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(54) Title: CORNEAL CROSS-LINKING THERAPEUTICS DELIVERY DEVICE

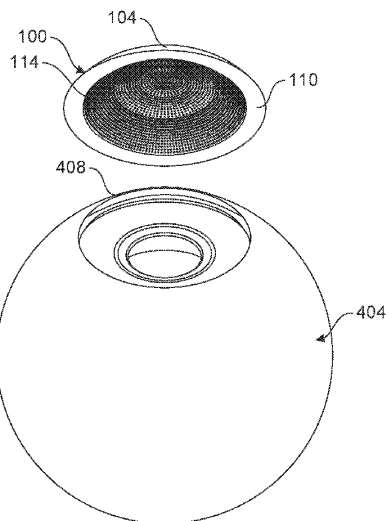


FIG. 4A

(57) Abstract: A device designed to assist in corneal cross-linking procedures. The device includes a body portion with a top and bottom side, the latter featuring a concave portion designed to be placed on a cornea's epithelial layer for uniform pressure distribution. The device incorporates a plurality of 50- micron high epithelial spikes positioned on the bottom side, aimed at creating micro-perforations in the corneal epithelial layer when pressure is applied to the device's top side. By creating these micro-perforations, the device facilitates improved penetration of therapeutics, such as riboflavin, in corneal cross-linking procedures. The device, fashioned from silicone and shaped like a contact lens, represents an innovative application of microneedle technology in the field of ophthalmology, addressing key limitations associated with traditional methods of drug delivery to the eye.