Title (en)

Apparatus for Improving LASIK flap adherence

Title (de)

Vorrichtung zur verbesserten Adhäsion einer LASIK-Hornhautklappe

Title (fr)

Dispositif pour assurer l'adhérance amélioré d'un clapet cornéen à LASIK

Publication

EP 0997122 A8 20020731 (EN)

Application

EP 99308614 A 19991029

Priority

US 18233498 A 19981029

Abstract (en)

[origin: US6019754A] A method and apparatus, which provides improved conditioning and adherence of a resected corneal flap into its original position on the eye following the laser ablation step of LASIK vision correction surgery is disclosed. The method comprises resecting at least a portion of at least one of a person's eyes to expose an inner layer of said cornea, which is sculpted using radiation from a laser beam to produce a desired corneal topography. After the desired topography is achieved, the corneal flap is floated back into its proper position in a sterile solution and to remove any debris associated with the sculpting step from the patient's eye. After the corneal flap is repositioned, a flap drying apparatus is used to dry the repositioned corneal flap by applying filtered, compressed air at a flow rate substantially between zero and 2.5 liters per minute at an appropriate pressure to draw the sterile solution away from the corneal flap/inner corneal layer interface without disturbing the positioned or alignment of the repositioned corneal flap. An ophthalmic surgeon observes the corneal flap using a microscope while applying the filtered, compressed air to the corneal flap, for substantially between 15 and 30 seconds, paying particular attention to a gutter area surrounding corneal flap. The surgeon terminates the application of the filtered, compressed air when the gutter area is observed to be substantially dry.

IPC 1-7

A61F 9/01

IPC 8 full level

A61F 9/01 (2006.01); A61B 19/00 (2006.01); A61C 17/022 (2006.01)

CPC (source: EP US)

A61F 9/008 (2013.01 - EP US); **A61F 9/00804** (2013.01 - EP US); A61B 2090/401 (2016.02 - EP US); A61C 17/022 (2013.01 - EP US); A61F 2009/00872 (2013.01 - EP US); A61F 2009/00882 (2013.01 - EP US)

Cited by

CN103167852A; DE102009009382A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

US 6019754 A 20000201; CA 2287790 A1 20000429; DE 69902732 D1 20021010; EP 0997122 A1 20000503; EP 0997122 A8 20020731; EP 0997122 B1 20020904

DOCDB simple family (application)

US 18233498 A 19981029; CA 2287790 A 19991029; DE 69902732 T 19991029; EP 99308614 A 19991029