

# Orthokeratology (Ortho-K) Correct Your Eyesight While You Sleep



**Dr. Berke Awarded  
4th US Patent For  
Custom Ortho-K Lens Designs**



(12) **United States Patent**  
Berke (10) Patent No.: **US 10,514,558 B2**  
(45) Date of Patent: **Dec. 24, 2019**

(54) **ORTHOKERATOLOGICAL LENS-EYE SYSTEM FOR PERSONAL REMODELING.**  
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(\* \*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 30 days.  
(21) Appl. No.: **15/613,846**  
(22) Filed: **Jun. 2, 2017**  
(65) **Prior Publication Data**  
US 2018/0024581 A1 Jun. 25, 2018

**Related U.S. Application Data**  
(60) Provisional application No. 62/365,326, filed on Jul. 21, 2016.  
(51) Int. Cl. (2006.01)  
**G02C 7/02**  
**G02C 7/04**  
**G02C 7/06**  
(52) U.S. Cl. (2013.01)  
**G02C 7/02** (2013.01); **G02C 7/04** (2013.01); **G02C 7/06** (2013.01)  
(58) Field of Classification Search  
CPC: G02C 7/02, G02C 7/04, G02C 7/06; F02D 7/02, F02D 7/04, F02D 7/06; A61H 3/125, A61H 3/1015, A61H 3/107

USPC: 359/159.23, 239, 161, 160 R, 169 L1, 177, 351.247, 246  
See application file for complete search history.  
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Primary Examiner—*The Law Firm of Sheppard Mullin Richter & Hampton LLP*  
(57) **ABSTRACT**  
An orthokeratological contact lens includes a treatment zone extending radially outward from a center point and returns and alignment zones extending radially outward from the treatment zone. The returns zone is shaped to create an empty topography volume between the lens and the cornea when the lens is applied to the cornea, whereas the alignment zone is shaped based on a target treatment curve as to center collagen fibers located in a stratum of a cornea to shorten and flatten the cornea in the treatment zone and to lengthen and steepen it in the return zone when the rigid contact lens makes contact with the cornea without putting excessive pressure on or compressing the cornea. The treatment curve being based on a difference between a first eye height determined when a lens is applied to the cornea and a second eye height determined when no lens is applied to the cornea.  
9 Claims, 10 Drawing Sheets

**Ortho-K is the non-surgical, FDA approved, overnight contact lens wear procedure that eliminates the need for glasses or daytime contacts.**

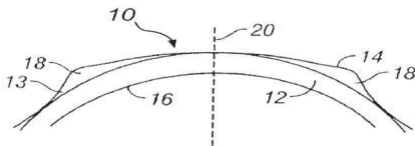
If you are unable to wear contacts due to dry eyes or allergies; if you dislike glasses or contacts or you can't wear them comfortably at your job or hobby environment; if you would like to swim, ski, surf or do any sport or recreation without needing daytime corrective lenses; or you are not desirous or ready for refractive surgery, then you will love Ortho-K.

Dr. Berke is unique and passionate about Ortho-K and has designed and patented his tailor-made lenses and method of fitting just for your eyes. They hold the moniker **One-Lens-One-Eye®** and are custom fit like no other!

See clearly all day and do any of the things you would like to do without the need for glasses, contacts or refractive laser surgery.

**Be yourself** and open doors to your life's potential and passion.

- **Stop the progression of myopia up to 85% of the time!**
- **Give kids better vision for life**
- **Reduce future eye health problems**
- **Gentle, Safe, Effective & FDA Approved**



**One-Lens-One-Eye®**

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