ORIGINAL

KILPATRICK TOWNSEND & STOCKTON LLP
ANNE M. ROGASKI (State Bar No. 184754)
1080 Marsh Road
Menlo Park, CA 94025
Telephone: (650) 326-2400
Facsimile: (650) 326-2422
Email: arogaski@kilpatricktownsend.com

Attorneys for Plaintiff
MEI 3D, LLC

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UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

MEI 3D, LLC,

Plaintiff,

v.

POLAROID EYEWEAR U.S., LLC, and DOES 1-5, INCLUSIVE,

Defendant.

CASE NO. CV 12-01321 JCS

COMPLAINT FOR PATENT INFRINGEMENT

DEMAND FOR JURY TRIAL

Plaintiff MEI 3D, LLC ("MEI 3D"), for its complaint against Defendant Polaroid Eyewear U.S., LLC ("Polaroid"), alleges as follows:

NATURE OF THE ACTION

1. This is an action arising under the patent laws of the United States based on infringement by Polaroid of claims in the patents owned by MEI 3D. MEI 3D seeks damages for Polaroid's infringement, enhancement of damages due to Polaroid's willful infringement and a permanent injunction restraining Polaroid from further infringement.

PARTIES

2. MEI 3D is a limited liability company organized and existing under the laws of Delaware with its principal place of business located at 11633 Sorrento Valley Road, San Diego, California 92121. MEI 3D was formed on August 13, 2010. MEI 3D is an innovator in the field of high quality 3D eyewear and has become one of the world's largest manufacturers and distributors of high quality 3D eyewear.

3. On information and belief, Polaroid is a limited liability company organized and existing under the laws of Florida, with a principal place of business at 2 Sunshine Boulevard, Ormond, Florida 32174.

4. MEI 3D is ignorant of the true names and capacities of Defendants sued herein as Does 1 through 5, inclusive, and therefore sues said Defendants by such fictitious names. MEI 3D will amend this Complaint, if necessary, to allege their true names and capacities when ascertained.

JURISDICTION

5. This is an action for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§1331 and 1338(a). This Court has personal jurisdiction over Defendant Polaroid because, on information and belief, Polaroid has purposely availed itself of the privilege of conducting activities within this State and District, at a minimum, by marketing and selling the accused products in this State and District. Additionally, Polaroid has placed the accused products into the stream of interstate commerce, knowing they would be sold to consumers in this State and District.

VENUE

6. Venue is proper in this judicial district pursuant to 28 U.S.C. §§1391 and 1400(b) as Polaroid has done business in this judicial district and has committed and continues to commit acts of patent infringement in this judicial district.

THE PATENTS

7. MEI 3D is the owner and assignee of United States Patent No. 7,854,506 ("the '506 patent") entitled, "Curved Lenses Configured to Decode Three-Dimensional Content on Television and Computer Screens." The '506 patent was duly and legally issued by the United States Patent and Trademark Office on December 21, 2010, to David A. Johnson and James Pritts as the inventors and original assignees. Through a series of assignments, the '506 patent was ultimately assigned to MEI 3D. Reexamination of the '506 patent was sought by an anonymous requestor on March 1, 2011. Reexamination was granted and, following reexamination, the United States Patent and Trademark Office confirmed the validity of all original claims on December 13, 2011. A true and correct copy of the '506 patent, with Reexamination Certificate, is attached hereto as Exhibit A.

8. MEI 3D is the owner and assignee of United States Patent No. 8,100,525 ("the '525 patent"), entitled, "Curved Lenses Configured to Decode Three-Dimensional Content on Television and Computer Screens." The '525 patent was duly and legally issued by the United States Patent and Trademark Office on January 24, 2012, to David A. Johnson and James Pritts as the inventors and MEI 3D, LLC, as the assignee. A true and correct copy of the '525 patent is attached hereto as Exhibit B.

9. MEI 3D identified the '506 patent and United States Patent Application No. 12/973,630 ("the '630 application," which issued as the '525 patent) to Polaroid on December 5, 2011.

THE POLAROID PRODUCTS

10. Polaroid offers for sale and sells in the United States a line of "Polaroid Premium 3D Glasses": **http://www.polaroideyewear.com/en/collection/Premium3DGlasses.aspx**. Polaroid's products are described as passive circular-polarized 3D lenses having both a polarizing layer and a retarder layer as well as additional layers to protect the polarizing layer. Polaroid's products are described as being made using its "Thermofusion™ Technology," that purports to involve the use of heat and pressure, to curve the 3D lenses in a way to avoid distortion of vision. (*See, e.g.*, **http://www.brilmode.com/?mid=323**.)

POLAROID'S WILLFUL INFRINGEMENT

11. Polaroid has engaged and continues to engage in a pattern of conduct demonstrating: Polaroid's awareness of the '506 and '525 patents; the objectively high likelihood that Polaroid's actions constituted and continue to constitute infringement of claims of the '506 and '525 patents and that the patents are valid and enforceable; that this objectively-defined risk was so obvious that Polaroid should have known it; and that Polaroid in fact knew of this objectively-defined risk.

12. On information and belief, Polaroid has been aware of the '506 patent and the '630 application leading to the '525 patent since at least December 5, 2011, when MEI 3D identified the '506 patent and '630 application to Stylemark, LLC ("Stylemark") who, at the time, on information and belief, was a parent company of Polaroid. On information and belief, Stylemark and Polaroid were already aware of the '506 patent no later than March 1, 2011, when an anonymous request for reexamination of the '506 patent was made. On further information and belief, Stylemark was the "anonymous" requester and assigned its rights in the reexamination to Polaroid on December 13, 2011, as reflected in assignment records filed with the United States Patent and Trademark Office at Reel/Frame: 027378/0355. A true and correct copy of the assignment filed at Reel/Frame 027378/0355 is attached hereto as Exhibit C.

13. Polaroid continues to sell its line of "Polaroid Premium 3D Glasses" in violation of the '506 and '525 patents, notwithstanding its awareness of the '506 patent and '525 patent, in willful disregard for MEI 3D's patent rights.

FIRST CLAIM FOR RELIEF

(Infringement of U.S. Patent No. 7,854,506)

14. MEI 3D incorporates by reference paragraphs 1 through 13 above.

15. On information and belief, Polaroid directly, indirectly, contributorily and/or by inducement, literally and/or under the doctrine of equivalents, has infringed and continues to infringe the '506 patent by its manufacture (or inducement of others to manufacture), use (or inducement of others to use), sale (or inducement of others to sell), offer for sale (or inducement of others to offer for sale) and/or importation of (or inducement of others to import) products within this judicial district and elsewhere in the United States that infringe one or more claims of the '506 patent, including at least claims 1, 3, 4, 7 and 8. Examples of infringing products include the Polaroid Eyewear Perfect 3D Vision line of glasses (including, by way of example only, product numbers PDN8100A and PDN8101A).

16. Polaroid's infringement of the '506 patent has caused and, unless enjoined, will continue to cause, irreparable harm to MEI 3D. MEI 3D has no adequate remedy at law and is entitled to a permanent injunction against further infringement.

17. MEI 3D has suffered and will continue to suffer damage to its business by reason of Polaroid's acts of infringement of the '506 patent as alleged herein and MEI 3D is entitled to recover from Polaroid the damages sustained as a result of Polaroid's acts pursuant to 35 U.S.C. § 284.

18. MEI 3D is informed and believes and, on that basis, alleges that Polaroid's actions make this an exceptional case within the meaning of 35 U.S.C. § 285, which entitles MEI 3D to an award of attorneys' fees.

SECOND CLAIM FOR RELIEF

(Infringement of U.S. Patent No. 8,100,525)

19. MEI 3D incorporates by reference paragraphs 1 through 13 above.

20. On information and belief, Polaroid directly, indirectly, contributorily and/or by inducement, literally and/or under the doctrine of equivalents, has infringed and continues to infringe the '525 patent by its manufacture (or inducement of others to manufacture), use (or inducement of others to use), sale (or inducement of others to sell), offer for sale (or inducement of others to offer for sale) and/or importation of (or inducement of others to import) products within this judicial district and elsewhere in the United States that infringe one or more claims of the '525 patent, including at least claims 1 and 2. Examples of infringing products include the Polaroid Eyewear Perfect 3D Vision line of glasses (including, by way of example only, product numbers PDN8100A and PDN8101A).

21. Polaroid's infringement of the '525 patent has caused and, unless enjoined, will continue to cause, irreparable harm to MEI 3D. MEI 3D has no adequate remedy at law and is entitled to a permanent injunction against further infringement.

22. MEI 3D has suffered and will continue to suffer damage to its business by reason of Polaroid's acts of infringement of the '525 patent as alleged herein and MEI 3D is entitled to recover from Polaroid the damages sustained as a result of Polaroid's acts pursuant to 35 U.S.C. § 284.

23. MEI 3D is informed and believes and, on that basis, alleges that Polaroid's actions make this an exceptional case within the meaning of 35 U.S.C. § 285, which entitles MEI 3D to an award of attorneys' fees.

PRAYER FOR RELIEF

WHEREFORE, MEI 3D, LLC, prays for the following relief:

1. That judgment be entered in favor of MEI 3D, LLC with a finding that Polaroid Eyewear U.S., LLC, has infringed and is infringing claims of United States Patent Nos. 7,854,506 and 8,100,525 in violation of 35 U.S.C. §271;

2. That MEI 3D, LLC be granted an accounting of all damages sustained as a result of the infringement of Polaroid Eyewear U.S., LLC, of United States Patent Nos. 7,854,506 and 8,100,525 as herein alleged;

3. That MEI 3D, LLC be awarded actual damages with prejudgment interest according to proof and enhanced damages pursuant to 35 U.S.C. §284;

4. That a permanent injunction be issued pursuant to 35 U.S.C. §283 enjoining Polaroid Eyewear U.S., LLC, their officers, agents, servants, employees, successors, assigns, and all other persons acting in concert or participation with them from further infringement of United States Patent Nos. 7,854,506 and 8,100,525;

5. That this case be decreed an "exceptional case" within the meaning of 35 U.S.C. §285, and that reasonable attorneys' fees, expenses, and costs be awarded to MEI 3D, LLC; and

6. That MEI 3D, LLC be awarded such further relief as the Court deems just and proper.

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DEMAND FOR JURY TRIAL

MEI 3D hereby demands a jury trial as to all issues triable to a jury.

DATED: March 16, 2012

Respectfully submitted,

KILPATRICK TOWNSEND & STOCKTON LLP

By: ______________________________
ANNE M. ROGASKI

Attorneys for Plaintiff
MEI 3D, LLC

64023601 v1

EXHIBIT A

US007854506B1

(12) **United States Patent**
Johnson et al.

(10) **Patent No.: US 7,854,506 B1**
(45) **Date of Patent: Dec. 21, 2010**

(54) **CURVED LENSES CONFIGURED TO DECODE THREE-DIMENSIONAL CONTENT ON TELEVISION AND COMPUTER SCREENS**

(76) Inventors: **David A. Johnson**, 11633 Sorrento Valley Rd., Suite 4A, San Diego, CA (US) 92121; **James Pritts**, 11633 Sorrento Valley Rd., Suite 4A, San Diego, CA (US) 92121

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **12/604,155**

(22) Filed: **Oct. 22, 2009**

Related U.S. Application Data

(63) Continuation-in-part of application No. 12/495,754, filed on Jun. 30, 2009, which is a continuation-in-part of application No. 12/350,092, filed on Jan. 7, 2009.

(60) Provisional application No. 61/019,545, filed on Jan. 7, 2008.

(51) **Int. Cl.**
G02C 7/12 (2006.01)

(52) **U.S. Cl.** **351/49**; 351/163; 359/485; 359/497

(58) **Field of Classification Search** 351/41, 351/44, 49, 163; 359/483, 485, 488, 497; 264/1.32
See application file for complete search history.

(56) **References Cited**

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FOREIGN PATENT DOCUMENTS

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EP	0505998	A2	9/1992
WO	WO2007-008777	A2	1/2007

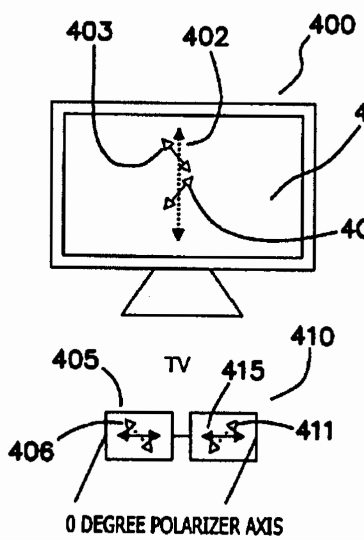
* cited by examiner

Primary Examiner—Huy K Mai
(74) *Attorney, Agent, or Firm*—Greenberg Traurig

(57) **ABSTRACT**

Curved lenses configured to decode three dimensional content and method of fabricating the same. The lenses decode three-dimensional content displayed on televisions or computer monitors. Sheets from which the lenses are cut have either (i) a polarizing axis of 0 degrees relative to horizontal and one sheet has a retarder axis at −45 degrees relative to horizontal and the other sheet has a retarder axis of +45 degrees relative to horizontal; (ii) a polarizing axis of −45 degrees relative to horizontal and one sheet has a retarder axis at 0 degrees relative to horizontal and the other sheet has a retarder axis of 90 degrees relative to horizontal; or (iii) a polarizing axis of +45 degrees relative to horizontal and one sheet has a retarder axis at 0 degrees relative to horizontal and the other sheet has a retarder axis of 90 degrees relative to horizontal.

12 Claims, 7 Drawing Sheets



100

CHECK POINT		UNIT	SPECIFIED VALUE	ACTUAL VALURE
DIMENSIONS	WIDTH	MM	495 ~ 505	495
	LENGTH	MM	700 ~ 710	700
	θP	°	0.0±1.0	-0.1
RETARDATION	R	NM	-------	-------
	θR2	°	45.0±1.0	45.1
HUE		L	64.0±16.0	63.8
		A	-1.40±2.50	-1.70
		B	2.10±2.50	2.73
SINGLE TRANSMITTANCE		%	40.00±2.50	41.77
POLARIZING EFFICIENCY		%	99.80	99.96
THICKNESS		μM	1050.0±30.0	1046.0
PEEL STRENGTH OF RELEASE FILM		GF/25MM	-------	-------
CURL		MM	-50.0 ≥ x ≤ +50.0	1.0
UV-CUT		%	1.000	0.020
HEAT RESISTANCE			70°C / DRY / 240 HRS.	PSSED
HUMIDITY RESISTANCE			40°C / 95%RH / 240 HRS	PSSED
APPEARANCE QUALITY			-------	PSSED

130 120 115 110 125 135 140

FIG. 1

105 110 115 120 125 130

CHECK POINT		UNIT	SPECIFIED VALUE	ACTUAL VALUE
DIMENSIONS	WIDTH	MM	495 ~ 505	495
	LENGTH	MM	700 ~ 710	700
	θP	°	0.0 ± 1.0	-0.1
RETARDATION	R	NM	-------	-------
	θR2	°	135.0 ± 1.0	134.9
HUE		L	64.0 ± 16.0	64.6
		A	-1.40 ± 2.50	-1.70
		B	2.10 ± 2.50	2.73
SINGLE TRANSMITTANCE		%	40.00 ± 2.50	41.77
POLARIZING EFFICIENCY		%	99.80	99.96
THICKNESS		μM	1050.0 ± 30.0	1058.0
PEEL STRENGTH OF RELEASE FILM		GF/25MM	-------	-------
CURL		MM	-50.0 ≥ x ≤ +50.0	1.0
UV-CUT		%	1.000	0.046
HEAT RESISTANCE			70°C / DRY / 240 HRS.	PSSED
HUMIDITY RESISTANCE			40°C / 95%RH / 240 HRS	PSSED
APPEARANCE QUALITY			-------	PSSED

135 140

FIG. 2

120 110 115 125 145 101

ITEM	UNIT	DATA	STANDARD		OK/NG
			SL	SU	
DIMENSION A	MM	969.0	938.0	978.0	
DIMENSION B	MM	503.0	480.0	520.0	
POLARIZING AXIS α	°	-0.5	-1.5	1.5	
LATE RITADATION AXIS β	°	135.5	133.5	136.5	
RITADATION	NM	124.4	110.0	130.0	
THICKNESS	μM	875.0	800.0	1000.0	
POLARIZER SIDE PROTECT FILM DETACHMENT POWER	N/25MM	0.02		0.98	
RITADATION FILM SIDE PROTECT FILM DETACHMENT POWER	N/25MM	0.03		0.98	

140

FIG. 3

106

110 115 145 120

ITEM	UNIT	DATA	STANDARD		OK/NG
			SL	SU	
DIMENSION A	MM	963.0	938.0	978.0	
DIMENSION B	MM	503.0	480.0	520.0	
POLARIZING AXIS α	°	0.0	-1.5	1.5	
LATE RITADATION AXIS β	°	45.1	43.5	46.5	
RITADATION	NM	122.7	110.0	130.0	
THICKNESS	μM	882.0	800.0	1000.0	
POLARIZER SIDE PROTECT FILM DETACHMENT POWER	N/25MM	0.03	-	0.98	
RITADATION FILM SIDE PROTECT FILM DETACHMENT POWER	N/25MM	0.03	-	0.98	

125 140

FIG. 4

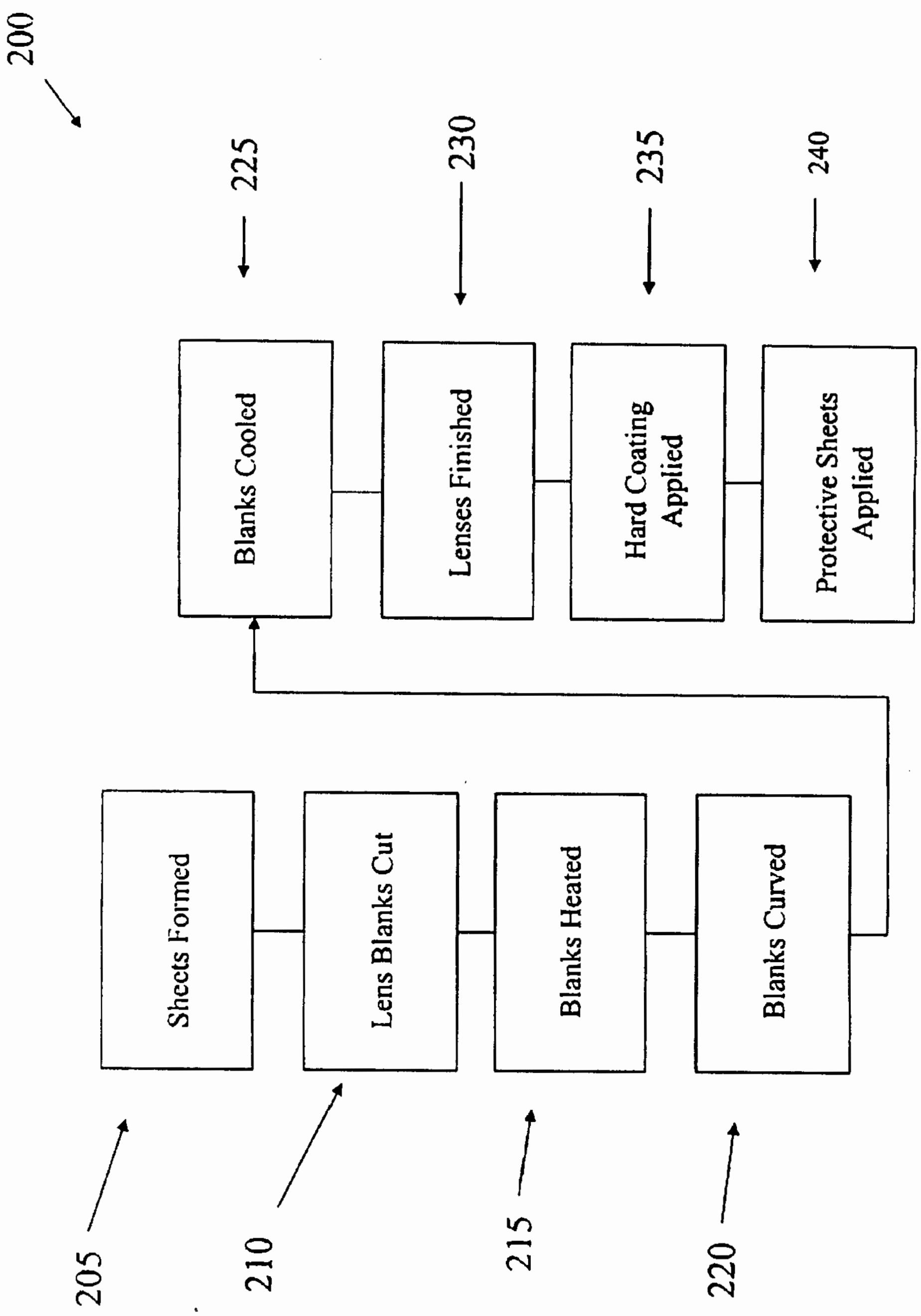

200
Sheets Formed
205
Lens Blanks Cut
210
Blanks Heated
215
Blanks Curved
220
Blanks Cooled
225
Lenses Finished
230
Hard Coating Applied
235
Protective Sheets Applied
240

Fig. 5

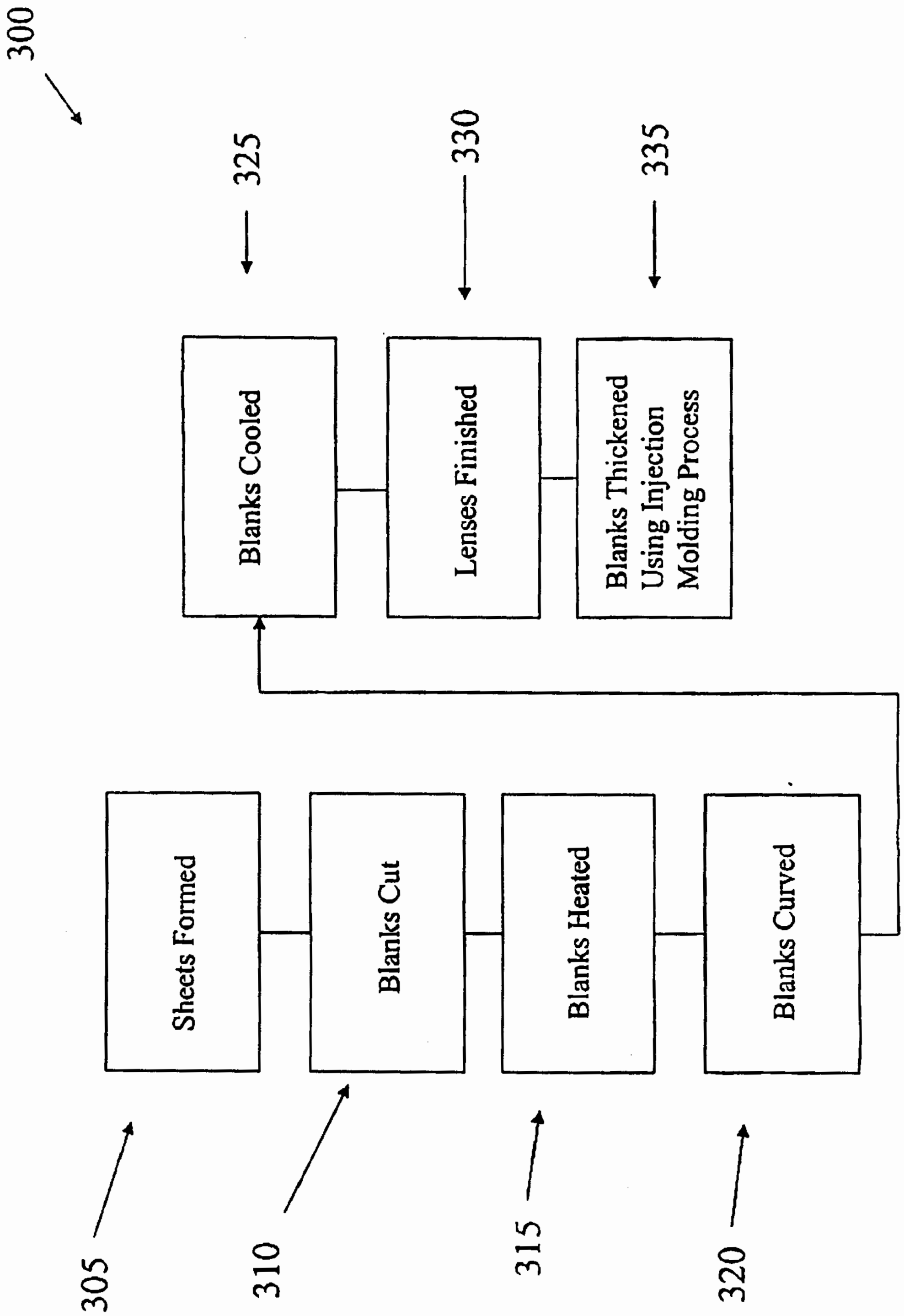

300
305
Sheets Formed
310
Blanks Cut
315
Blanks Heated
320
Blanks Curved
325
Blanks Cooled
330
Lenses Finished
335
Blanks Thickened Using Injection Molding Process

Fig. 6

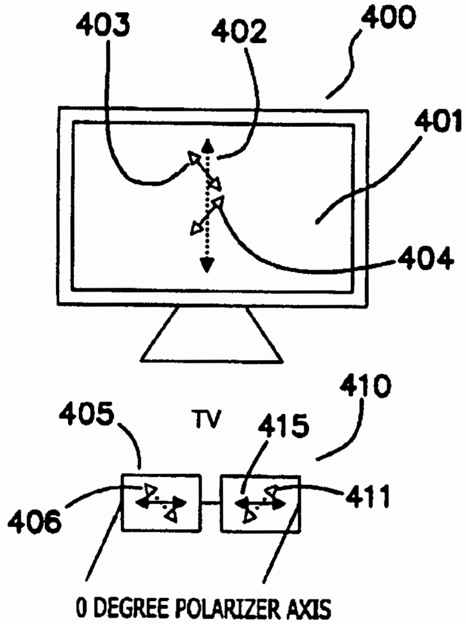


FIG. 7A

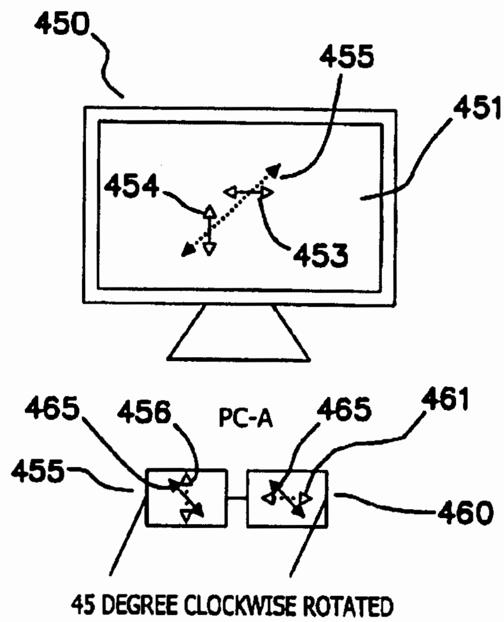


FIG. 7B

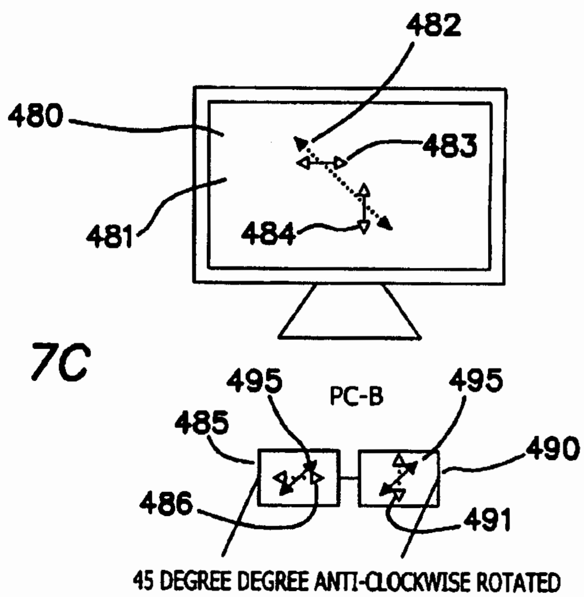


FIG. 7C

CURVED LENSES CONFIGURED TO DECODE THREE-DIMENSIONAL CONTENT ON TELEVISION AND COMPUTER SCREENS

CROSS-REFERENCE TO RELATED APPLICATION

This application is a continuation-in-part of U.S. application Ser. No. 12/495,754 filed Jun. 30, 2009, which is a continuation-in-part of U.S. patent application Ser. No. 12/350,092 filed Jan. 7, 2009, which claims the benefit of U.S. Provisional Application No. 61/019,545 filed Jan. 7, 2008.

FIELD OF THE INVENTION

The embodiments of the present invention relate to lenses designed to decode three dimensional content displayed on television, movie, computer or similar screens or monitors.

BACKGROUND

Three dimensional movies for theatres have been around for decades. With technological advances, three dimensional content is being developed for television, computer monitors and home projectors. In the past, and even today, special glasses allow users to view three dimensional content. Flat paper eyeglasses using red and green film for lenses are the primary glasses being used today. However, flat paper eyeglasses are not very effective for facilitating the desired three dimension effect. In addition, the flat paper eyeglasses are not comfortable and are generally viewed as a novelty. Other flat lenses suffer from the same drawbacks.

One advancement has been the development of linear and circular polarization for decoding three dimensional content. Despite the advancement, the lens and eyeglass technology has not advanced significantly.

Thus, there is a need for lenses that take advantage of the linear and circular polarization technologies while more effectively creating the desired three dimensional effect. Advantageously, the lenses and eyeglasses should provide improved optics and contrast while providing user comfort and versatility. It is also beneficial if the lenses may be mounted into stylish frames.

SUMMARY

Accordingly, one embodiment of the present invention is a curved lens configured to decode three dimensional content comprising: a polarizing layer laminated with a polymeric material layer on one or both sides; a retarder layer laminated to a front of the polarizer layer directly or to the polymeric material to form a sheet, said retarder layer aligned to decode a desired circular polarization; and wherein a blank cut from the sheet is curved using a thermoforming process or high pressure process into a lens configured to decode three dimensional content.

Another embodiment is a lens configured to decode three dimensional content comprising: a polarizing layer laminated with a polymeric material layer on one or both sides; a retarder layer laminated to a front of the polarizer layer directly or to the polymeric material to form a sheet, said retarder layer aligned to decode a desired circular polarization; wherein a blank cut from the sheet is curved using a thermoforming process or high pressure process into an optical element configured to decode three dimensional content; and wherein said optical element is utilized in an injection molding process whereby one or more thickness layers are added to the optical element to form said lens.

Another embodiment of the present invention is a method of fabricating a curved lens configured to decode three dimensional content comprising: cutting lens blanks from sheets of material comprising: a polarizing layer laminated with a polymeric material layer on one or both sides; a retarder layer laminated to a front of the polarizer layer directly or the polymeric material, said retarder layer aligned to decode a desired circular polarization, and wherein said blanks are cut to maintain a specified alignment of a polarizing axis associated with said sheet; curving said blanks into lenses by: a. heating the blanks to a deformation temperature; and applying a vacuum suction and/or pressure; or b. applying high pressure.

In one embodiment, the retarder is a norbornene copolymer resin such as an Arton film (manufactured by JSR Corp.) or Zenor film (manufactured by Zeon corp.). Conventional adhesives (e.g., pressure sensitive adhesives) are used to bond the layers forming the lens. In one embodiment, a hard coating is applied to the front and back surfaces of the lens to allow for normal cleaning and extended life. In one embodiment, a lens thickness is between 750 and 1500 microns. In another embodiment, the lens thickness is between 250 and 1500 microns.

In an embodiment intended to decode 3D content displayed on computer screens or monitors, the blanks are cut from the sheet at a plus or minus 45 degree angle to correctly align the polarizing axis with the display of content on the television or computer screen.

Other variations, embodiments and features of the present invention will become evident from the following detailed description, drawings and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGS. **1** and **2** illustrate an exemplary specification sheet for a first lens embodiment of the present invention;

FIGS. **3** and **4** illustrate an exemplary specification sheet for a second lens embodiment of the present invention;

FIG. **5** illustrates a flow chart detailing one embodiment of manufacturing the lenses according to the embodiments of the present invention;

FIG. **6** illustrates a flow chart detailing a second embodiment of manufacturing the lenses according to the embodiments of the present invention; and

FIGS. **7a**-**7c** illustrate various television and computer screen shots showing content parameters and polarizing axis alignment of corresponding 3D lenses.

DETAILED DESCRIPTION

For the purposes of promoting an understanding of the principles in accordance with the embodiments of the present invention, reference will now be made to the embodiments illustrated in the drawings and specific language will be used to describe the same. It will nevertheless be understood that no limitation of the scope of the invention is thereby intended. Any alterations and further modifications of the inventive feature illustrated herein, and any additional applications of the principles of the invention as illustrated herein, which would normally occur to one skilled in the relevant art and having possession of this disclosure, are to be considered within the scope of the invention claimed.

Traditionally flat lenses and frames have been used in 3D glasses. One problem with the flat 3D glasses is that the lenses are distanced from the user's face and more particularly the user's eyes. Thus, light is able to enter the user's eyes from the top, bottom and side of the lenses reducing the visual acuity and contrast thereby reducing the effectiveness and comfort of the 3D experience. This is especially true at home or other locations outside of dark movie theatres. Moreover, the current one-size-fits-all approach to flat 3D eyeglasses reduces the quality of the 3D experience and in many cases results in an uncomfortable fit for most users. Accordingly, the embodiments of the present invention seek to overcome the disadvantages of the prior art flat 3D eyeglasses by creating 3D lenses and eyeglasses which are more akin to normal curved lenses and eyeglasses. Consequently, the lenses described herein are generally thicker than traditional flat 3D lenses and curved to prevent ambient light from interfering with the 3D experience and allow for better fitting glasses. Conventional flat 3D paper lenses are 0.3 to 0.4 mm thick while the embodiments of the present invention are substantially in a range of 0.75 mm to 1.5 mm. In an alternative embodiment, the lenses may be in range of 0.25 mm to 0.75 mm for use with an injection molding process as described below. The curvature further enables a better fit on the user's head. In addition, the thicker lenses enable them to be mounted into stylish frames to which people are more accustomed.

FIGS. **1-4** show specifications associated with lenses made utilizing the embodiments of the present invention. FIGS. **1** and **2** depict charts **100** and **105** listing lens specifications according to a first embodiment. The charts **100** and **105** depict dimensions, including width **110** and length **115**, polarization angle **120**, retardation angle **125**, transmittance percentage **130**. polarizing efficiency **135**, thickness **140** and retardation **145**. As shown in charts **100** and **105**, the width ranges from 495 mm to 505 mm; length from 700 mm to 710 mm; polarization angle from −1.0 degree to 1.0 degree; retardation angle from 44.0 degrees to 46.0 degrees (or 134 degrees to 136 degrees); transmittance percentage from 37.5% to 42.5% v; polarizing efficiency of 99% or greater; thickness of 1020 microns to 1080 microns (or 1.02 mm to 1.08 mm) and retardation of 110 to 150 nm. Larger ranges are possible for each of the aforementioned categories. Charts **101** and **106** shown in FIGS. **3** and **4**, respectively, depict similar lens specifications according to a second embodiment of the present invention.

Fabrication of the lenses is accomplished using lamination and thermoforming techniques. FIG. **5** shows a flow chart **200** detailing one method of fabricating lenses according to the embodiments of the present invention. At **205**, sheets are formed and, at **210**, lens blanks are cut from the sheets of material comprising: polyvinylalcohol polarizer film, polyethylene terephthalate or similar material laminated with triacetate on one or both surfaces (i.e., linear polarized film) and a retarder film laminated on a front surface thereof creating a circular polarized film. While triacetate is one material that can be used, others include polycarbonate, poly(methyl methacrylate), polystyrene, polyamide, cellulose acetate butyrate (CAB), cellulose acetate, cellulose diacetate (DAC) or cellulose triacetate (TAC), diacetate and similar stress-free (no birefringence) materials. The triacetate, diacetate or other materials may also be laminated onto the back (bottom) of the polarizer film to eliminate any unwanted retardation effects. A laminator machine forms the sheets of materials such that the axis of the polarizing film and retarder film are aligned properly to small tolerances. In one embodiment, the retarder is an Arton film (manufactured by JSR Corp.) or Zenor (manufactured by Zeon corp.). Other materials, such as polyurethanes, cellulose diacetate and polycarbonates, may also be used as the retardation film. Adhesives bind the materials together. The size of the blanks is dictated by the intended frame size. A typical size is 50 mm×70 mm. At **215**. the blanks are placed into a thermoforming machine which heats the blanks to a deformation temperature (e.g., 90° C. to 130° C.). At **220**, the heated blanks are curved using thermoforming techniques to an optically correct curved surface utilizing vacuum suction and/or pressure. To generate the desired base curve (e.g., 4, 6 and 8), a different combination of unique temperatures and times may be required. Once formed, at **225**, the curved blanks are cooled and removed from the machine. At **230**, the blanks, now lenses, can be finished with conventional lens dry cutting machines. At **235**, a hard coating is applied over the curved lenses. The hard coating allows normal cleaning and extended use while protecting the operational materials forming the lenses. The hard coat may also be applied prior to the thermoforming process by using a thermoformable hard coat material. At **240**, protective, removable sheets are applied to protect the lenses during subsequent operations including installation into frames. packaging and shipping. The protective sheets may also be applied to the sheets of the material prior to thermoforming process.

While thermoforming techniques are referenced in the flow chart **200**, extreme pressures may also be used to create the curved lenses. A machine known as the Wheel or similar machines generate extreme pressures and can be used to curve a blank into a lens. The process is known as press polishing whereby heat and pressure are applied to the blank via both sides of highly polished molds.

The triacetate and diacetate may comprises multiple layers themselves and have qualities, including transparency, low birefringence, lightweight and strength. Moreover, triacetate and diacetate are responsive to lamination and thermoforming processes and techniques as disclosed herein.

For the circular polarized lenses utilized in the embodiments of the present invention the polyvinylalcohol polarizer film is tinted and stretched in a linear direction to orient the polymer molecules. Polyiodine molecules are commonly used to allow polarizing efficiency and transmission to reach acceptable levels (e.g., >99% and >35%, respectively). Alternatively, dichroic dyes can be used to provide improved resistance to heat and humidity, but may have slightly lower polarizing efficiency and transmission. Both embodiments can produce the desired 3D decoding effect.

The curved lenses disclosed herein have numerous advantages over the flat 3D glasses of the prior art. The curved lenses provide a clearer and natural vision of 3D images with greater acuity and contrast. More particularly, the curved lenses reduce light entering the user's eyes from the side, top or bottom of the eyeglass frames thereby increasing the comfort and contrast associated with the viewed 3D images. The curved lenses can be fitted into commercial eyeglass frames to create a stylish pair of eyeglasses.

In another embodiment, as shown in the flow chart **300** of FIG. **6**, an optical element is made using the aforementioned process for use in an injection molded lens. Steps **305-330** coincide with steps **205-230** described above except that the resultant blanks are thinner than the lenses formed using the steps of flow chart **200**. At **335**, the blank becomes part of the final thicker lenses via an injection molding process. In other words, a thinner version of the lens described above is used as an optical element to make low cost injection molded polycarbonate (or polymethylmethacrylate and polymide) lenses. In this embodiment, the thermoformed optical elements are in a range of about 250-750 microns with a final injected 3D lens in a range of about 1000 to 2200 microns. Such lenses can be optically corrected with increased thickness and rigidity. In one embodiment, a back polymer layer of the lens is the same material as the injected material to provide good adhesion and reliability.

FIGS. 7*a*-7*c* show various television and computer screens depicting content and polarizing axis orientation or alignment for corresponding 3D lenses. FIG. 7*a* shows a television **400** displaying 3D content on a screen **401** configured with a vertical polarizing axis **402** and retarder axes **403**, **404** aligned at −45 and +45 degrees, respectively, relative to horizontal. Lenses **405**, **410** have a polarizing axis **415** aligned at 0 degrees (i.e., horizontal). A retardation axis **406** associated with the left lens **405** is at −45 degrees (i.e., rotated clockwise) relative to horizontal and a retardation axis **411** associated with the right lens **410** is at +45 degrees (i.e., rotated counter-clockwise) relative to horizontal. Accordingly, the left lens **405** and right lens **410** each allow only similarly polarized content emitted by the television screen to pass through thus creating the 3D effect. The configuration of lenses **405**, **410** is the same as the configuration of the movie lenses discussed above.

FIG. 7*b* shows a first computer **450** displaying 3D content on a screen **451** with a polarizing axis **452** at +45 degrees from the horizontal and retarder axes **453**, **454** aligned at 0 degrees (horizontal) and 90 degrees (vertical), respectively, from the horizontal. Lenses **455**, **460** have a polarizing axis **465** aligned at −45 degrees from the horizontal. A retardation axis **456** associated with the left lens **455** is at 90 degrees and a retardation axis **461** associated with the right lens **460** is at 0 degrees relative to horizontal.

FIG. 7*c* shows a second computer **480** displaying 3D content on a screen **481** with a polarizing axis **482** at −45 degrees from the horizontal and retarder axes **483**, **484** aligned at 0 degrees (horizontal) and 90 degrees (vertical), respectively, from the horizontal. Lenses **485**, **490** have a polarizing axis **495** aligned at +45 degrees from the horizontal. A retardation axis **486** associated with the left lens **485** is at 0 degrees and a retardation axis **491** associated with the right lens **490** is at 90 degrees relative to horizontal.

Although the invention has been described in detail with reference to several embodiments, additional variations and modifications exist within the scope and spirit of the invention as described and defined in the following claims.

We claim:

1. Glasses configured to decode three dimensional content comprising:

two lenses having:

a polarizing layer laminated with a polymeric material layer on one or both sides;

a retarder layer laminated to a front of the polarizer layer directly or to the polymeric material to form a sheet, said retarder layer configured to decode a desired circular polarization;

wherein a blank cut from a first sheet is curved into a first lens and a blank cut from a second sheet is curved into a second lens wherein together the first and second lens are able to decode three dimensional content; and

wherein the first and second sheet are configured such that:

(i) the first and second sheet have a polarizing axis of 0 degrees relative to horizontal and one sheet has a retarder axis at −45 degrees relative to horizontal and the other sheet has a retarder axis of +45 degrees relative to horizontal;

(ii) the first and second sheet have a polarizing axis of −45 degrees relative to horizontal and one sheet has a retarder axis at 0 degrees relative to horizontal and the other sheet has a retarder axis of 90 degrees relative to horizontal; or

(iii) the first and second sheet have a polarizing axis of +45 degrees relative to horizontal and one sheet has a retarder axis at 0 degrees relative to horizontal and the other sheet has a retarder axis of 90 degrees relative to horizontal.

2. The glasses of claim **1** wherein said polarizing layer, polymeric layer and retarder layer have a combined thickness of 250-1500 microns.

3. The glasses of claim **1** wherein said first and second lens in combination are configured to decode three dimensional content displayed on a computer or television monitor.

4. Glasses configured to decode three dimensional content comprising:

two optical elements having:

a polarizing layer laminated with a polymeric material layer on one or both sides;

a retarder layer laminated to a front of the polarizer layer directly or to the polymeric material to form a sheet, said retarder layer configured to decode a desired circular polarization;

wherein a blank cut from a first sheet is curved into a first optical element and a blank cut from a second sheet is curved into a second optical element;

wherein the first and second sheet are configured such that:

(i) the first and second sheet have a polarizing axis of 0 degrees relative to horizontal and one sheet has a retarder axis at −45 degrees relative to horizontal and the other sheet has a retarder axis of +45 degrees relative to horizontal;

(ii) the first and second sheet have a polarizing axis of −45 degrees relative to horizontal and one sheet has a retarder axis at 0 degrees relative to horizontal and the other sheet has a retarder axis of 90 degrees relative to horizontal; or

(iii) the first and second sheet have a polarizing axis of +45 degrees relative to horizontal and one sheet has a retarder axis at 0 degrees relative to horizontal and the other sheet has a retarder axis of 90 degrees relative to horizontal.

5. The glasses of claim **4** wherein said polarizing layer, polymeric layer and retarder layer have a combined thickness in a range of about 250-750 microns.

6. The glasses of claim **5** wherein said polarizing layer, polymeric layer, retarder layer and one or more thickness layers have a combined thickness in a range of about 1000 to 2200 microns.

7. The glasses of claim **4** wherein said pair of lenses is configured to decode three dimensional content displayed on a computer monitor.

8. A method of fabricating curved lenses configured to decode three dimensional content comprising:

cutting blanks from sheets of material comprising: a polarizing layer laminated with a polymeric material layer on one or both sides; a retarder layer laminated to a front of the polarizer layer directly or the polymeric material, said retarder layer aligned to decode a desired circular polarization, and wherein a first and second blank used to form a left and right lens are cut from first and second sheets configured such that:

(i) the first and second sheet have a polarizing axis of 0 degrees relative to horizontal and one sheet has a retarder axis at −45 degrees relative to horizontal and the other sheet has a retarder axis of +45 degrees relative to horizontal;

(ii) the first and second sheet have a polarizing axis of −45 degrees relative to horizontal and one sheet has a retarder axis at 0 degrees relative to horizontal and the other sheet has a retarder axis of 90 degrees relative to horizontal; or

(iii) the first and second sheet have a polarizing axis of +45 degrees relative to horizontal and one sheet has a retarder axis at 0 degrees relative to horizontal and the other sheet has a retarder axis of 90 degrees relative to horizontal; and

curving said first and second blanks into lenses by:

applying high pressure with controlled heating from both sides of a polished mold.

9. The method of claim **8** further comprising fabricating said lens with said polarizing layer, polymeric layer and retarder layer having a combined thickness of 250-1500 microns.

10. The method of claim **8** further comprising fabricating said lens with said polarizing layer, polymeric layer and retarder layer having a combined thickness of 250-750 microns.

11. The method of claim **10** further comprising utilizing an injection molding process to add thickness to said lenses.

12. The method of claim **11** further comprising fabricating said lens with said polarizing layer, polymeric layer, retarder layer and one or more injection molding layers having a combined thickness of 1000-2200 microns.

* * * * *

US007854506C1

(12) EX PARTE REEXAMINATION CERTIFICATE (8762nd)

United States Patent

Johnson et al.

(10) Number: US 7,854,506 C1

(45) Certificate Issued: Dec. 13, 2011

(54) CURVED LENSES CONFIGURED TO DECODE THREE-DIMENSIONAL CONTENT ON TELEVISION AND COMPUTER SCREENS

(75) Inventors: **David A. Johnson**, San Diego, CA (US); **James Pritts**, San Diego, CA (US)

(73) Assignee: **Marchon Eyewear, Inc.**, Melville, NY (US)

Reexamination Request:
No. 90/011,517, Mar. 1, 2011

Reexamination Certificate for:

Patent No.:	**7,854,506**
Issued:	**Dec. 21, 2010**
Appl. No.:	**12/604,155**
Filed:	**Oct. 22, 2009**

Related U.S. Application Data

(63) Continuation-in-part of application No. 12/495,754, filed on Jun. 30, 2009, now Pat. No. 7,946,703, which is a continuation-in-part of application No. 12/350,092, filed on Jan. 7, 2009, now Pat. No. 7,950,798.

(60) Provisional application No. 61/019,545, filed on Jan. 7, 2008.

(51) **Int. Cl.**
G02C 7/12 (2006.01)

(52) **U.S. Cl.** **351/49**; 351/163; 359/485.01

(58) **Field of Classification Search** .... None
See application file for complete search history.

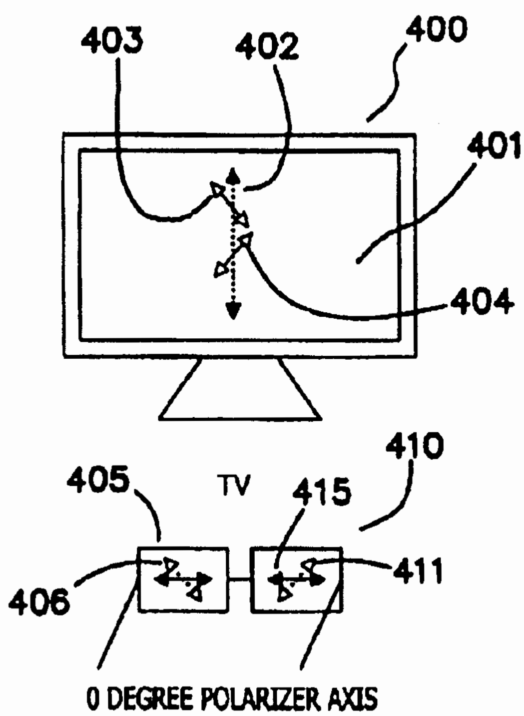
(56) **References Cited**

To view the complete listing of prior art documents cited during the proceeding for Reexamination Control Number 90/011,517, please refer to the USPTO's public Patent Application Information Retrieval (PAIR) system under the Display References tab.

Primary Examiner—Deandra Hughes

(57) **ABSTRACT**

Curved lenses configured to decode three dimensional content and method of fabricating the same. The lenses decode three-dimensional content displayed on televisions or computer monitors. Sheets from which the lenses are cut have either (i) a polarizing axis of 0 degrees relative to horizontal and one sheet has a retarder axis at −45 degrees relative to horizontal and the other sheet has a retarder axis of +45 degrees relative to horizontal; (ii) a polarizing axis of −45 degrees relative to horizontal and one sheet has a retarder axis at 0 degrees relative to horizontal and the other sheet has a retarder axis of 90 degrees relative to horizontal; or (iii) a polarizing axis of +45 degrees relative to horizontal and one sheet has a retarder axis at 0 degrees relative to horizontal and the other sheet has a retarder axis of 90 degrees relative to horizontal.



EX PARTE REEXAMINATION CERTIFICATE ISSUED UNDER 35 U.S.C. 307

NO AMENDMENTS HAVE BEEN MADE TO THE PATENT

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

The patentability of claims **1-12** is confirmed.

* * * * *

EXHIBIT B

US008100525B2

(12) **United States Patent**
Johnson et al.

(10) **Patent No.: US 8,100,525 B2**
(45) **Date of Patent: *Jan. 24, 2012**

(54) **CURVED LENSES CONFIGURED TO DECODE THREE-DIMENSIONAL CONTENT ON TELEVISION AND COMPUTER SCREENS**

(75) Inventors: **David A. Johnson**, Del Mar, CA (US); **James Pritts**, Emerald Hills, CA (US)

(73) Assignee: **MEI 3D, LLC**, Melville, NY (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **12/973,620**

(22) Filed: **Dec. 20, 2010**

(65) **Prior Publication Data**

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Related U.S. Application Data

(63) Continuation of application No. 12/604,155, filed on Oct. 22, 2009, now Pat. No. 7,854,506, which is a continuation-in-part of application No. 12/495,754, filed on Jun. 30, 2009, now Pat. No. 7,946,703, which is a continuation-in-part of application No. 12/350,092, filed on Jan. 7, 2009, now Pat. No. 7,950,798.

(60) Provisional application No. 61/019,545, filed on Jan. 7, 2008.

(51) **Int. Cl.**
G02C 7/12 (2006.01)

(52) **U.S. Cl.** **351/49**; 351/163; 359/485.01; 359/489.15

(58) **Field of Classification Search** 351/41, 351/44, 49, 163; 359/483.01, 485.01, 489.15, 359/489.16; 264/1.32

See application file for complete search history.

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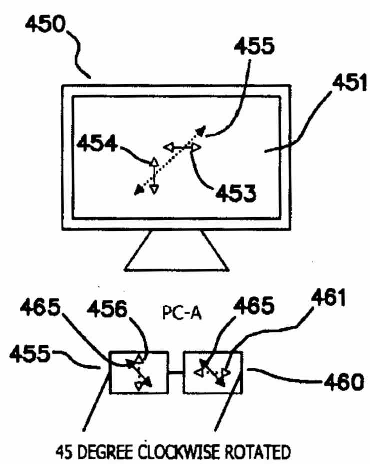
Primary Examiner — Huy K Mai

(74) *Attorney, Agent, or Firm* — Kilpatrick Townsend & Stockton LLP

(57) **ABSTRACT**

Curved lenses configured to decode three dimensional content and method of fabricating the same. The lenses decode three-dimensional content displayed on televisions or computer monitors. Sheets from which the lenses are cut have either (i) a polarizing axis of 0 degrees relative to horizontal and one sheet has a retarder axis at −45 degrees relative to horizontal and the other sheet has a retarder axis of +45 degrees relative to horizontal; (ii) a polarizing axis of −45 degrees relative to horizontal and one sheet has a retarder axis at 0 degrees relative to horizontal and the other sheet has a retarder axis of 90 degrees relative to horizontal; or (iii) a polarizing axis of +45 degrees relative to horizontal and one sheet has a retarder axis at 0 degrees relative to horizontal and the other sheet has a retarder axis of 90 degrees relative to horizontal.

6 Claims, 7 Drawing Sheets



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100

130 120 115 110 125

CHECK POINT		UNIT	SPECIFIED VALUE	ACTUAL VALURE
DIMENSIONS	WIDTH	MM	495 ~ 505	495
	LENGTH	MM	700 ~ 710	700
	θP	°	0.0±1.0	-0.1
RETARDATION	R	NM	-------	-------
	θR2	°	45.0±1.0	45.1
HUE		L	64.0±16.0	63.8
		A	-1.40±2.50	-1.70
		B	2.10±2.50	2.73
SINGLE TRANSMITTANCE		%	40.00±2.50	41.77
POLARIZING EFFICIENCY		%	99.80	99.96
THICKNESS		μM	1050.0±30.0	1046.0
PEEL STRENGTH OF RELEASE FILM		GF/25MM	-------	-------
CURL		MM	-50.0 ≥ x ≤ +50.0	1.0
UV-CUT		%	1.000	0.020
HEAT RESISTANCE			70°C / DRY / 240 HRS.	PSSED
HUMIDITY RESISTANCE			40°C / 95%RH / 240 HRS	PSSED
APPEARANCE QUALITY			-------	PSSED

135 140

FIG. 1

130 115 110 120 125 105

CHECK POINT		UNIT	SPECIFIED VALUE	ACTUAL VALURE
DIMENSIONS	WIDTH	MM	495 ~ 505	495
	LENGTH	MM	700 ~ 710	700
	θP	°	0.0± 1.0	-0.1
RETARDATION	R	NM	-------	-------
	θR2	°	135.0± 1.0	134.9
HUE		L	64.0± 16.0	64.6
		A	-1.40± 2.50	-1.70
		B	2.10± 2.50	2.73
SINGLE TRANSMITTANCE		%	40.00± 2.50	41.77
POLARIZING EFFICIENCY		%	99.80	99.96
THICKNESS		μM	1050.0± 30.0	1058.0
PEEL STRENGTH OF RELEASE FILM		GF/25MM	-------	-------
CURL		MM	-50.0 ≥ x ≤ +50.0	1.0
UV-CUT		%	1.000	0.046
HEAT RESISTANCE			70°C / DRY / 240 HRS.	PSSED
HUMIDITY RESISTANCE			40°C / 95%RH / 240 HRS	PSSED
APPEARANCE QUALITY			-------	PSSED

135 140

FIG. 2

120 110 115 125 145 101

ITEM	UNIT	DATA	STANDARD		OK/NG
			SL	SU	
DIMENSION A	MM	969.0	938.0	978.0	
DIMENSION B	MM	503.0	480.0	520.0	
POLARIZING AXIS α	°	-0.5	-1.5	1.5	
LATE RITADATION AXIS β	°	135.5	133.5	136.5	
RITADATION	NM	124.4	110.0	130.0	
THICKNESS	μM	875.0	800.0	1000.0	
POLARIZER SIDE PROTECT FILM DETACHMENT POWER	N/25MM	0.02		0.98	
RITADATION FILM SIDE PROTECT FILM DETACHMENT POWER	N/25MM	0.03		0.98	

140

FIG. 3

106

110 115 145 120

ITEM	UNIT	DATA	STANDARD		OK/NG
			SL	SU	
DIMENSION A	MM	963.0	938.0	978.0	
DIMENSION B	MM	503.0	480.0	520.0	
POLARIZING AXIS α	°	0.0	-1.5	1.5	
LATE RITADATION AXIS β	°	45.1	43.5	46.5	
RITADATION	NM	122.7	110.0	130.0	
THICKNESS	μM	882.0	800.0	1000.0	
POLARIZER SIDE PROTECT FILM DETACHMENT POWER	N/25MM	0.03	-	0.98	
RITADATION FILM SIDE PROTECT FILM DETACHMENT POWER	N/25MM	0.03	-	0.98	

125 140

FIG. 4

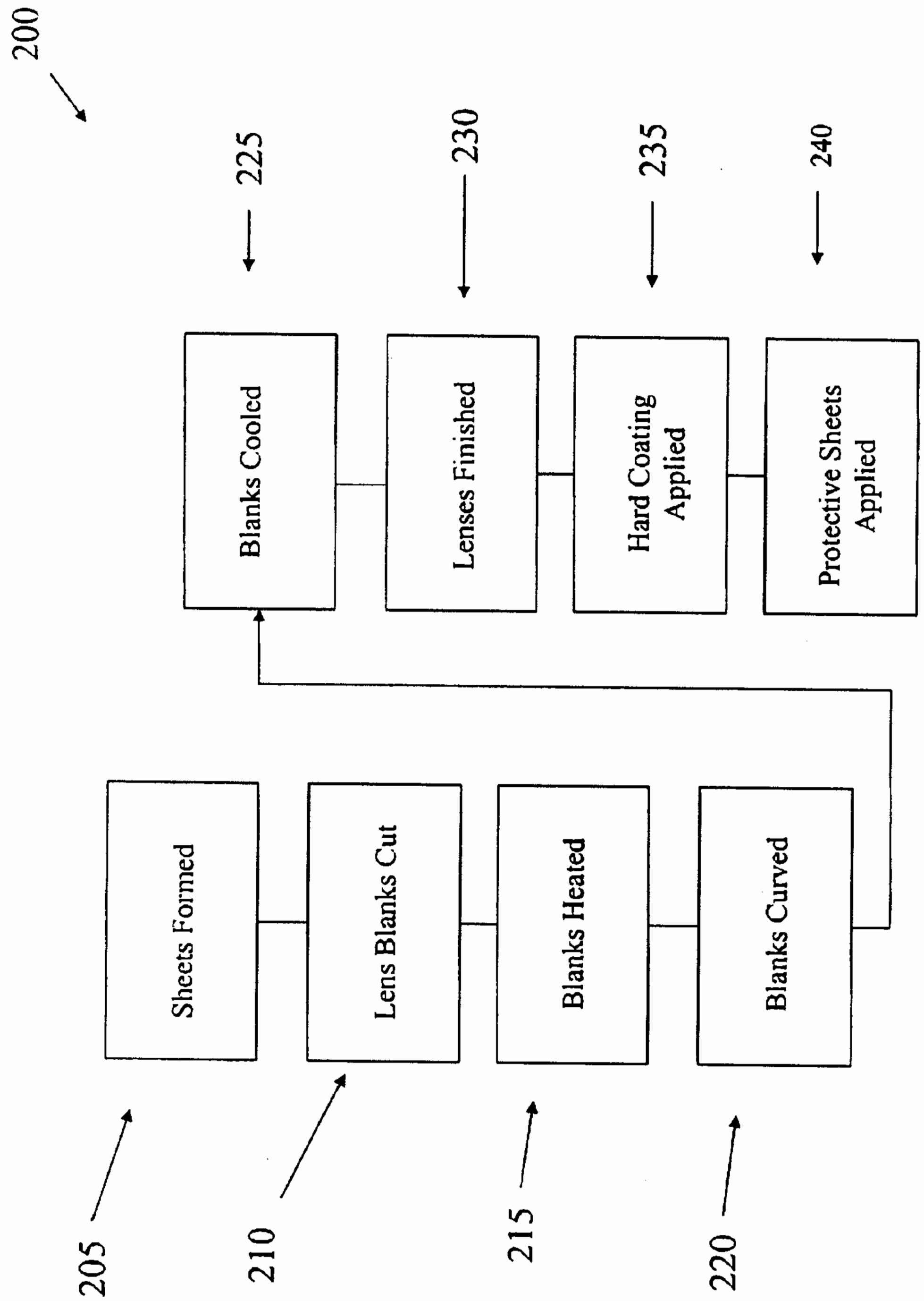
200
Sheets Formed
205
Lens Blanks Cut
210
Blanks Heated
215
Blanks Curved
220
Blanks Cooled
225
Lenses Finished
230
Hard Coating Applied
235
Protective Sheets Applied
240

Fig. 5

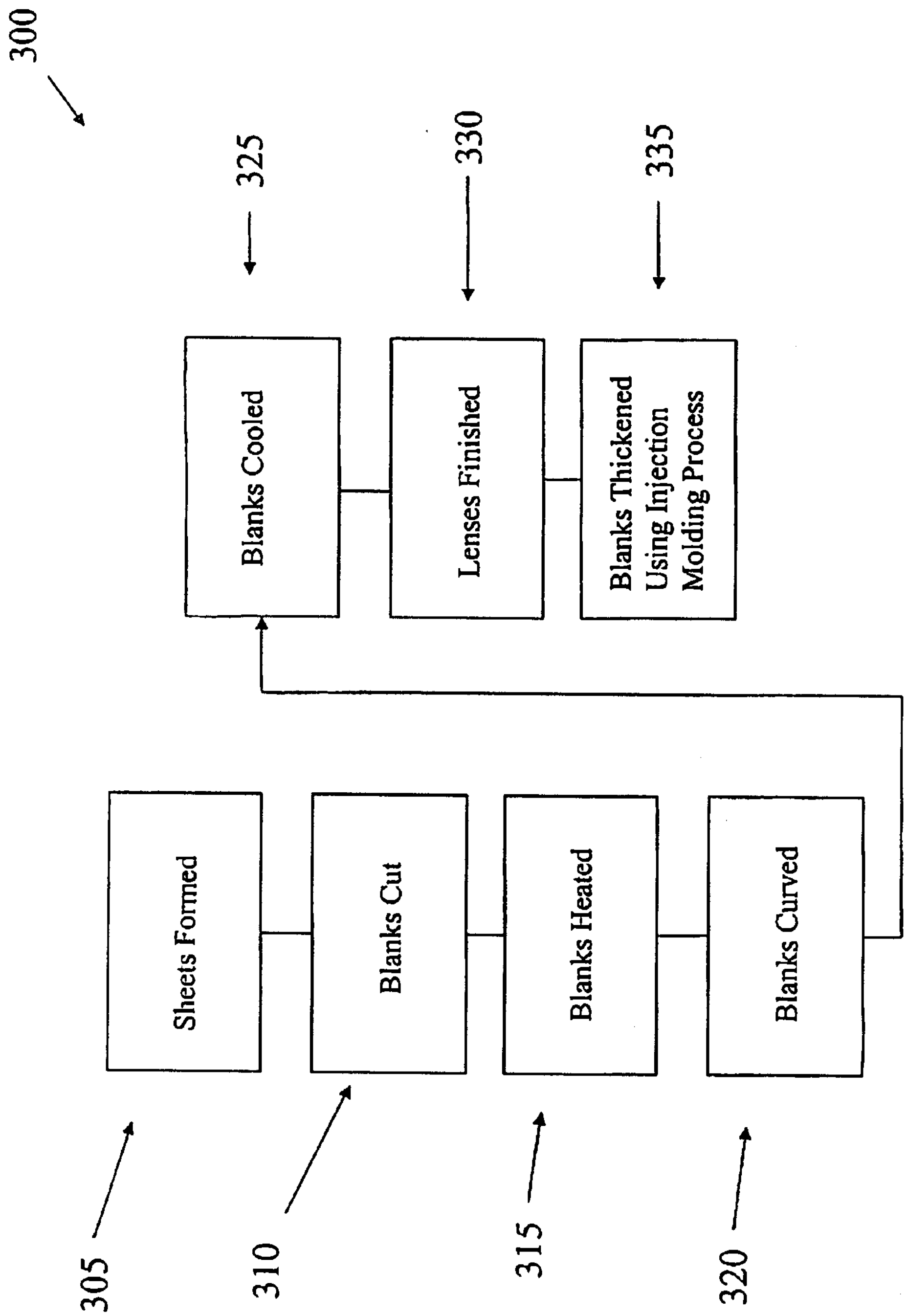
300
Sheets Formed
Blanks Cut
Blanks Heated
Blanks Curved
Blanks Cooled
Lenses Finished
Blanks Thickened Using Injection Molding Process
305
310
315
320
325
330
335

Fig. 6

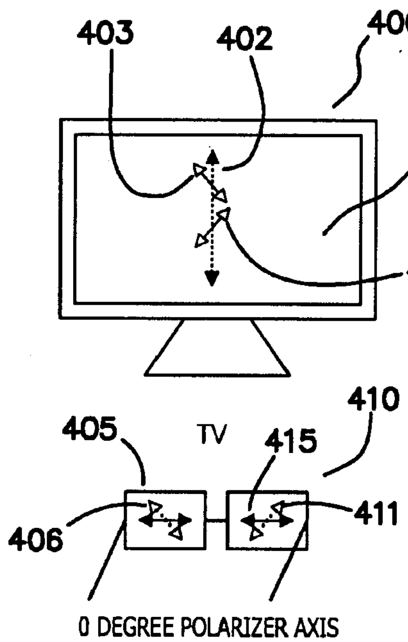

FIG. 7A

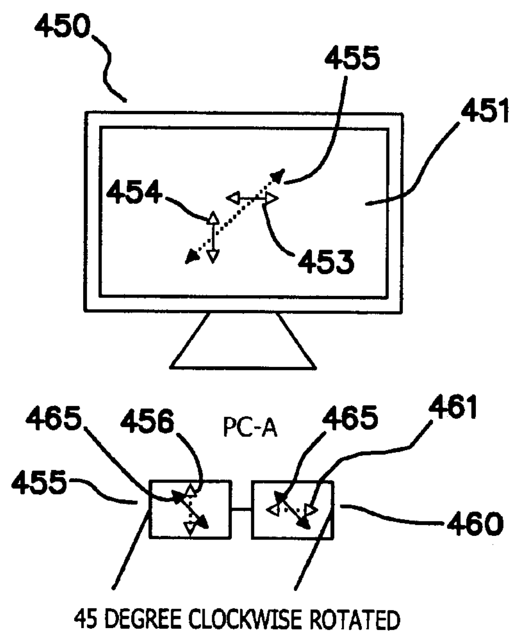

FIG. 7B

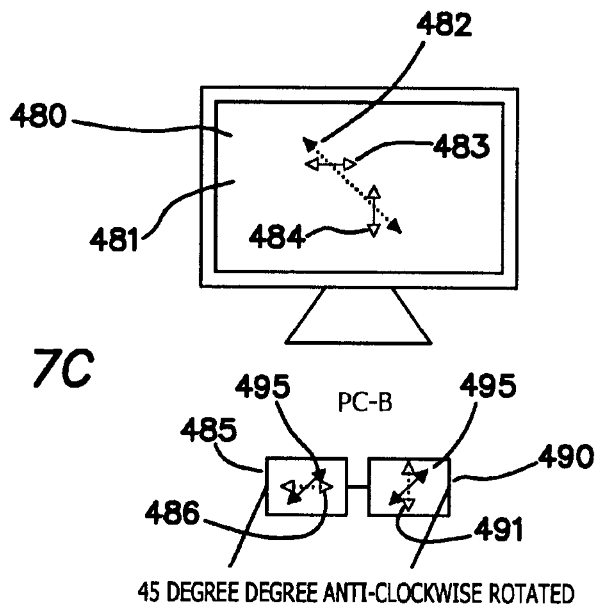

FIG. 7C

CURVED LENSES CONFIGURED TO DECODE THREE-DIMENSIONAL CONTENT ON TELEVISION AND COMPUTER SCREENS

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. application Ser. No. 12/604,155 filed Oct. 22, 2009, now U.S. Pat. No. 7,854,506 which is a continuation-in-part of U.S. application Ser. No. 12/495,754 filed Jun. 30, 2009, now U.S. Pat. No. 7,946,703 which is a continuation-in-part of U.S. patent application Ser. No. 12/350,092 filed Jan. 7, 2009, now U.S. Pat. No. 7,950,798 which claims the benefit of U.S. Provisional Application No. 61/019,545 filed Jan. 7, 2008.

FIELD OF THE INVENTION

The embodiments of the present invention relate to lenses designed to decode three dimensional content displayed on television, movie, computer or similar screens or monitors.

BACKGROUND

Three dimensional movies for theatres have been around for decades. With technological advances, three dimensional content is being developed for television, computer monitors and home projectors. In the past, and even today, special glasses allow users to view three dimensional content. Flat paper eyeglasses using red and green film for lenses are the primary glasses being used today. However, flat paper eyeglasses are not very effective for facilitating the desired three dimension effect. In addition, the flat paper eyeglasses are not comfortable and are generally viewed as a novelty. Other flat lenses suffer from the same drawbacks.

One advancement has been the development of linear and circular polarization for decoding three dimensional content. Despite the advancement, the lens and eyeglass technology has not advanced significantly.

Thus, there is a need for lenses that take advantage of the linear and circular polarization technologies while more effectively creating the desired three dimensional effect. Advantageously, the lenses and eyeglasses should provide improved optics and contrast while providing user comfort and versatility. It is also beneficial if the lenses may be mounted into stylish frames.

SUMMARY

Accordingly, one embodiment of the present invention is a curved lens configured to decode three dimensional content comprising: a polarizing layer laminated with a polymeric material layer on one or both sides; a retarder layer laminated to a front of the polarizer layer directly or to the polymeric material to form a sheet, said retarder layer aligned to decode a desired circular polarization; and wherein a blank cut from the sheet is curved using a thermoforming process or high pressure process into a lens configured to decode three dimensional content.

Another embodiment is a lens configured to decode three dimensional content comprising: a polarizing layer laminated with a polymeric material layer on one or both sides; a retarder layer laminated to a front of the polarizer layer directly or to the polymeric material to form a sheet, said retarder layer aligned to decode a desired circular polarization; wherein a blank cut from the sheet is curved using a thermoforming process or high pressure process into an optical element configured to decode three dimensional content; and wherein said optical element is utilized in an injection molding process whereby one or more thickness layers are added to the optical element to form said lens.

Another embodiment of the present invention is a method of fabricating a curved lens configured to decode three dimensional content comprising: cutting lens blanks from sheets of material comprising: a polarizing layer laminated with a polymeric material layer on one or both sides; a retarder layer laminated to a front of the polarizer layer directly or the polymeric material, said retarder layer aligned to decode a desired circular polarization, and wherein said blanks are cut to maintain a specified alignment of a polarizing axis associated with said sheet; curving said blanks into lenses by: a. heating the blanks to a deformation temperature; and applying a vacuum suction and/or pressure; or b. applying high pressure.

In one embodiment, the retarder is a norbornene copolymer resin such as an Arton film (manufactured by JSR Corp.) or Zenor film (manufactured by Zeon corp.). Conventional adhesives (e.g., pressure sensitive adhesives) are used to bond the layers forming the lens. In one embodiment, a hard coating is applied to the front and back surfaces of the lens to allow for normal cleaning and extended life. In one embodiment, a lens thickness is between 750 and 1500 microns. In another embodiment, the lens thickness is between 250 and 1500 microns.

In an embodiment intended to decode 3D content displayed on computer screens or monitors, the blanks are cut from the sheet at a plus or minus 45 degree angle to correctly align the polarizing axis with the display of content on the television or computer screen.

Other variations, embodiments and features of the present invention will become evident from the following detailed description, drawings and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGS. **1** and **2** illustrate an exemplary specification sheet for a first lens embodiment of the present invention;

FIGS. **3** and **4** illustrate an exemplary specification sheet for a second lens embodiment of the present invention;

FIG. **5** illustrates a flow chart detailing one embodiment of manufacturing the lenses according to the embodiments of the present invention;

FIG. **6** illustrates a flow chart detailing a second embodiment of manufacturing the lenses according to the embodiments of the present invention; and

FIGS. **7***a*-**7***c* illustrate various television and computer screen shots showing content parameters and polarizing axis alignment of corresponding 3D lenses.

DETAILED DESCRIPTION

For the purposes of promoting an understanding of the principles in accordance with the embodiments of the present invention, reference will now be made to the embodiments illustrated in the drawings and specific language will be used to describe the same. It will nevertheless be understood that no limitation of the scope of the invention is thereby intended. Any alterations and further modifications of the inventive feature illustrated herein, and any additional applications of the principles of the invention as illustrated herein, which would normally occur to one skilled in the relevant art and having possession of this disclosure, are to be considered within the scope of the invention claimed.

Traditionally flat lenses and frames have been used in 3D glasses. One problem with the flat 3D glasses is that the lenses are distanced from the user's face and more particularly the user's eyes. Thus, light is able to enter the user's eyes from the top, bottom and side of the lenses reducing the visual acuity and contrast thereby reducing the effectiveness and comfort of the 3D experience. This is especially true at home or other locations outside of dark movie theatres. Moreover, the current one-size-fits-all approach to flat 3D eyeglasses reduces the quality of the 3D experience and in many cases results in an uncomfortable fit for most users. Accordingly, the embodiments of the present invention seek to overcome the disadvantages of the prior art flat 3D eyeglasses by creating 3D lenses and eyeglasses which are more akin to normal curved lenses and eyeglasses. Consequently, the lenses described herein are generally thicker than traditional flat 3D lenses and curved to prevent ambient light from interfering with the 3D experience and allow for better fitting glasses. Conventional flat 3D paper lenses are 0.3 to 0.4 mm thick while the embodiments of the present invention are substantially in a range of 0.75 mm to 1.5 mm. In an alternative embodiment, the lenses may be in range of 0.25 mm to 0.75 mm for use with an injection molding process as described below. The curvature further enables a better fit on the user's head. In addition, the thicker lenses enable them to be mounted into stylish frames to which people are more accustomed.

FIGS. **1-4** show specifications associated with lenses made utilizing the embodiments of the present invention. FIGS. **1** and **2** depict charts **100** and **105** listing lens specifications according to a first embodiment. The charts **100** and **105** depict dimensions, including width **110** and length **115**, polarization angle **120**, retardation angle **125**, transmittance percentage **130**, polarizing efficiency **135**, thickness **140** and retardation **145**. As shown in charts **100** and **105**, the width ranges from 495 mm to 505 mm; length from 700 mm to 710 mm; polarization angle from −1.0 degree to 1.0 degree; retardation angle from 44.0 degrees to 46.0 degrees (or 134 degrees to 136 degrees); transmittance percentage from 37.5% to 42.5% v; polarizing efficiency of 99% or greater; thickness of 1020 microns to 1080 microns (or 1.02 mm to 1.08 mm) and retardation of 110 to 150 nm. Larger ranges are possible for each of the aforementioned categories. Charts **101** and **106** shown in FIGS. **3** and **4**, respectively, depict similar lens specifications according to a second embodiment of the present invention.

Fabrication of the lenses is accomplished using lamination and thermoforming techniques. FIG. **5** shows a flow chart **200** detailing one method of fabricating lenses according to the embodiments of the present invention. At **205**, sheets are formed and, at **210**, lens blanks are cut from the sheets of material comprising: polyvinylalcohol polarizer film, polyethylene terephthalate or similar material laminated with triacetate on one or both surfaces (i.e., linear polarized film) and a retarder film laminated on a front surface thereof creating a circular polarized film. While triacetate is one material that can be used, others include polycarbonate, poly(methyl methacrylate), polystyrene, polyamide, cellulose acetate butyrate (CAB), cellulose acetate, cellulose diacetate (DAC) or cellulose triacetate (TAC), diacetate and similar stress-free (no birefringence) materials. The triacetate, diacetate or other materials may also be laminated onto the back (bottom) of the polarizer film to eliminate any unwanted retardation effects. A laminator machine forms the sheets of materials such that the axis of the polarizing film and retarder film are aligned properly to small tolerances. In one embodiment, the retarder is an Arton film (manufactured by JSR Corp.) or Zenor (manufactured by Zeon corp.). Other materials, such as polyurethanes, cellulose diacetate and polycarbonates, may also be used as the retardation film. Adhesives bind the materials together. The size of the blanks is dictated by the intended frame size. A typical size is 50 mm×70 mm. At **215**, the blanks are placed into a thermoforming machine which heats the blanks to a deformation temperature (e.g., 90° C. to 130° C.). At **220**, the heated blanks are curved using thermoforming techniques to an optically correct curved surface utilizing vacuum suction and/or pressure. To generate the desired base curve (e.g., 4, 6 and 8), a different combination of unique temperatures and times may be required. Once formed, at **225**, the curved blanks are cooled and removed from the machine. At **230**, the blanks, now lenses, can be finished with conventional lens dry cutting machines. At **235**, a hard coating is applied over the curved lenses. The hard coating allows normal cleaning and extended use while protecting the operational materials forming the lenses. The hard coat may also be applied prior to the thermoforming process by using a thermoformable hard coat material. At **240**, protective, removable sheets are applied to protect the lenses during subsequent operations including installation into frames, packaging and shipping. The protective sheets may also be applied to the sheets of the material prior to thermoforming process.

While thermoforming techniques are referenced in the flow chart **200**, extreme pressures may also be used to create the curved lenses. A machine known as the Wheel or similar machines generate extreme pressures and can be used to curve a blank into a lens. The process is known as press polishing whereby heat and pressure are applied to the blank via both sides of highly polished molds.

The triacetate and diacetate may comprises multiple layers themselves and have qualities, including transparency, low birefringence, lightweight and strength. Moreover, triacetate and diacetate are responsive to lamination and thermoforming processes and techniques as disclosed herein.

For the circular polarized lenses utilized in the embodiments of the present invention the polyvinylalcohol polarizer film is tinted and stretched in a linear direction to orient the polymer molecules. Polyiodine molecules are commonly used to allow polarizing efficiency and transmission to reach acceptable levels (e.g., >99% and >35%, respectively). Alternatively, dichroic dyes can be used to provide improved resistance to heat and humidity, but may have slightly lower polarizing efficiency and transmission. Both embodiments can produce the desired 3D decoding effect.

The curved lenses disclosed herein have numerous advantages over the flat 3D glasses of the prior art. The curved lenses provide a clearer and natural vision of 3D images with greater acuity and contrast. More particularly, the curved lenses reduce light entering the user's eyes from the side, top or bottom of the eyeglass frames thereby increasing the comfort and contrast associated with the viewed 3D images. The curved lenses can be fitted into commercial eyeglass frames to create a stylish pair of eyeglasses.

In another embodiment, as shown in the flow chart **300** of FIG. **6**, an optical element is made using the aforementioned process for use in an injection molded lens. Steps **305-330** coincide with steps **205-230** described above except that the resultant blanks are thinner than the lenses formed using the steps of flow chart **200**. At **335**, the blank becomes part of the final thicker lenses via an injection molding process. In other words, a thinner version of the lens described above is used as an optical element to make low cost injection molded polycarbonate (or polymethylmethacrylate and polymide) lenses. In this embodiment, the thermoformed optical elements are in a range of about 250-750 microns with a final injected 3D lens in a range of about 1000 to 2200 microns. Such lenses can be optically corrected with increased thickness and rigidity. In one embodiment, a back polymer layer of the lens is the same material as the injected material to provide good adhesion and reliability.

FIGS. 7*a*-7*c* show various television and computer screens depicting content and polarizing axis orientation or alignment for corresponding 3D lenses. FIG. 7*a* shows a television **400** displaying 3D content on a screen **401** configured with a vertical polarizing axis **402** and retarder axes **403**, **404** aligned at −45 and +45 degrees, respectively, relative to horizontal. Lenses **405**, **410** have a polarizing axis **415** aligned at 0 degrees (i.e., horizontal). A retardation axis **406** associated with the left lens **405** is at −45 degrees (i.e., rotated clockwise) relative to horizontal and a retardation axis **411** associated with the right lens **410** is at +45 degrees (i.e., rotated counter-clockwise) relative to horizontal. Accordingly, the left lens **405** and right lens **410** each allow only similarly polarized content emitted by the television screen to pass through thus creating the 3D effect. The configuration of lenses **405**, **410** is the same as the configuration of the movie lenses discussed above.

FIG. 7*b* shows a first computer **450** displaying 3D content on a screen **451** with a polarizing axis **452** at +45 degrees from the horizontal and retarder axes **453**, **454** aligned at 0 degrees (horizontal) and 90 degrees (vertical), respectively, from the horizontal. Lenses **455**, **460** have a polarizing axis **465** aligned at −45 degrees from the horizontal. A retardation axis **456** associated with the left lens **455** is at 90 degrees and a retardation axis **461** associated with the right lens **460** is at 0 degrees relative to horizontal.

FIG. 7*c* shows a second computer **480** displaying 3D content on a screen **481** with a polarizing axis **482** at −45 degrees from the horizontal and retarder axes **483**, **484** aligned at 0 degrees (horizontal) and 90 degrees (vertical), respectively, from the horizontal. Lenses **485**, **490** have a polarizing axis **495** aligned at +45 degrees from the horizontal. A retardation axis **486** associated with the left lens **485** is at 0 degrees and a retardation axis **491** associated with the right lens **490** is at 90 degrees relative to horizontal.

Although the invention has been described in detail with reference to several embodiments, additional variations and modifications exist within the scope and spirit of the invention as described and defined in the following claims.

We claim:

1. Glasses configured to decode three dimensional content comprising:

two lenses having:

a polarizing layer laminated with a polymeric material layer on one or both sides;

a retarder layer laminated to a front of the polarizer layer directly or to the polymeric material to forma a sheet, said retarder layer configured to decode a desired circular polarization;

wherein a first blank cut from said sheet is curved into a first lens and a second blank cut from said sheet is curved into a second lens wherein together the first and second lenses are able to decode three dimensional circular polarized content; and

wherein the first blank and second blank are cut from said sheet such that:

the first and second blank have a polarizing axis of 0 degrees relative to horizontal and one of said first blank or second blank has a retarder axis at −45 degrees relative to horizontal and the other of said first blank or second blank has a retarder axis of +45 degrees relative to horizontal.

2. The glasses of claim **1** wherein said first and second lens in combination are configured to decode three dimensional circular polarized content displayed on a computer or television monitor.

3. Glasses configured to decode three dimensional content comprising:

two lenses having:

a polarizing layer laminated with a polymeric material layer on one or both sides;

a retarder layer laminated to a front of the polarizer layer directly or to the polymeric material to form a sheet, said retarder layer configured to decode a desired circular polarization;

wherein a first blank cut from said sheet is curved into a first lens and a second blank cut from said sheet is curved into a second lens wherein together the first and second lenses are able to decode three dimensional circular polarized content; and

wherein the first blank and second blank are cut such that:

the first blank and second blank have a polarizing axis of −45 degrees relative to horizontal and one of said first blank or second blank has a retarder axis at 0 degrees relative to horizontal and the other of said first blank or second blank has a retarder axis of 90 degrees relative to horizontal.

4. The glasses of claim **3** wherein said first and second lens in combination are configured to decode three dimensional circular polarized content displayed on a computer or television monitor.

5. Glasses configured to decode three dimensional content comprising:

two lenses having:

a polarizing layer laminated with a polymeric material layer on one or both sides;

a retarder layer laminated to a front of the polarizer layer directly or to the polymeric material to form a sheet, said retarder layer configured to decode a desired circular polarization;

wherein a first blank cut from said sheet is curved into a first lens and a second blank cut from said sheet is curved into a second lens wherein together the first and second lenses are able to decode three dimensional circular polarized content; and

wherein the first blank and second blank are cut such that:

the first blank and second blank have a polarizing axis of +45 degrees relative to horizontal and one of said first blank and second blank has a retarder axis a 0 degrees relative to horizontal and the other on of said first blank or second blank has a retarder axis of 90 degrees relative to horizontal.

6. The glasses of claim **5** wherein said first and second lens in combination are configured to decode three dimensional circular polarized content displayed on a computer or television monitor.

* * * * *

EXHIBIT C

Patent Assignment Details

NOTE:Results display only for issued patents and published applications. For pending or abandoned applications please consult USPTO staff.

Reel/Frame: 027378 / 0355 View Recorded Assignment **Pages:** 15

Recorded: 12/13/2011

Attorney Dkt #: 0515642.00004

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Total properties: 6

1 **Patent #:** 5434707 **Issue Dt:** 07/18/1995 **Application #:** 08122231 **Filing Dt:** 09/14/1993
Title: SHAPED PLASTIC LIGHT-POLARIZING LENS AND METHOD OF MAKING SAME

2 **Patent #:** 5805336 **Issue Dt:** 09/08/1998 **Application #:** 08628781 **Filing Dt:** 04/05/1996
Title: OPTICAL LENS BLANK WITH POLARIZER ALIGNED BETWEEN PLASTIC BIREFRINGENT SHEETS

3 **Patent #:** 6746631 **Issue Dt:** 06/08/2004 **Application #:** 09966179 **Filing Dt:** 09/28/2001
Publication #: US20030071965 **Pub Dt:** 04/17/2003
Title: SHAPED PLASTIC LENSES AND METHOD FOR MAKING THE SAME

4 **Patent #:** 7042641 **Issue Dt:** 05/09/2006 **Application #:** 10805759 **Filing Dt:** 03/22/2004
Publication #: US20040227995 **Pub Dt:** 11/18/2004
Title: SHAPED PLASTIC LENSES AND METHOD FOR MAKING THE SAME

5 **Patent #:** 7621750 **Issue Dt:** 11/24/2009 **Application #:** 12045976 **Filing Dt:** 03/11/2008
Title: ANTI-GLARE PROPERTIES OF POLARIZED LENS DEMONSTRATION DEVICE AND ASSOCIATED METHODS

6 **Patent #:** 7854506 **Issue Dt:** 12/21/2010 **Application #:** 12604155 **Filing Dt:** 10/22/2009
Title: CURVED LENSES CONFIGURED TO DECODE THREE-DIMENSIONAL CONTENT ON TELEVISION AND COMPUTER SCREENS

Assignor

1 STYLEMARK LLC **Exec Dt:** 12/13/2011

Assignee

1 POLAROID EYEWEAR U.S., LLC
2 SUNSHINE BLVD.
ORMOND BEACH, FLORIDA 32174

Correspondence name and address

MONTY L. ROSS
2200 ROSS AVE.
STE. 2200
DALLAS, TX 75201

Search Results as of: 03/09/2012 11:08 AM

If you have any comments or questions concerning the data displayed, contact PRD / Assignments at 571-272-3350. v.2.2.1
Web interface last modified: Jan 26, 2012

PATENT ASSIGNMENT

Electronic Version v1.1
Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Stylemark LLC	12/13/2011

RECEIVING PARTY DATA

Name:	Polaroid Eyewear U.S., LLC
Street Address:	2 Sunshine Blvd.
City:	Ormond Beach
State/Country:	FLORIDA
Postal Code:	32174

PROPERTY NUMBERS Total: 11

Property Type	Number
Patent Number:	7621750
Application Number:	61475871
Application Number:	61475885
Application Number:	61475901
Application Number:	61497265
Patent Number:	5434707
Patent Number:	5805336
Patent Number:	6746631
Patent Number:	7042641
Patent Number:	7854506
Application Number:	61496651

CH $440.00 7621750

CORRESPONDENCE DATA

Fax Number: (214)756-8519
Phone: 214-740-8519
Email: chewitt@lockelord.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.

Correspondent Name:	Monty L. Ross
Address Line 1:	2200 Ross Ave.
Address Line 2:	Ste. 2200
Address Line 4:	Dallas, TEXAS 75201

ATTORNEY DOCKET NUMBER:	0515642.00004
NAME OF SUBMITTER:	Monty L. Ross

Total Attachments: 13
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RECORDABLE PATENT ASSIGNMENT

This Recordable Patent Assignment (this "Assignment") is signed this 13th day of December, 2011, and is made by StyleMark LLC, a Florida limited liability company ("Assignor"), which is the successor to StyleMark, Inc., a Florida corporation, pursuant to a conversion from a regular corporation to a limited liability company under Florida law as evidenced by the certified copy of the Certificate of Conversion that is attached as Exhibit A to this Assignment, in favor of Polaroid Eyewear U.S., LLC, a Florida limited liability company ("Assignee").

In exchange for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and pursuant to the IP Assignment and Sharing Agreement between Assignor and Assignee dated December 13, 2011, the parties agree as follows:

1. Assignor hereby assigns, transfers, and conveys to Assignee all of Assignor's rights, title and interests, throughout the world, in and to the patents and patent applications listed on the attached Schedule of Patents (the "Patents"), including without limitation the right to sue for and to recover damages and other remedies in respect of any infringement of the Patents on or subsequent to the date of the IP Assignment and Sharing Agreement. Assignee hereby accepts the foregoing assignment.

2. Assignor hereby authorizes and requests the officials of the U.S. Patent and Trademark Office and the corresponding officials of any and all other countries worldwide to record this assignment and issue all patents, certificates, and similar documents related to the Patents in the name of Assignee or Assignee's designee.

3. Assignor also agrees that it will reasonably cooperate with Assignee to fully carry out the terms of this Assignment, including, but not limited to, executing and delivering, or causing to be executed and delivered, any additional documents, oaths, declarations, and instruments that Assignee reasonably determines may be necessary to perfect, vest, give effect to and record Assignee's ownership of any rights in the Patents and notarization or other legalization of any such additional documents, oaths, declarations, and instruments.

IN WITNESS WHEREOF, the Assignor has duly executed this Assignment to be, effective as of the date set forth above.

ASSIGNOR:

STYLEMARK LLC

Address: 2 Sunshine Blvd.
Ormond Beach, Florida 32174

By: ______________________

Printed Name: Mark A. Asik

Title: President

NOTARIZATION

STATE OF TEXAS)

COUNTY OF DALLAS)

On this 13th day of December, 2011, before me personally appeared Mark A. Ascik having the title of President of STYLEMARK LLC, known by me to be the person of the above name, who signed the foregoing instrument in his/her capacity as the President of STYLEMARK LLC, and acknowledged the same to be his/her own free act and deed on behalf of STYLEMARK LLC, and for the purpose therein set forth.

Ricardo Santiago
Notary Public

My Commission Expires:

RICARDO SANTIAGO
Notary Public,
State of Texas
Comm. Exp. 08-23-12

ACKNOWLEDGED AND ACCEPTED BY ASSIGNEE:

POLAROID EYEWEAR U.S., LLC

Address: 2 Sunshine Blvd.
Ormond Beach, Florida 32174

By: ______________________

Printed Name: Mark L. Sisk

Title: President

SCHEDULE OF PATENTS

COUNTRY	TITLE	SERIAL NO.	FILE DATE	PATENT NO./ PUB NO.	ISSUE DATE/PUB. DATE
U.S.	Anti-glare properties of polarized lens demonstration device and associated methods	12/045,976	2008-03-11	7,621,750	2009-11-24
U.S.	Apparatus and Method for Shaping Light Polarizers	61/475,871			
U.S.	Apparatus and Method for Shaping Light Polarizers	61/475,885			
U.S.	Apparatus and Method for Shaping Light Polarizers	61/475,901	2011-04-15		
U.S.	Polarized Light Display and Viewing System	61/497,265	2011-04-15		
Germany	SHAPED PLASTIC LENSES AND METHOD FOR MAKING THE SAME	02778367.9	2002-09-26	60218709.5	2007-03-07
France	SHAPED PLASTIC LENSES AND METHOD FOR MAKING THE SAME	02778367.9	2002-09-26	1429913	2007-03-07
Great Britain	SHAPED PLASTIC LENSES AND METHOD FOR MAKING THE SAME	02778367.9	2002-09-26	1429913	2007-03-07
U.S.	SHAPED PLASTIC LIGHT-POLARIZING LENS AND METHOD OF MAKING SAME	08/122,231	1993-09-14	5,434,707	1995-07-18
U.S.	OPTICAL LENS BLANK WITH POLARIZER ALIGNED BETWEEN PLASTIC BIREFRINGENT SHEETS	08/628,781	1996-04-05	5,805,336	1998-09-08
U.S.	SHAPED PLASTIC LENSES AND METHOD FOR MAKING THE SAME	09/966,179	2004-06-08	6,746,631	2001-09-28
U.S.	SHAPED PLASTIC LENSES AND METHOD FOR MAKING THE SAME	10/805,759	2004-03-22	7,042,641	2006-05-09
U.S.	CURVED LENSES CONFIGURED TO DECODE THREE DIMENSIONAL CONTENT ON TELEVISIONS AND COMPUTER SCREENS	12/604,155	2009-10-22	7,854,506[1]	2010-12-21
U.S.	FRAME FOR EYEGLASSES	61/496,651	2011-06-14		

1 US Patent 7,854,506 is not being assigned with this Agreement. The rights to Reexamination Control No. 90011517 are included as part of Assigned Patents.

EXHIBIT A

CERTIFICATE OF CONVERSION
FROM STYLEMARK INC.
TO STYLEMARK LLC

FLORIDA DEPARTMENT OF STATE
Division of Corporations

December 9, 2011

C T CORPORATION SYSTEM

TALLAHASSEE, FL

Re: Document Number L11000138854

The Certificate of Conversion and Articles of Organization were filed December 9, 2011, with an organizational date deemed effective July 5, 1974, for STYLEMARK, LLC, the resulting Florida Limited Liability Company.

The certification you requested is enclosed.

To maintain "active" status with the Division of Corporations, an annual report must be filed yearly between January 1st and May 1st beginning in the year following the file date or effective date indicated above. If the annual report is not filed by May 1st, a $400 late fee will be added. **It is your responsibility to remember to file your annual report in a timely manner.**

A Federal Employer Identification Number (FEI/EIN) will be required when this report is filed. Contact the IRS at 1-800-829-4933 for an SS-4 form or go to www.irs.gov.

Should you have any further questions concerning this matter, please feel free to call (850) 245-6051, the Registration Filing Section.

Buck Kohr
Regulatory Specialist II
Division of Corporations

Letter Number: 211A00027576

State of Florida

Department of State

I certify from the records of this office that STYLEMARK, LLC, is a limited liability company organized under the laws of the State of Florida, filed on December 9, 2011, with an organizational date deemed effective July 5, 1974.

The document number of this company is L11000138854.

I further certify that said company has paid all fees due this office through December 31, 2011, and its status is active.

Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this the
Ninth day of December, 2011

GREAT SEAL OF THE STATE OF FLORIDA
IN GOD WE TRUST

Kurt S. Browning
Secretary of State

CR2EO22 (1-11)

State of Florida

Department of State

I certify the attached is a true and correct copy of the Certificate of Conversion and Articles of Organization, filed on December 9, 2011, with an organizational date deemed effective July 5, 1974, for STYLEMARK, LLC, the resulting Florida Limited Liability Company, as shown by the records of this office.

The document number of this entity is L11000138854.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Ninth day of December, 2011

Kurt S. Browning
Secretary of State

GREAT SEAL OF THE STATE OF FLORIDA
IN GOD WE TRUST

CR2EO22 (1-11)

COVER LETTER

TO: Registration Section
Division of Corporations

SUBJECT: StyleMark, LLC
(Name of Resulting Florida Limited Company)

The enclosed Certificate of Conversion, Articles of Organization, and fees are submitted to convert an "Other Business Entity" into a "Florida Limited Liability Company" in accordance with s. 608.439, F.S.

Please return all correspondence concerning this matter to:

Carrie Wright
(Contact Person)

Locke Lord Bissell & Liddell, LLP
(Firm/Company)

2200 Ross Avenue, Suite 2200
(Address)

Dallas, TX 75201
(City, State and Zip Code)

kmason@stylemark.net
E-mail address: (to be used for future annual report notifications)

For further information concerning this matter, please call:

Kirk A. Mason at (386) 615-5789
(Name of Contact Person) (Area Code and Daytime Telephone Number)

Enclosed is a check for the following amount:

$150.00 Filing Fees ($25 for Conversion & $125 for Articles of Organization)	$155.00 Filing Fees and Certificate of Status	$180.00 Filing Fees and Certified Copy	$185.00 Filing Fees, Certified Copy, and Certificate of Status

STREET ADDRESS:
Registration Section
Division of Corporations
Clifton Building
2661 Executive Center Circle
Tallahassee, FL 32301

MAILING ADDRESS:
Registration Section
Division of Corporations
P. O. Box 6327
Tallahassee, FL 32314

FILED
SECRETARY OF STATE
DIVISION OF CORPORATIONS
11 DEC -9 PM 2:28

FILED
SECRETARY OF STATE
DIVISION OF CORPORATIONS
11 DEC -9 PM 2:28

Certificate of Conversion
For
"Other Business Entity"
Into
Florida Limited Liability Company

This Certificate of Conversion **and attached Articles of Organization** are submitted to convert the following "Other Business Entity" into a Florida Limited Liability Company in accordance with s.608.439, Florida Statutes.

1. The name of the "Other Business Entity" immediately prior to the filing of this Certificate of Conversion is:

StyleMark, Inc.
(Enter Name of Other Business Entity)

2. The "Other Business Entity" is a corporation
(Enter entity type. Example: corporation, limited partnership, general partnership, common law or business trust, etc.)

first organized, formed or incorporated under the laws of Florida
(Enter state, or if a non-U.S. entity, the name of the country)

on 07/05/1974
(Enter date "Other Business Entity" was first organized, formed or incorporated)

3. If the jurisdiction of the "Other Business Entity" was changed, the state or country under the laws of which it is now organized, formed or incorporated:

____

4. The name of the Florida Limited Liability Company as set forth in the attached Articles of Organization:

StyleMark, LLC
(Enter Name of Florida Limited Liability Company)

5. If not effective on the date of filing, enter the effective date: ________________
(The effective date: 1) cannot be prior to nor more than 90 days after the date this document is filed by the Florida Department of State; AND 2) must be the same as the effective date listed in the attached Articles of Organization, if an effective date is listed therein.)

6. The conversion is permitted by the applicable law(s) governing the other business entity and the conversion complies with such law(s) and the requirements of s.608.439, F.S., in effecting the conversion.

7. The "Other Business Entity" currently exists on the official records of the jurisdiction under which it is currently organized, formed or incorporated.

Signed this 8th day of December 2011.

Signature of Member or Authorized Representative of Limited Liability Company:
Individual signing affirms that the facts stated in this document are true. Any false information constitutes a third degree felony as provided for in s.817.155, F.S.

Signature of Member or Authorized Representative: [signature]
Printed Name: Mark A. Asick Title: Authorized Representative

Signature(s) on behalf of Other Business Entity: Individual(s) signing affirm(s) that the facts stated in this document are true. Any false information constitutes a third degree felony as provided for in s.817.155, F.S. [See below for required signature(s).]

Signature: [signature]
Printed Name: Mark A. Asick Title: President

Signature: ______
Printed Name: ______ Title: ______

Signature: ______
Printed Name: ______ Title: ______

Signature: ______
Printed Name: ______ Title: ______

Signature: ______
Printed Name: ______ Title: ______

Signature: ______
Printed Name: ______ Title: ______

If Florida Corporation:
Signature of Chairman, Vice Chairman, Director, or Officer.
If Directors or Officers have not been selected, an Incorporator must sign.

If Florida General Partnership or Limited Liability Partnership:
Signature of one General Partner.

If Florida Limited Partnership or Limited Liability Limited Partnership:
Signatures of ALL General Partners.

All others:
Signature of an authorized person.

Fees:

Certificate of Conversion:	$25.00
Fees for Florida Articles of Organization:	$125.00
Certified Copy:	$30.00 (Optional)
Certificate of Status:	$5.00 (Optional)

ARTICLES OF ORGANIZATION FOR FLORIDA LIMITED LIABILITY COMPANY

FILED
SECRETARY OF STATE
DIVISION OF CORPORATIONS
11 DEC -9 PM 2:28

ARTICLE I - Name:
The name of the Limited Liability Company is:

StyleMark, LLC
(Must end with the words "Limited Liability Company, the abbreviation "L.L.C.," or the designation "LLC.")

ARTICLE II - Address:
The mailing address and street address of the principal office of the Limited Liability Company is:

Principal Office Address:	Mailing Address:
2 Sunshine Blvd.	2 Sunshine Blvd.
Ormond Beach, FL 32174	Ormond Beach, FL 32174

ARTICLE III - Registered Agent, Registered Office, & Registered Agent's Signature:
(The Limited Liability Company cannot serve as its own Registered Agent. You must designate an individual or another business entity with an active Florida registration.)

The name and the Florida street address of the registered agent are:

Mark A. Ascik
Name

2 Sunshine Blvd.
Florida street address (P.O. Box NOT acceptable)

Ormond Beach, FL 32174
City, State, and Zip

Having been named as registered agent and to accept service of process for the above stated limited liability company at the place designated in this certificate, I hereby accept the appointment as registered agent and agree to act in this capacity. I further agree to comply with the provisions of all statutes relating to the proper and complete performance of my duties, and I am familiar with and accept the obligations of my position as registered agent as provided for in Chapter 608, F.S.

[signature]
Registered Agent's Signature (REQUIRED)

(CONTINUED)

ARTICLE IV- Manager(s) or Managing Member(s):
The name and address of each Manager or Managing Member is as follows:

Title: "MGR" = Manager "MGRM" = Managing Member	Name and Address:
MGR	Mark A. Asolk 2 Sunshine Blvd. Ormond Beach, FL 32174
MGR	Warren A. Stephens 2 Sunshine Blvd. Ormond Beach, FL 32174
MGR	Richard H. Blank, Jr. 2 Sunshine Blvd. Ormond Beach, FL 32174
MGR	Noel Strauss 2 Sunshine Blvd. Ormond Beach, FL 32174

(Use attachment if necessary)

ARTICLE V: Effective date, if other than the date of filing: ____________ (OPTIONAL)

(The effective date: 1) cannot be prior to nor more than 90 days after the date this document is filed by the Florida Department of State; AND 2) must be the same as the effective date listed in the attached Certificate of Conversion, if an effective date listed therein.)

REQUIRED SIGNATURE:

Signature of a member or an authorized representative of a member.

(In accordance with section 608.408(3), Florida Statutes, the execution of this document constitutes an affirmation under the penalties of perjury that the facts stated herein are true. I am aware that any false information submitted in a document to the Department of State constitutes a third degree felony as provided for in s.817.155, F.S.)

By: Mark A. Asolk, Authorized Representative
Typed or printed name of signee