

# THE COTTER MEDICAL HISTORY MUSEUM



## Keeler Vertex (UK) dioptrescope

(c 1941-45)

This instrument is in effect a modified microscope and was developed to allow opticians to determine the corrective power of any unlabelled spectacle lens. A target (usually a cross-hair) is brought into focus when viewed through a standard corrective lens (as used in a normal eye examination), this establishes the focal point. The unknown lens (or combination of lenses) is then inserted into the light-path and the instrument refocused. The Vernier scale of the focus knob then gives the optician either a positive, neutral or negative reading in relation to the standard lens. Equivalent instruments were manufactured by many of the major optical companies with the first patent (although called a 'vertex refractionometer') being issued to Carl Zeiss in 1914. A combination of improved optics and electronics has led to the development of modern, smaller instruments which are able to provide rapid, accurate corrective values without reference to a standard corrective lens.