second reflective element. The second reflective element is angled downwardly and forwardly with respect to the first reflective element when the mirror assembly is mounted to a side of an automobile to provide an increased field of view. In one form, both reflective elements are commonly supported on a bezel, which is mounted to the mirror assembly casing. In another form, the reflective elements are separately mounted, with the second reflective element fixedly mounted to the casing and the first reflective element movably supported in the mirror casing, for example, on an actuator.

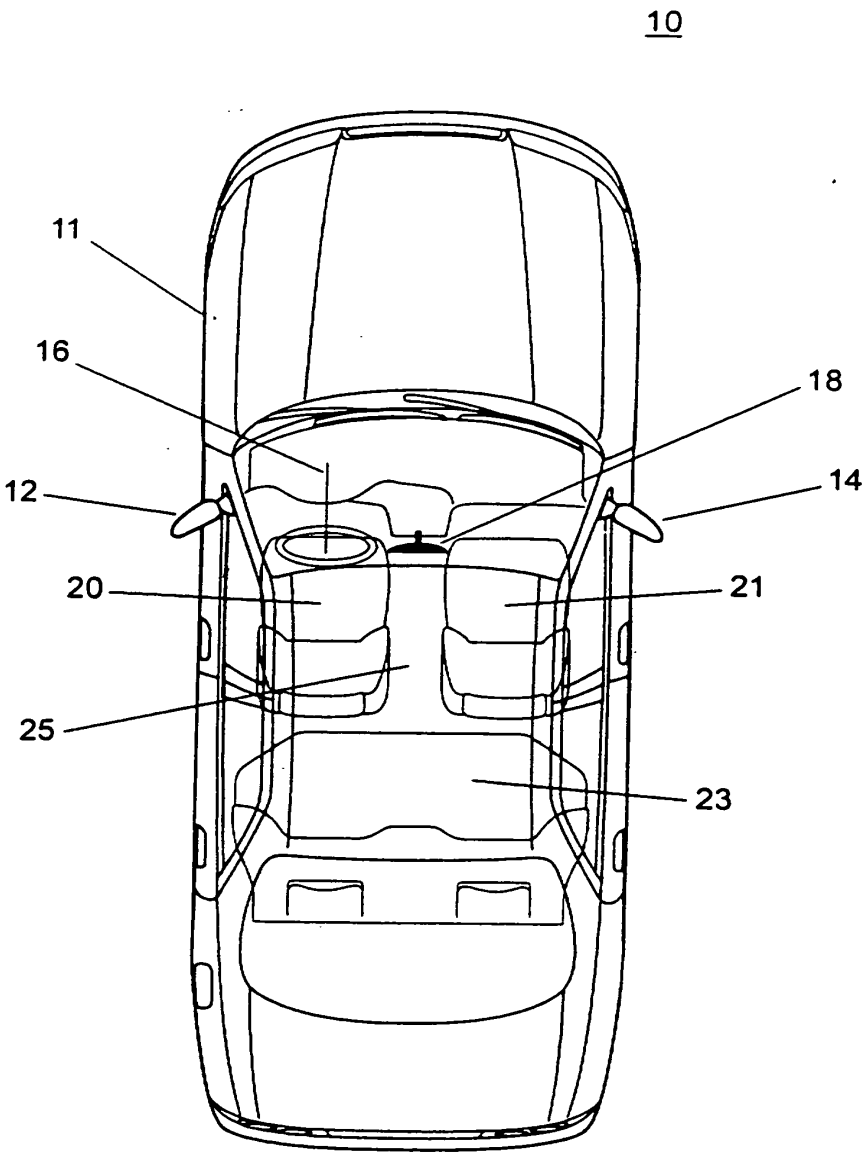


Figure 1

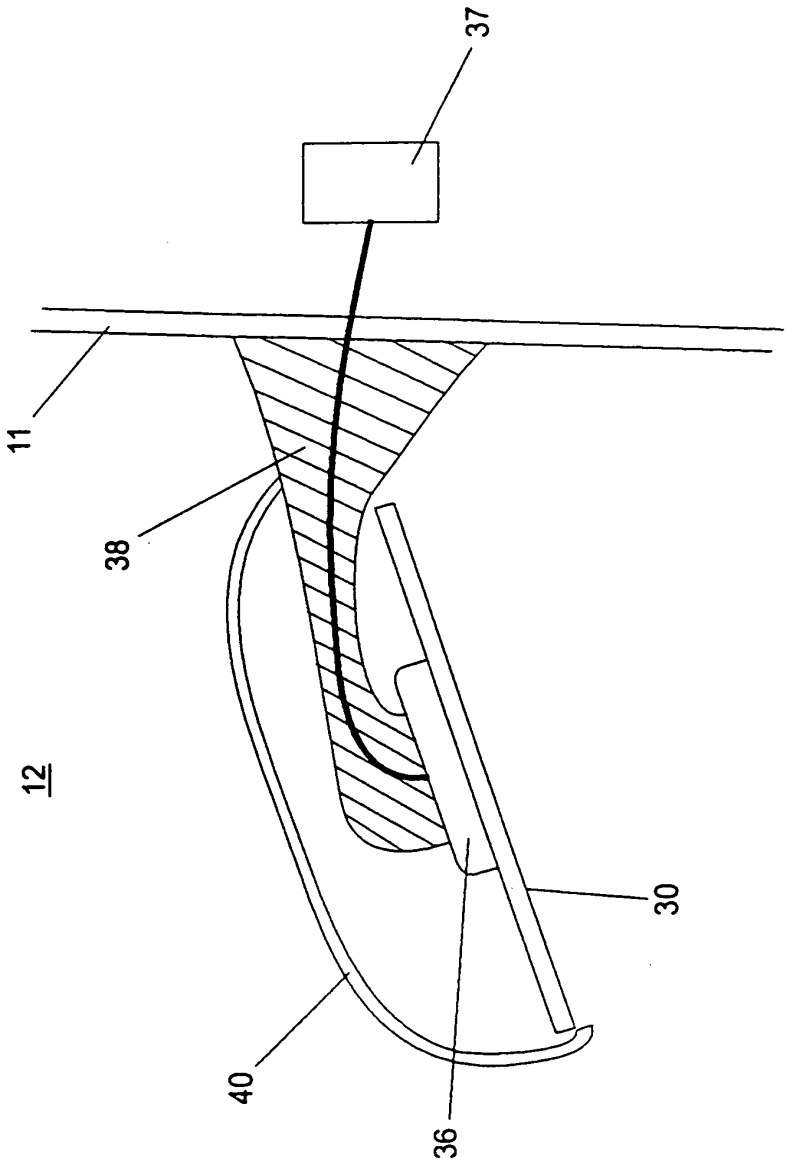


Figure 2

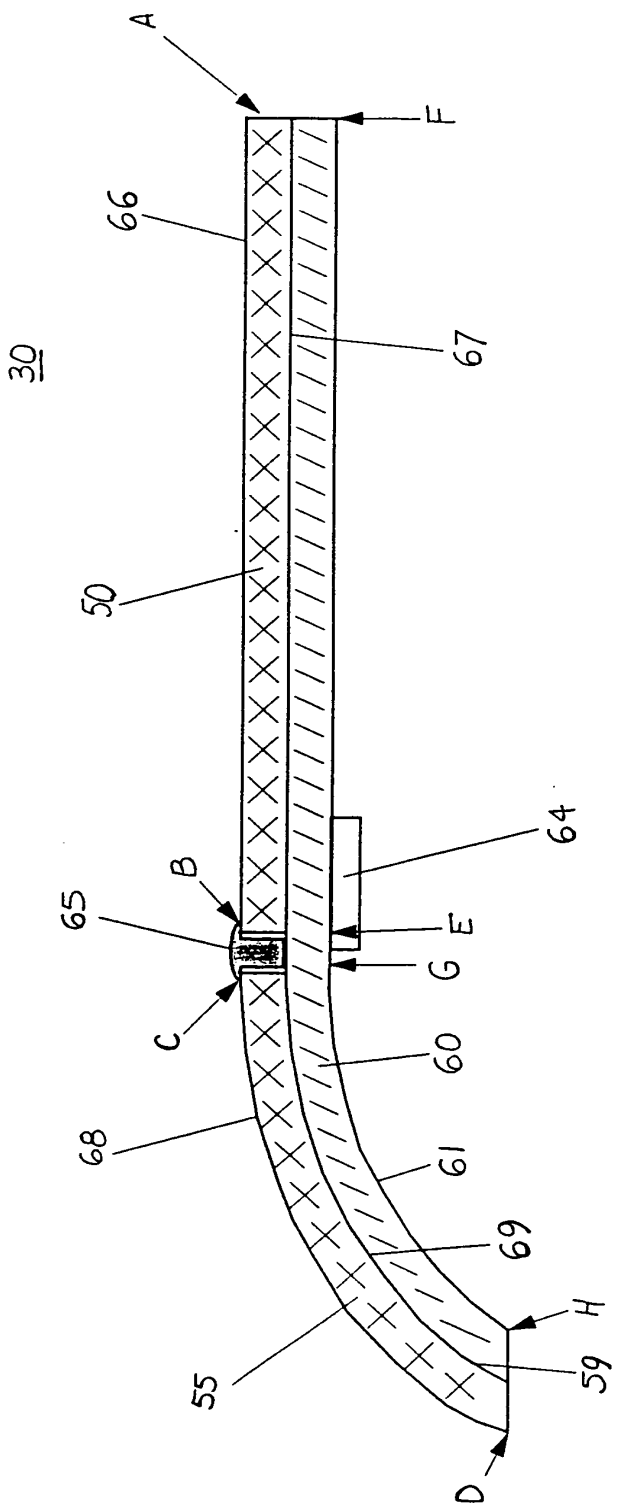


Figure 3

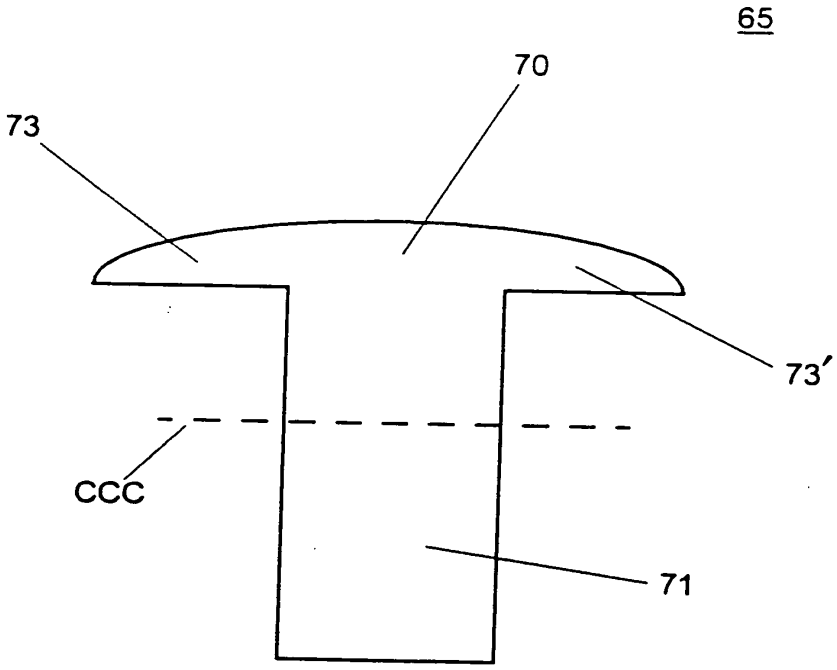


Figure 4

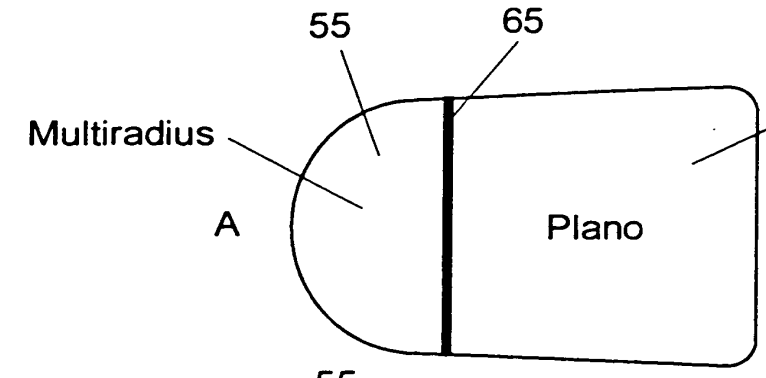


Figure 5A

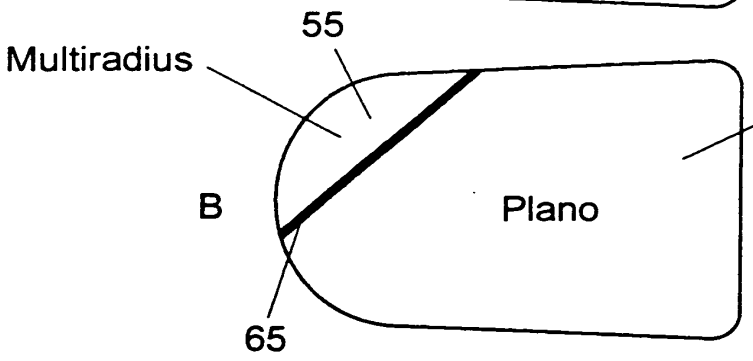


Figure 5B

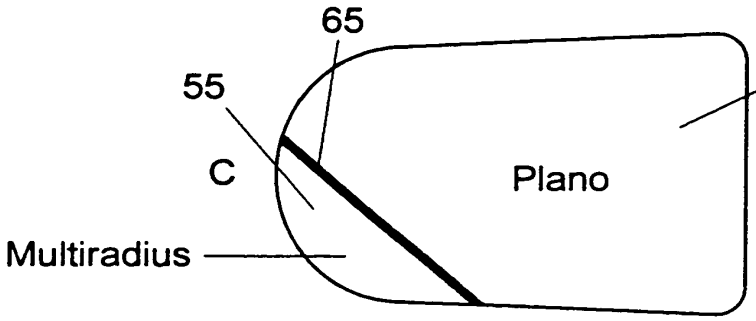


Figure 5C

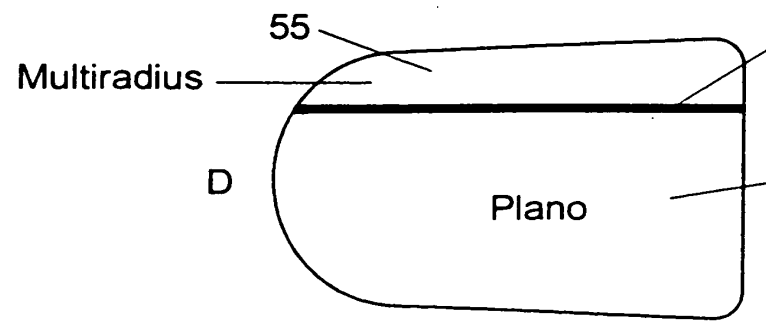


Figure 5D

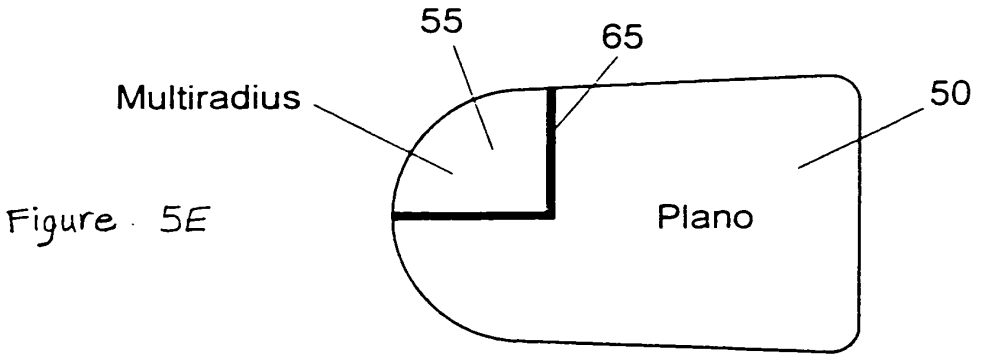


Figure 5E

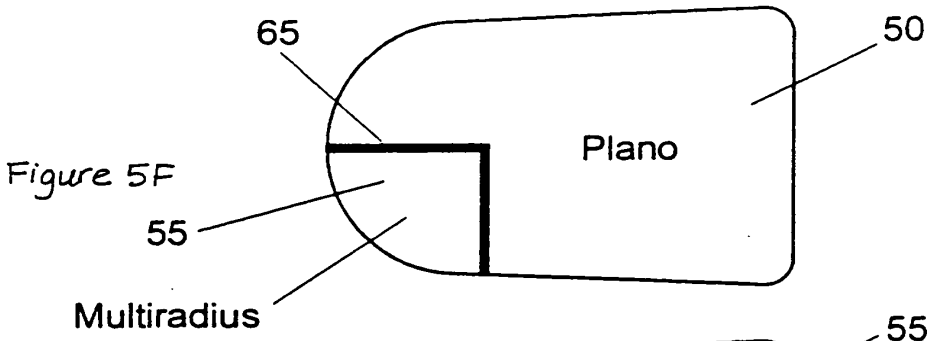


Figure 5F

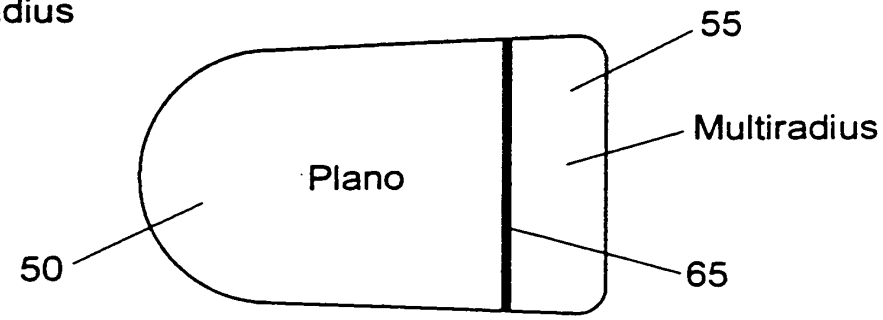


Figure 5G

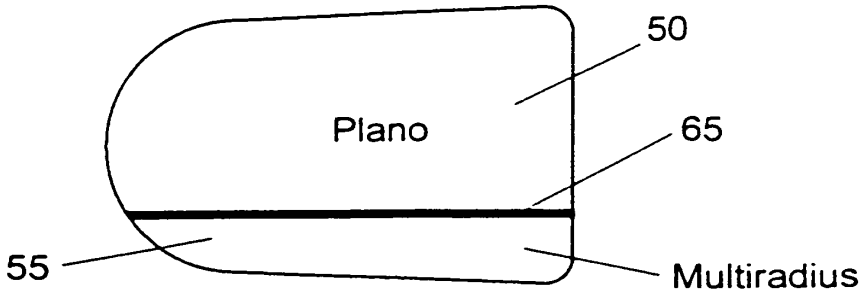


Figure 5H

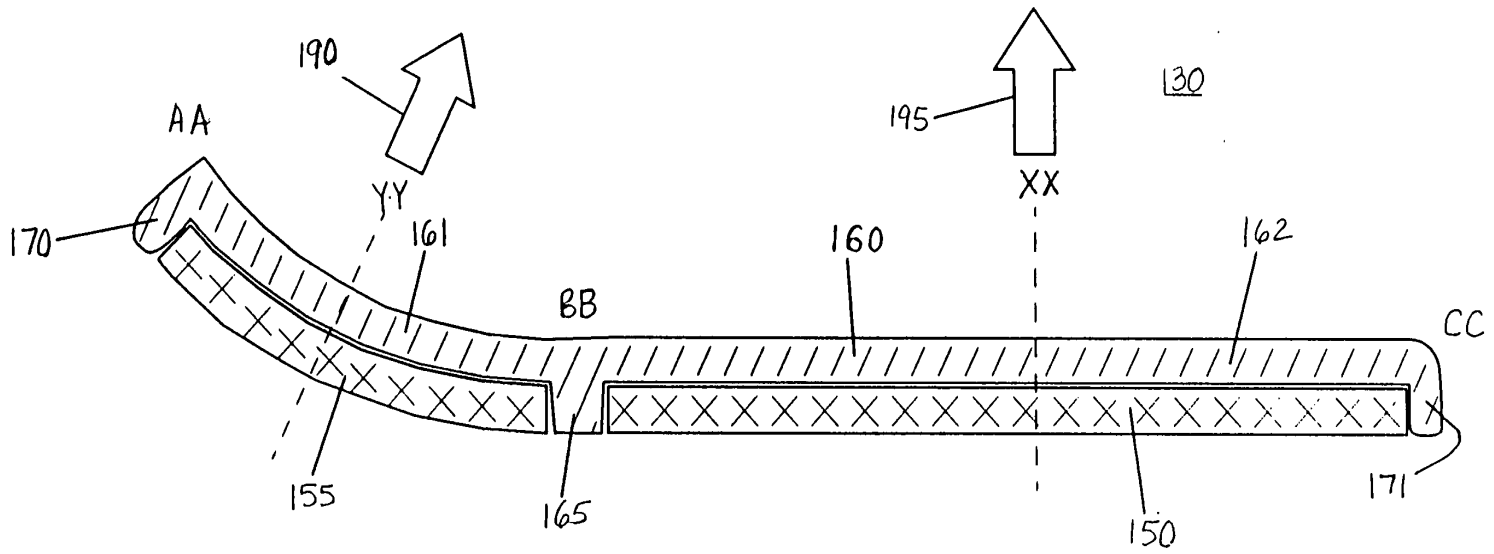


Figure 6

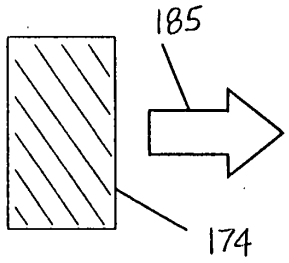


Figure 6A

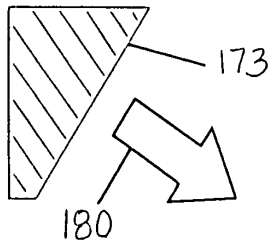


Figure 6B

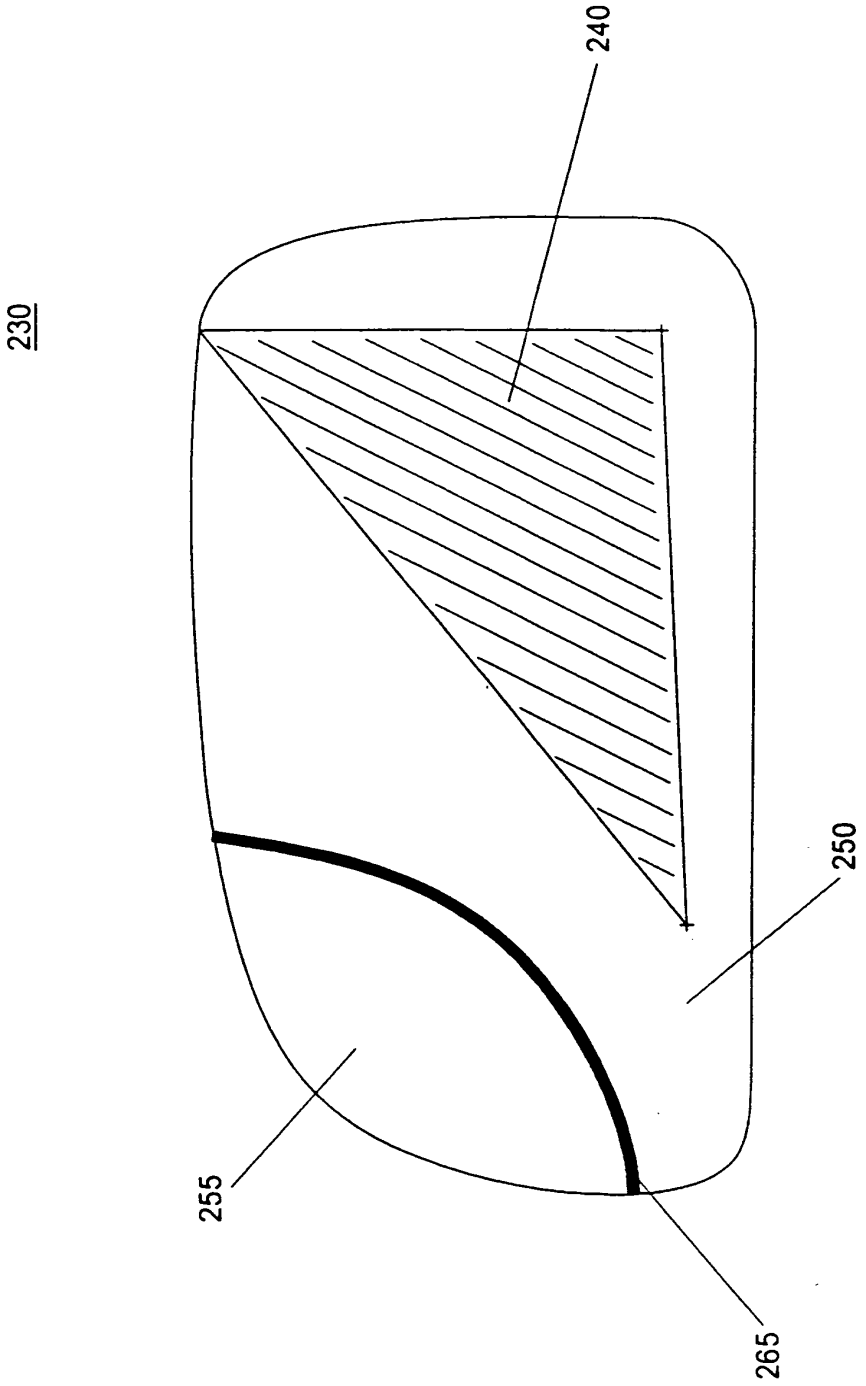


Figure 7

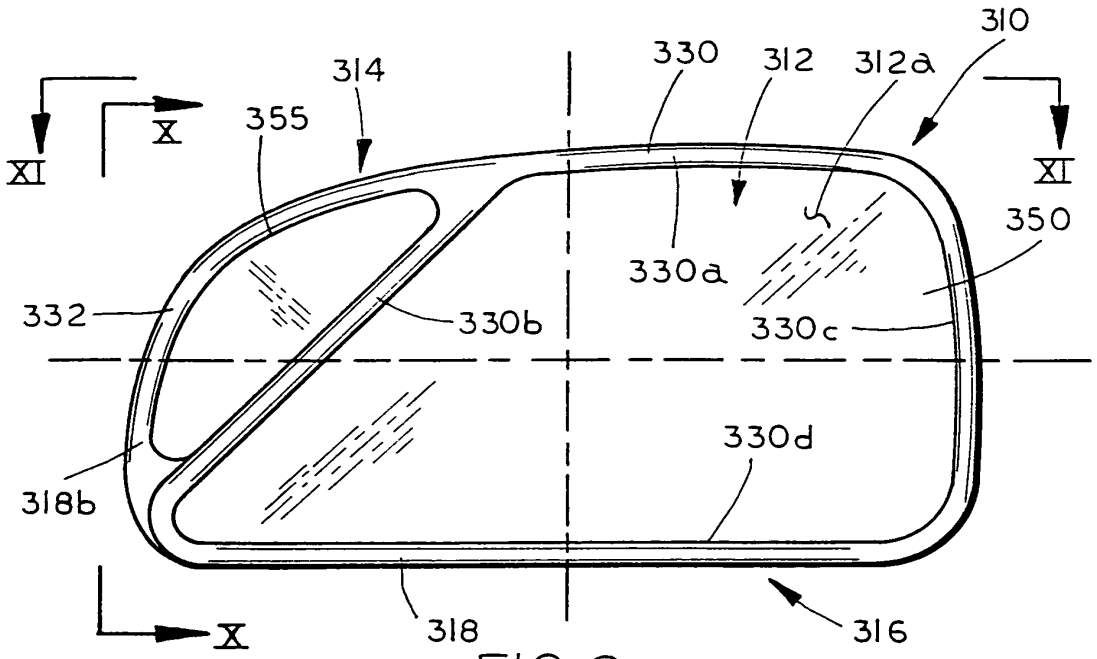

310
314
330
312
312a
355
X
XI
XI
350
330a
332
330b
330c
330d
318b
318
316
X

FIG.8

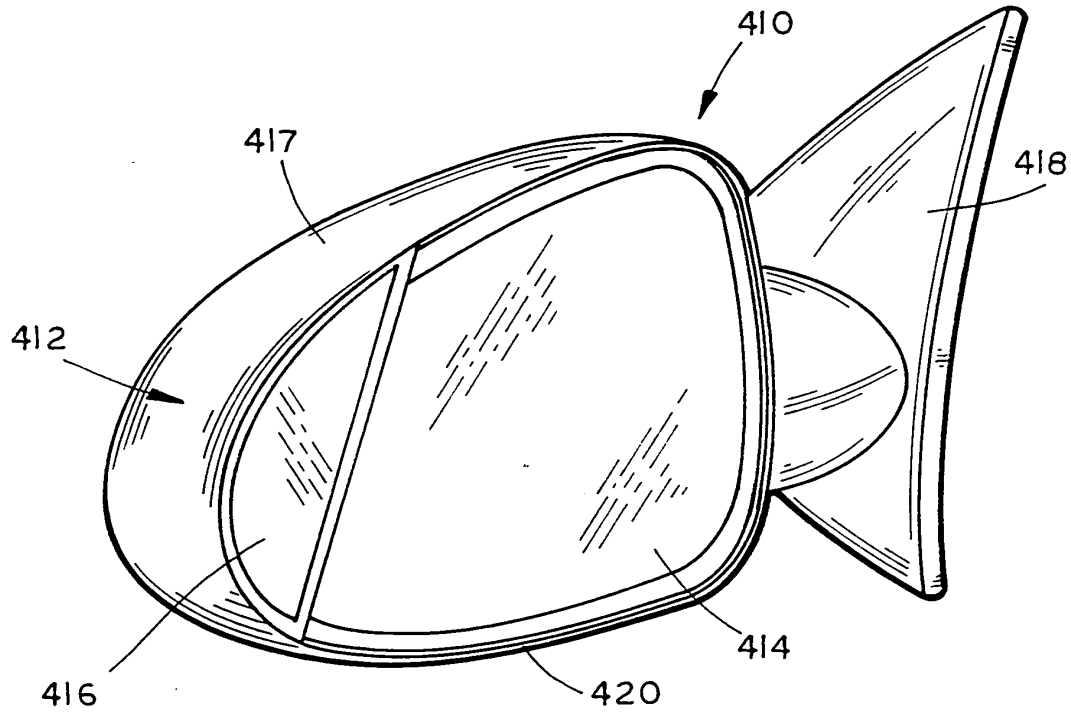

410
417
418
412
414
416
420

FIG.15

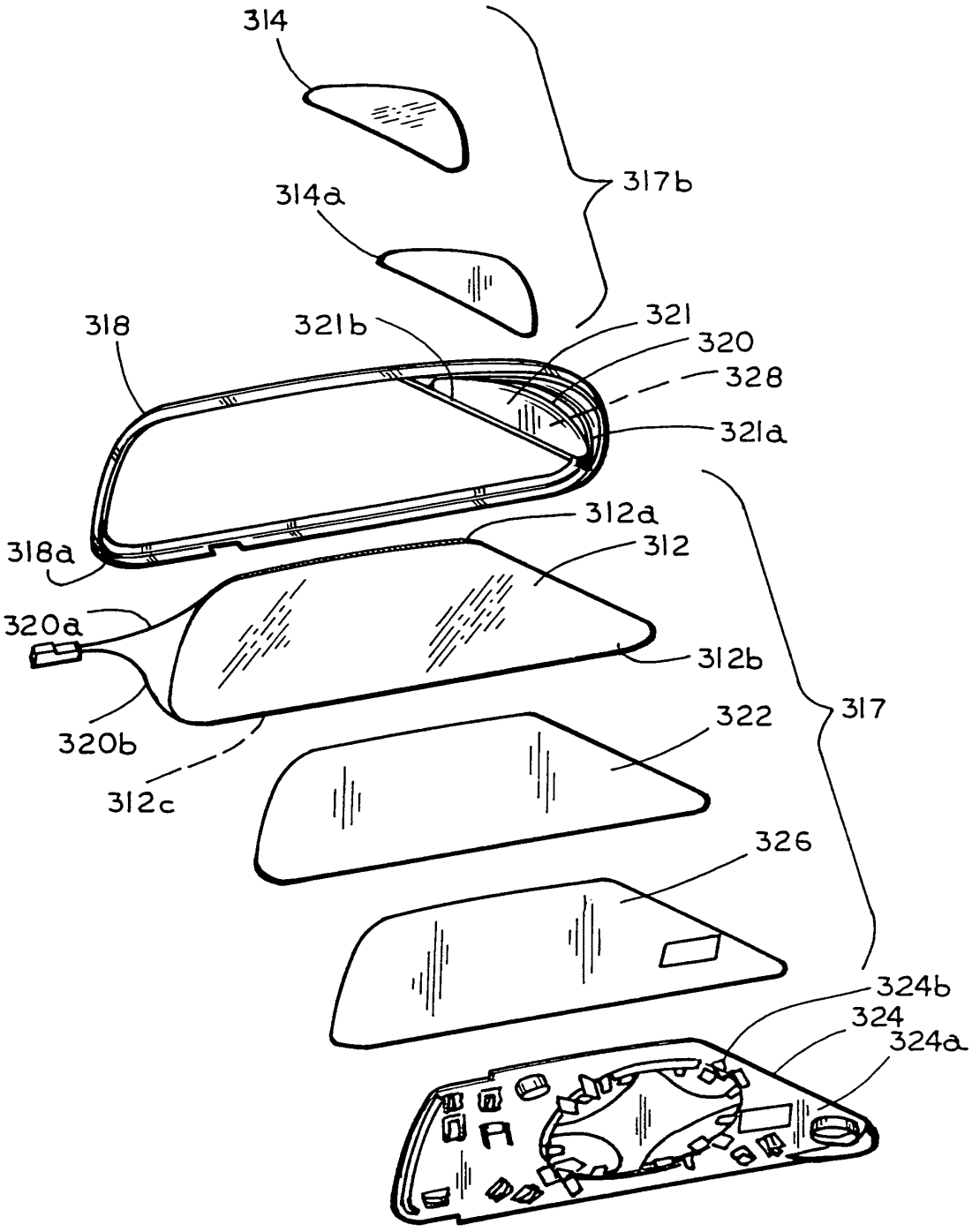

314
317b
314a
318
321b
321
320
328
321a
312a
318a
312
320a
312b
317
320b
322
312c
326
324b
324
324a

FIG.9

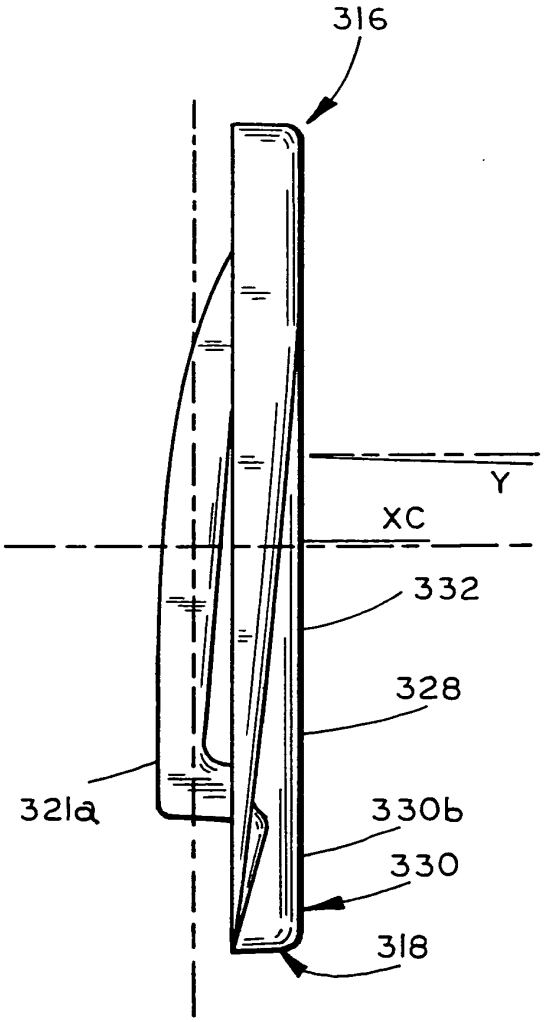

316
Y
XC
332
328
321a
330b
330
318

FIG.10

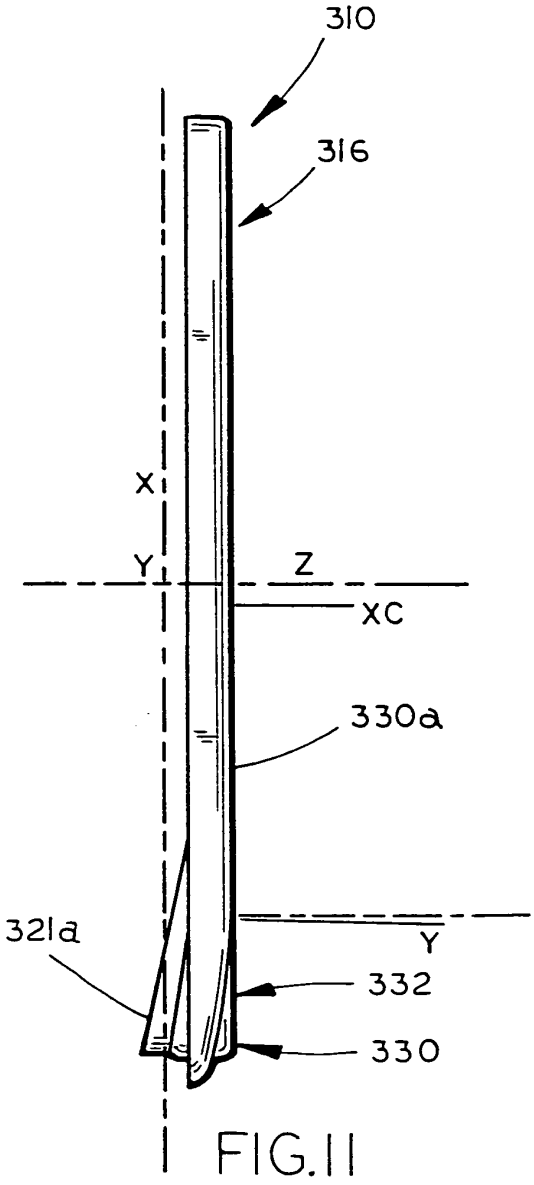

310
316
X
Y
Z
XC
330a
321a
Y
332
330

FIG.11

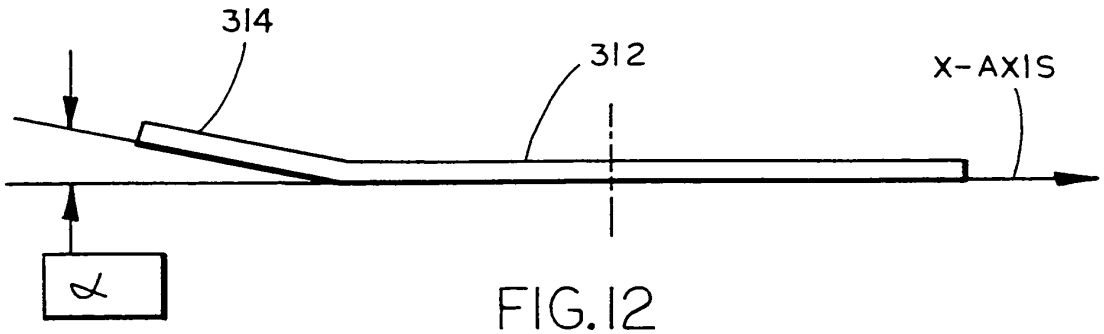


FIG. 12

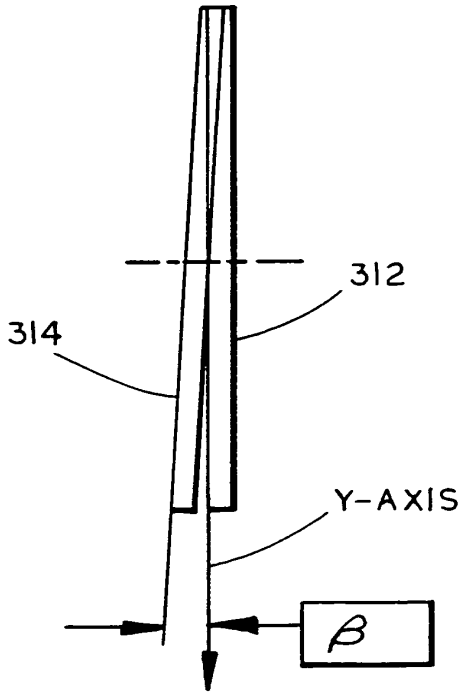


FIG. 13

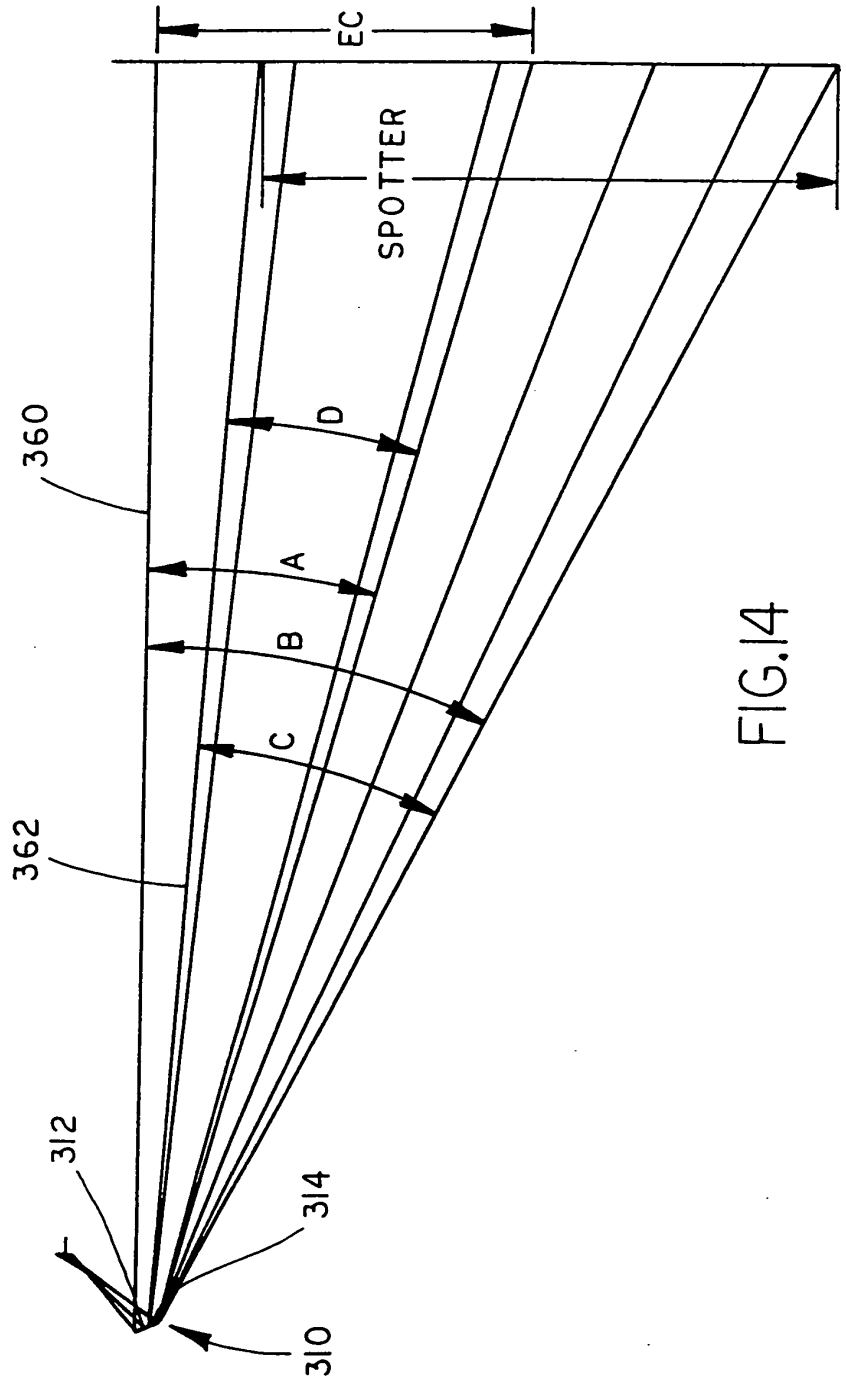


FIG.14

DON01 P-842

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor, if only one name is listed below, or an original, first and joint inventor, if plural names are listed below, of the subject matter which is claimed and for which a patent is sought on the invention entitled EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY, the specification of which was filed on December 20, 2000, Serial No. 09/745,172.

I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office (the Office), all information which is known by me to be material to patentability as defined in Title 37, Code of Federal Regulations (C.F.R.), Section 1.56.

CLAIM OF PRIORITY

I hereby claim foreign benefits under Title 35, United States Code (U.S.C.), Section 119, of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Application Ser. No. None, filed in (country) _____ on _____.

I hereby claim the benefit under 35 U.S.C. § 120, of any United States application(s) listed below and, insofar as the above-identified specification, including claims, discloses and claims subject matter in addition to that disclosed in the prior copending application(s), listed below, I acknowledge the duty to disclose to the Office, all information which is known by me to be material to patentability as defined in 37 C.F.R. § 1.56, which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Serial No. 09/478,315, filed on January 6, 2000, and now (status) pending.

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

U.S. Serial No. None, filed on _____.

POWER OF ATTORNEY

I hereby appoint the patent law firm of Van Dyke, Gardner, Linn & Burkhart, LLP, 2851 Charlevoix Drive, S.E., Suite 207, Grand Rapids, Michigan 49546, telephone number 616/975-5500, facsimile number 616/975-5505, and the individual patent attorneys and patent agents at such patent law firm, namely, Daniel Van Dyke, Reg. No. 25 046; Donald S. Gardner, Reg. No. 25 975; Terence J. Linn, Reg. No. 30 283; Frederick S. Burkhart, Reg. No. 29 288; Catherine S. Collins, Reg. No. 37 599; Matthew L. Goska, Reg. No. 42 594; Anthony A. Bisulca, Reg. No. 40 913; and Timothy A. Flory, Reg. No. 42 540, my attorney(s) or agent(s) with full power of substitution and revocation, to prosecute this application and to transact all business in and to receive all correspondence from the Patent and Trademark Office connected therewith.

All statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true, and further, these statements are made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001, and that such willful false statements may jeopardize the validity of this application or any patent issued thereon.

First joint inventor:

Niall R. Lynam 12/10/01
Niall R. Lynam Date
Citizenship: USA
Residence: 248 Foxdown
Holland, Michigan 49424
Post Office Address: Same as above.

Second joint inventor:

John O. Lindahl 12-10-01
John O. Lindahl Date
Citizenship: USA
Residence: Forty South 7th Street
Fruitport, Michigan 49415
Post Office Address: Same as above.

Third joint inventor:

01/07/02
Hans Joachim Fuchs Date
Citizenship: Germany
Residence: Gartenstrasse 1A
Dorftrozelten, Germany 97904
Post Office Address: Same as above.

PATENT
DON01 P-1148
Express Mail No. EL994418005US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs

For : EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY

Mail Stop Patent Application
Commissioner for Patents
P.P. Box 1450
Alexandria VA 22313-1450

Dear Sir:

PRELIMINARY AMENDMENT

Prior to examination in the above-entitled patent application Applicants with to amend their application as follows:

IN THE TITLE:

On page 1, please replace the title on line 1 with the following new title:

~~EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY~~

AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

IN THE ABSTRACT:

On page 41, please replace the Title and Abstract starting on line one with the following new Title and Abstract:

AUTOMOBILE EXTERIOR SIDEVIEW MIRROR SYSTEM

ABSTRACT

An automobile exterior sideview mirror system includes an exterior sideview mirror assembly, which includes a reflective element assembly. The reflective element assembly includes a first reflective element having a unit magnification and a second reflective element having a curvature. The first reflective element and the second reflective element are supported at a support element. The mirror system preferably further includes an actuator, which is operable to adjust the orientation of the reflective element assembly. The second reflective element is disposed adjacent to and separate from the first reflective element when it is included in the exterior sideview mirror assembly. Further, a demarcation element is provided between the first reflective element and the second reflective element. A portion of the second reflective element adjacent the demarcation element has a front surface that is generally coplanar with the front surface of the first reflective element.

~~EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY~~

~~ABSTRACT~~

~~This invention provides a reflective element assembly suitable for use in an exterior sideview mirror assembly mounted to the side body of an automobile. The reflective element assembly includes a first reflective element and a second reflective element. The second reflective element is angled downwardly and forwardly with respect to the first reflective element when the mirror assembly is mounted to a side of an automobile to provide an increased field of view. In one form, both reflective elements are commonly supported on a bezel, which is mounted to the mirror assembly casing. In another form, the reflective elements are separately mounted, with the second reflective element fixedly mounted to the casing and the first reflective element movably supported in the mirror casing, for example, on an actuator.~~

IN THE SPECIFICATION:

On page 1, please replace the paragraph starting on line 2 with the following new paragraph:

This is a continuation application of U.S. Pat. application Ser. No. 09/745,172, filed Dec. 20, 2000, entitled EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY, now U.S. Pat. No. 6,717,712, which is a continuation-in-part of U.S. Pat. application Ser. No. 09/478,315, filed Jan. 6, 2000, entitled "EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY", now U.S. Patent No. 6,522,451, which [[is]] are incorporated by reference herein in ~~its entirety~~ their entireties.

On page 16, please replace the paragraph starting on line 1 with the following new paragraph:

Also, plano element 50 and/or multiradius element 55 can comprise a variable reflectance electro-optic element such as an electrochromic mirror reflector. Thus, both element 50 and element 55 can comprise an electrochromic mirror element or either of element 50 and element 55 can comprise an electrochromic mirror element and the other can comprise a fixed reflectance non-variable reflectance mirror element such as a metal reflector coated glass panel such as a chromium coated glass substrate. Also, if both plano element 50 and multiradius element 55 comprise an electro-optic element such as an electrochromic mirror element capable of electrically dimmable reflectivity, both elements 50, 55 can dim together and in tandem under control of a common dimming control signal (typically provided by an electro-optic automatic dimming interior mirror assembly mounted in the cabin of the automobile and equipped with photosensors to detect incident glare and ambient light). Alternately, if both plano element 50 and multiradius element 55 comprise an electro-optic element such as an electrochromic mirror element capable of electrically dimmable reflectivity, element 50 can dim independently of element 55 (such as is disclosed in U.S. Pat. No. 5,550,677, the entire disclosure of which is hereby incorporated by reference herein). If either or both of elements 50, 55 comprise an electrochromic element, preferably, the electrochromic reflective element comprises a front substrate and a rear substrate with an

electrochromic medium disposed between, such as a solid polymer matrix electrochromic medium such as is disclosed in U.S. Pat. application Ser. No. 09/350,930, filed July 12, 1999, entitled "ELECTROCHROMIC POLYMERIC SOLID FILMS, MANUFACTURING ELECTROCHROMIC DEVICES USING SUCH FILMS, AND PROCESSES FOR MAKING SUCH SOLID FILMS AND DEVICES" to Desaraju V. Varaprasad et al., now U.S. Pat. No. 6,154,306, or such as is disclosed in U.S. Pat. Nos. 5,668,663; 5,724,187; 5,910,854; and 5,239,405, the entire disclosures of which are hereby incorporated by reference herein. Most preferably, in such laminate-type electrochromic mirror reflective elements, the front substrate comprises a glass plate of thickness less than about 1.6 mm, most preferably about 1.1 mm thickness or lower, and the rear substrate comprises a glass plate of thickness equal to or greater than about 1.6mm, more preferably greater than about 1.8 mm thickness, most preferably equal to or greater than about 2.0 mm thickness. The rearmost surface of the rear substrate (the fourth surface as known in the mirror art) is reflector coated with a high reflecting metal film such as of aluminum or silver, or an alloy of aluminum or silver. Most preferably, the front-most surface of the rear substrate (the third surface as known in the mirror art) is reflector coated with a high reflecting metal film such as of aluminum or silver, or an alloy of aluminum or silver.

On page 24, please replace the paragraph starting on line 13 with the following new paragraph:

Frame element assembly 316 mounts reflective element assembly 310 in the mirror casing and preferably on an actuator, such as an electric actuator, which permits adjustment to the orientation of reflective element assembly 310 about one or more axis. Examples of suitable actuators are described in U.S. Pat. Nos. 5,900,999; 5,986,364; 6,132,052; 6,037,689; and 6,094,027 and copending applications Ser. No. 09/277,632, filed Mar. 26, 1999, now U.S. Pat. No. 6,229,226, and Ser. No. 09/408,867, filed Sept. 29, 1999, now U.S. Pat. No. 6,243,218, which are incorporated herein by reference in their entireties. Optionally and preferably, backing plate 324 is adapted to engage or be engaged by the actuator for repositioning of plano-auxiliary reflective element assembly 310 about one or more axes. In this manner, the orientation of both reflective element 312 and reflective

element 314 are simultaneously adjusted by the actuator. As best seen in FIG. 9, forward facing side 324a of backing plate 324 includes mounting structures 324b which are engaged by the actuator to thereby mount reflective element assembly 310 in the mirror casing.

On page 28, please replace the paragraph starting on line 9 with the following new paragraph:

From the foregoing, it can be appreciated that reflective elements 312 and 314 provide a wider field of view than a wholly planar rearview mirror element that fully accommodates an equivalent frame having similar dimensions. In addition, because reflective elements 312 and 314 have overlapping field of views, an image in the field of view of reflective element 314 will transition or move between the reflective elements and appear in both reflective elements during the transition to thereby enable the driver of the automobile to view or be conscious of the object continuously. In the illustrated embodiment, reflective element 314 is positioned in an outboard position relative to reflective element 312; therefore, when a vehicle or object that is approaching the automobile from the rear and to some extent from the side, the image of the approaching object will first appear in reflective element 312, then appear in both reflective elements 314 and 312, and then move to reflective element 314 so that the driver will be initially aware of the approaching object when its image first appears in reflective element 312 and continue to be aware of the object as it moves closer to the automobile, thus increasing the range of viewing of the driver. Since the image transitions smoothly from reflective element 312 to reflective element 314, the driver's awareness of the object is continuous and, further, the driver is not distracted from sudden transitions that often occur with conventional spotter mirrors. Typically, when an object "falls" or "drops" out, a driver's consciousness of the object reduces significantly, if not ceases, which is one of the causes of many automobile blind spot accidents. Hence, when combined with the field of view of an interior rearview mirror system, the present invention reduces, if not eliminates, an automobile's blind spot. For further discussion of blind spots in vehicle rearview mirror systems, reference is made to copending U.S. provisional application entitled VEHICULAR REARVIEW MIRROR SYSTEM, Ser. No. 60/252,149, filed November 20, 2000 by Robert E. Schnell, David K. Willmore, and Richard J. Weber (Attorney Docket DON01 P-840),

which is herein incorporated by reference in its entirety. Thus, the plano-auxiliary reflective element assembly provides a seamless rearvision function whereby the image of a side approaching/side overtaking other vehicle is substantially seamlessly maintained as the image of the overtaking or approaching vehicle transitions from being principally and substantially viewed by the driver of the vehicle (the vehicle mounted with the mirror system of the present invention) in the plano reflective element to be seen in the auxiliary reflective element.

IN THE CLAIMS:

Please cancel Claims 1-59. Please add the following new Claims:

1-59. (cancelled)

60. (new) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said first reflective element and said second reflective element supported at a support element;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element supported on said support element adjacent to and separate from said first reflective element;

a demarcation element between said first reflective element and said second reflective element; and

wherein the portion of said second reflective element adjacent said demarcation element has a front surface generally coplanar with the front surface of said first reflective element.

61. (new) The exterior sideview mirror system of Claim 60, wherein said demarcation element is dark colored.

62. (new) The exterior sideview mirror system of Claim 60, wherein said reflective element assembly includes a first bezel portion extending around said first reflective element, said demarcation element comprising a segment of said first bezel portion.

63. (new) The exterior sideview mirror system of Claim 60, wherein said second reflective element comprises a curved reflective element comprising a bent substrate with at least one radius of curvature in the range of about 4000 mm to about 100 mm.

64. (new) The exterior sideview mirror system of Claim 60, wherein said support element comprises a frame, said first and second reflective elements being mounted at said frame.

65. (new) The exterior sideview mirror system of Claim 64, wherein said second reflective element is mounted at said frame at an outboard position, and said first reflective element is positioned adjacent said second reflective element and at an inboard position with respect to said second reflective element when said exterior sideview mirror assembly is mounted to an automobile.

66. (new) The exterior sideview mirror system of Claim 64, wherein said first reflective element is mounted at said frame by a backing plate.

67. (new) The exterior sideview mirror system of Claim 66, wherein said backing plate is adapted to mount to an actuator operable to adjust the orientation of said reflective element assembly.

68. (new) The exterior sideview mirror system of Claim 67, wherein said actuator comprises an electrical actuator.

69. (new) The exterior sideview mirror system of Claim 64, wherein said first reflective element and said second reflective element are adjacently attached at said frame, said frame including a first perimeter portion and a second perimeter portion, said first perimeter portion

extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

70. (new) The exterior sideview mirror system of Claim 69, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

71. (new) The exterior sideview mirror system of Claim 69, wherein said second perimeter portion is angled downwardly and forwardly with respect to said first perimeter portion when said mirror assembly is mounted to an automobile.

72. (new) The exterior sideview mirror system of Claim 64, wherein said second reflective element is attached at said frame by at least one of an adhesive attachment and a mechanical attachment.

73. (new) The exterior sideview mirror system of Claim 66, wherein said backing plate is attached to one side of said first reflective element and said frame by one of an adhesive attachment, a welded attachment, and a mechanical attachment.

74. (new) The exterior sideview mirror system of Claim 73, wherein an opposed side of said frame forms a bezel around said first reflective element.

75. (new) The exterior sideview mirror system of Claim 60, wherein said first reflective element includes a rearward field of view having a principal axis different from a principal axis of the rearward field of view of said second reflective element when mounted in said exterior sideview mirror assembly.

76. (new) The exterior sideview mirror system of Claim 75, wherein said principal axis of the rearward field of view of said second reflective element is directed generally outwardly and downwardly with respect to a longitudinal axis of the automobile.

77. (new) The exterior sideview mirror system of Claim 76, wherein said principal axis of the rearward field of said second reflective element forms a downward angle with respect to the longitudinal axis of the automobile in the range from about 0.75° to about 5°.

78. (new) The exterior sideview mirror system of Claim 77, wherein said downward angle is in a range from about 1.5° to about 3.5°.

79. (new) The exterior sideview mirror system of Claim 77, wherein said downward angle is in a range of about 2° to about 3°.

80. (new) The exterior sideview mirror system of Claim 76, wherein said principal axis of said second reflective element forms an outward angle with respect to the longitudinal axis of the automobile in a range of about 0.75° to about 5°.

81. (new) The exterior sideview mirror system of Claim 80, wherein said outward angle is in a range of about 1° to about 3°.

82. (new) The exterior sideview mirror system of Claim 81, wherein said outward angle is in a range of about 1.25° to about 2.5°.

83. (new) The exterior sideview mirror system of Claim 81, wherein said exterior sideview mirror assembly comprises a fixedly attached exterior sideview mirror assembly.

84. (new) The exterior sideview mirror system of Claim 60, wherein said exterior sideview mirror assembly comprises a break-away exterior sideview mirror assembly.

85. (new) The exterior sideview mirror system of Claim 60, wherein said exterior sideview mirror assembly comprises a powerfold exterior sideview mirror assembly.

86. (new) The exterior sideview mirror system of Claim 60, wherein at least one of said first reflective element and said second reflective element comprises a variable reflectance reflective element.

87. (new) The exterior sideview mirror system of Claim 86, wherein each of said first reflective element and said second reflective element comprises a variable reflectance reflective element.

88. (new) The exterior sideview mirror system of Claim 60, wherein said first reflective element comprises an electrochromic reflective element.

89. (new) The exterior sideview mirror system of Claim 60, wherein said first reflective element has a first principal axis and said second reflective element has a second principal axis when supported on said support element, said second principal axis being angled outwardly from said first principal axis at an angle in a range of about 0.75° to about 5°.

90. (new) The exterior sideview mirror system of Claim 89, wherein said second principal axis is angled outwardly from said first principal axis at an angle in a range of about 1° to about 3°.

91. (new) The exterior sideview mirror system of Claim 89, wherein said second principal axis is angled outwardly from said first principal axis at an angle in a range of about 1.25° to about 2.5°.

92. (new) The exterior sideview mirror system of Claim 60, wherein said second reflective element has a second principal axis that is angled downwardly from a first principal axis of said first reflective element when supported on said support element.

93. (new) The exterior sideview mirror system of Claim 92, wherein said second principal axis is angled downwardly from said first principal axis at an angle in a range of approximately 0.75° to about 5°.

94. (new) The exterior sideview mirror system of Claim 92, wherein said second principal axis is angled downwardly from said first principal axis at an angle in a range of about 2° to about 3°.

95. (new) The exterior sideview mirror system of Claim 60, wherein said second reflective element has a second principal axis that is directed generally outwardly and downwardly with respect to a longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

96. (new) The exterior sideview mirror system of Claim 60, wherein said support element includes a support surface for said second reflective element, said support surface angling a second principal axis of said second reflective element.

97. (new) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

said first reflective element including a rearward field of view having a principal axis different from a principal axis of the rearward field of view of said second reflective element when mounted in said exterior sideview mirror assembly;

a demarcation element between said first reflective element and said second reflective element; and

wherein the portion of said second reflective element adjacent said demarcation element has a front surface generally coplanar with the front surface of said first reflective element.

98. (new) The exterior sideview mirror system of Claim 97, wherein said reflective element assembly includes a first bezel portion extending around said first reflective element, said demarcation element comprising a segment of said first bezel portion.

99. (new) The exterior sideview mirror system of Claim 97, wherein said second reflective element comprises a curved reflective element comprising a bent substrate with at least one radius of curvature in the range of about 4000 mm to about 100 mm.

100. (new) The exterior sideview mirror system of Claim 97, further comprising a support element, said first reflective element and said second reflective element supported at said support element.

101. (new) The exterior sideview mirror system of Claim 100, wherein said support element including a support surface for said second reflective element, said support surface angling said principal axis of said second reflective element.

102. (new) The exterior sideview mirror system of Claim 101, wherein said principal axis of said second reflective element is directed generally outwardly and downwardly with respect to the longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

103. (new) The exterior sideview mirror system of Claim 97, further comprising an actuator operable to adjust the orientation of said reflective element assembly.

104. (new) The exterior sideview mirror system of Claim 97, wherein said principal axis of the rearward field of view of said second reflective element is directed generally outwardly and downwardly with respect to a longitudinal axis of the automobile.

105. (new) The exterior sideview mirror system of Claim 97, wherein said principal axis of said second reflective element forms an outward angle with respect to a longitudinal axis of the automobile.

106. (new) The exterior sideview mirror system of Claim 97, further comprising a frame, said first and second reflective elements being mounted at said frame, said frame including a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

107. (new) The exterior sideview mirror system of Claim 106, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

108. (new) An automobile exterior sideview mirror system comprising:

an exterior sideview mirror assembly adapted for attachment to a side of an automobile;

said exterior sideview mirror assembly including a reflective element assembly;

said reflective element assembly including a first reflective element having unit magnification and a second reflective element having a curvature;

an actuator operable to adjust the orientation of said reflective element assembly;

said second reflective element disposed at an outer, upper portion of said reflective element assembly when said reflective element assembly is included in said exterior sideview mirror assembly and when said exterior sideview mirror assembly is attached to the side of an automobile;

said second reflective element disposed adjacent to and separate from said first reflective element;

a demarcation element between said first reflective element and said second reflective element; and

wherein the portion of said second reflective element adjacent said demarcation element has a front surface generally coplanar with the front surface of said first reflective element.

109. (new) The exterior sideview mirror system of Claim 108, wherein said first reflective element has a first principal axis and said second reflective element has a second principal axis, said second principal axis being angled outwardly from said first principal axis.

110. (new) The exterior sideview mirror system of Claim 109, wherein said second principal axis is angled downwardly from said first principal axis of said first reflective element.

111. (new) The exterior sideview mirror system of Claim 110, wherein said second principal axis is directed generally outwardly and downwardly with respect to a longitudinal axis of an automobile when said mirror assembly is mounted to the automobile.

112. (new) The exterior sideview mirror system of Claim 110, further comprising a support element, said support element including a support surface for said second reflective element, said support surface angling said second principal axis of said second reflective element relative to said first principal axis.

113. (new) The exterior sideview mirror system of Claim 112, wherein said support element comprises a frame, said first and second reflective elements being mounted at said frame.

114. (new) The exterior sideview mirror system of Claim 113, wherein said second reflective element is mounted at said frame at an outboard position, and said first reflective

element is positioned adjacent said second reflective element and at an inboard position with respect to said second reflective element when said exterior sideview mirror assembly is mounted to an automobile.

115. (new) The exterior sideview mirror system of Claim 114, wherein said frame includes a first perimeter portion and a second perimeter portion, said first perimeter portion extending around said first reflective element, and said second perimeter portion extending around said second reflective element.

116. (new) The exterior sideview mirror system of Claim 115, wherein a side portion of said first perimeter portion of said frame provides said demarcation element between said first reflective element and said second reflective element.

117. (new) The exterior sideview mirror system of Claim 116, wherein said second perimeter portion is angled downwardly and forwardly with respect to said first perimeter portion when said mirror assembly is mounted to an automobile.

REMARKS

Prior to examination, Applicants respectfully request that the amendments set forth above to the specification and claims be entered in the application. No new matter has been added by any of these amendments or claims. The amendments and claims are fully supported by the disclosure as originally filed and/or by the disclosures of the priority documents. Entry of these amendments and examination of the application based on the above amendments, including new Claims 60-117, is respectfully requested.

Respectfully submitted,

NIALL R. LYNAM ET AL.

By: Van Dyke, Gardner, Linn & Burkhart, LLP

April 2, 2004
Date

Catherine S. Collins
Registration No. 37 599
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc

INVENTOR INFORMATION

Inventor One Given Name:: Niall R
Family Name:: Lynam
Postal Address Line One:: 248 Foxdown
City:: Holland
State or Province:: Michigan
Country:: USA
Postal or Zip Code:: 49424
City of Residence:: Holland
State or Province of Residence:: Michigan
Country of Residence:: USA
Citizenship Country:: USA
Inventor Two Given Name:: John O
Family Name:: Lindahl
Postal Address Line One:: Forty South 7th Street
City:: Fruitport
State or Province:: Michigan
Country:: USA
Postal or Zip Code:: 49415
City of Residence:: Fruitport
State or Province of Residence:: Michigan
Country of Residence:: USA
Citizenship Country:: USA
Inventor Three Given Name:: Hahns Y
Family Name:: Fuchs
Postal Address Line One:: Gartenstrasse 1A
City:: Dorftrozelten
Country:: Germany
Postal or Zip Code:: 97904
City of Residence:: Dorftrozelten
Country of Residence:: Germany
Citizenship Country:: Germany

CORRESPONDENCE INFORMATION

Correspondence Customer Number:: 28101
Fax One:: (616) 975-5505
Electronic Mail One:: collins@vglb.com

APPLICATION INFORMATION

Title Line One:: EXTERIOR MIRROR PLANO-AUXILIARY REFLECTI
Title Line Two:: VE ELEMENT ASSEMBLY
Total Drawing Sheets:: 13
Formal Drawings?:: Yes
Application Type:: Utility
Docket Number:: DON01 P-1148
Secrecy Order in Parent Appl.?:: No

REPRESENTATIVE INFORMATION

Representative Customer Number:: 28101

CONTINUITY INFORMATION

This application is a:: CONTINUATION OF
> Application One:: 09/745,172
Filing Date:: 12-20-2000
Patent Number:: 6,717,712

Which is a::CONTINUATION IN PART OF
>> Application Two:: 09/478,315
Filing Date:: 01-06-2000
Patent Number:: 6,522,451

Source:: PrintEFS Version 1.0.1

PATENT
DON01 P-1148
Express Mail No. EL994418005US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Niall R. Lynam, John O. Lindahl, and Hahns Yoachim Fuchs

For : EXTERIOR MIRROR PLANO-AUXILIARY REFLECTIVE ELEMENT ASSEMBLY

Mail Stop Patent Application
Commissioner for Patents
P.P. Box 1450
Alexandria VA 22313-1450

Dear Sir:

INFORMATION DISCLOSURE STATEMENT

In accordance with 37 CFR § 1.51, 1.56, 1.97 and 1.98, Applicants submit herewith patents, publications or other information listed on attached Forms PTO-1449 for consideration by the Examiner in connection with examination of the present application. Copies of the documents listed on Form PTO-1449 are not submitted herewith because they were previously cited by or submitted to the Office in a prior application, which is properly identified as parent application Serial No. 09/745,172, filed December 20, 2000, now U.S. Pat. No. 6,717,712, which is a continuation-in-part of U.S. Pat. No. 6,522,451. A copy of each information item is of record in the prior related application.

This Information Disclosure Statement is not intended to constitute an admission that any patent, publication or other information referred to herein is "prior art" for this invention unless specifically designated as such.

Under 37 CFR 1.97(h), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists.

An early and favorable action on the merits is respectfully requested.

Respectfully submitted,

NIALL R. LYNAM ET AL.

By: Van Dyke, Gardner, Linn & Burkhart, LLP

April 2, 2004
Date

Catherine S. Collins
Registration No. 37 599
2851 Charlevoix Drive, S.E.
P.O. Box 888695
Grand Rapids, MI 49588-8695
(616) 975-5500

CSC:lmsc

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (Rev. 2-32) PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. **DON01 P-1148**	SERIAL NO.
	APPLICANT(S) **Niall R. Lynam, John O. Lindahl and Hahns Yoachim Fuchs**	
	FILING DATE	GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER							DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPRO-PRIATE
		5	7	5	1	4	8	9	05/12/98	Caskey et al.	359	603	
		5	9	1	0	8	5	4	06/08/99	Varaprasad et al	359	273	
		5	7	2	4	1	8	7	03/03/98	Varaprasad et al	359	608	
		5	6	6	8	6	6	3	09/16/97	Varaprasad et al	359	608	
		5	5	5	0	6	7	7	08/27/96	Schofield et al.	359	604	
		5	2	3	9	4	0	5	08/24/93	Varaprasad et al	359	272	
		4	4	4	9	7	8	6	05/22/84	McCord	350	293	
		4	2	6	8	1	2	0	05/19/81	Jitsumori	350	302	
		3	3	7	5	0	5	3	03/26/68	W. W. Ward	350	293	
		6	1	5	4	3	0	6	11/28/00	Varaprasad et al.	359	273	
		3	3	3	8	6	5	5	08/1967	Young			
		3	3	8	9	9	5	2	06/1968	Tobin, Jr.			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER							DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLA-TION	
													Y	N
	FR	2	6	2	8	0	4	2	09/1929	France	B 60 R 1	06	X	
	DT	2	4	0	9	7	4	8	09/04/75	Germany	B60r-01	02	X	
		1	1	8	6	4	4	3	07/25/89	Japan	B60R1	06	X	
	EP	0	3	1	0	2	6	1 A1	09/88	EPC	B60R 1	08	X	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIAL		

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

(Form PTO-1449 [6-4])

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (Rev. 2-32) PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. **DON01 P-1148**	SERIAL NO.
	APPLICANT(S) **Niall R. Lynam, John O. Lindahl and Hahns Yoachim Fuchs**	
	FILING DATE	GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPRO-PRIATE
		4 6 7 8 2 9 4	07/1987	Van Nostrand			
		4 9 1 7 4 8 5	04/1990	Baldwin, Sr.			
		5 4 1 2 5 1 2	05/1995	ZeBold et al.			
		5 5 5 7 4 6 7	09/1996	McColgan t al.			
		5 6 2 1 5 7 7	04/1997	Lang et al.			
		5 7 8 4 2 1 1	07/1998	Mingledorff			
		5 7 9 3 5 4 2	08/1998	Kondo et al.			
		5 8 0 5 3 6 7	09/1998	Kanazawa			
		6 1 1 6 7 4 3	09/2000	Hoek			
		6 5 1 1 1 9 2	01/2003	Henion et al.			
		6 5 2 2 4 5 1	02/2003	Lynam			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION	
							Y	N
		2 0 9 2 5 4 3	08/1982	UK				
		3 6 2 0 2 2 8	12/1987	Germany			X	
		4 0 2 6 5 7 8	04/1992	Germany			Abstract only	
		0 7 2 9 8 6 4	09/1996	EPO				
		0 9 1 7 9 8 7	05/1999	EPO				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIAL		

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

(Form PTO-1449 [6-4])

MULTIPLE DEPENDENT CLAIM FEE CALCULATION SHEET

SERIAL NO.

FILING DATE

APPLICANT(S)

CLAIMS

	AS FILED		AFTER 1ST AMENDMENT		AFTER 2ND AMENDMENT	
	IND	DEP	IND	DEP	IND	DEP
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
TOTAL IND.						
TOTAL DEP.						
TOTAL CLAIMS						

	IND	DEP	IND	DEP	IND	DEP
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82						
83						
84						
85						
86						
87						
88						
89						
90						
91						
92						
93						
94						
95						
96						
97						
98						
99						
100						
TOTAL IND.						
TOTAL DEP.						
TOTAL CLAIMS						

PTO-1360 (Reproduction only) (3/03)

page 2

MULTIPLE DEPENDENT CLAIM FEE CALCULATION SHEET

SERIAL NO.

FILING DATE

APPLICANT(S)

CLAIMS

	AS FILED		AFTER 1ST AMENDMENT		AFTER 2ND AMENDMENT	
	IND	DEP	IND	DEP	IND	DEP
1		1				
2		1				
3		1				
4		1				
5		1				
6		1				
7		1				
8	1					
9		1				
10		1				
11		1				
12		1				
13		1				
14		1				
15		1				
16		1				
17		1				
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
TOTAL IND.	3					
TOTAL DEP.	55					
TOTAL CLAIMS	58					

	IND	DEP	IND	DEP	IND	DEP
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82						
83						
84						
85						
86						
87						
88						
89						
90						
91						
92						
93						
94						
95						
96						
97						
98						
99						
100						
TOTAL IND.						
TOTAL DEP.						
TOTAL CLAIMS						

PTO-1360 (Replication only) (3/03)

PATENT APPLICATION FEE DETERMINATION RECORD
Effective October 1, 2003

Application or Docket Number: 10817645

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	58	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	58 minus 20=	* 38
INDEPENDENT CLAIMS	3 minus 3 =	* 0
MULTIPLE DEPENDENT CLAIM PRESENT		☐

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐		OR	OTHER THAN SMALL ENTITY	
RATE	FEE		RATE	FEE
BASIC FEE	385.00	OR	BASIC FEE	770.00
XS 9=		OR	XS18=	684.00
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL		OR	TOTAL	1454

CLAIMS AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
***If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

04/07/2004 ANABI1 00000001 10817645

01 FC:1001 770.00 OP
02 FC:1202 684.00 OP

PTO-1556
(5/87)

*U.S. Government Printing Office: 2002 — 489-267/69033