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[Continued on next page]

(54) **Title:** PORTABLE OPTICS ADAPTER TO DIGITAL CAMERA FOR FUNDUS IMAGING

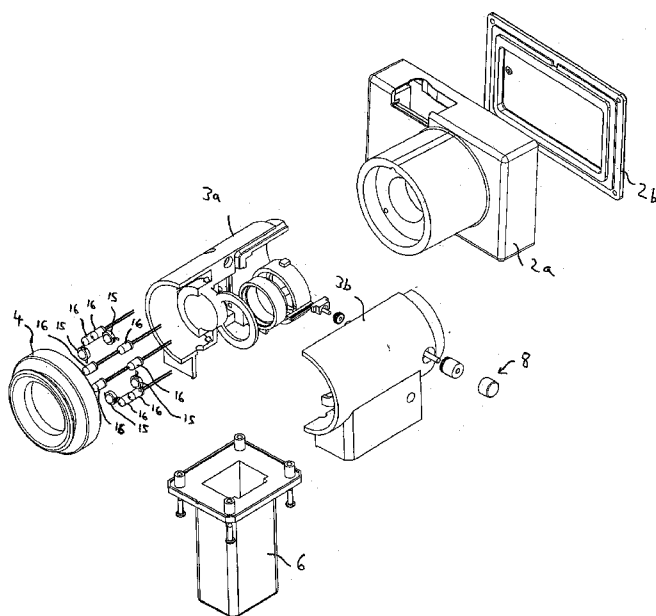


Fig. 2(b)

(57) **Abstract:** An adapter for interfacing an independent off-the-shelf commercial camera that allows the camera to take a retinal fundus image of an eye. The adapter defines an optical path between the camera and an aperture directed at the fundus. The adapter contains at least one each of both an infrared as well as a visible light source. The infrared source(s) enable the camera to auto-focus without affecting the eye, and the visible light source(s) provide illumination when capturing an image. The light sources are arranged off the optical path but direct light towards the aperture along a line which converges to the optical path. The optical path includes an aspheric and an achromatic lens that reduce the two major aberrations: spherical and chromatic. A sharp image is obtained without using a third lens. The infrared light source(s) generate at least a portion with a wavelength range below 950nm.



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