

## HERING'S COLOUR BLIND APPARATUS

*Maker:* R. Rothe, Leipzig  
*Year made:* c. 1900

*l x w x h:* 40 x 46 x 19 cm

Ewald Hering invented this apparatus for the detection of color-blindness. The subject looked down the main tube and saw a circular field, half red and half green. By moving reflecting screens the subject could change the hue of one half, the brightness of the other, and the saturation of both together. Subjects were asked to make the two halves match. If the match could be accomplished, the subject was deemed to be colour-blind. Boring, (1957).



Ewald Hering (1834 - 1918) held a theory of color vision that rivaled that of Helmholtz. Visual sensations, according to Hering's view, were due to three pairs of antagonistic processes in the optic system - one being catabolic, the other anabolic - yielding white - black; yellow - blue; and red - green respectively. Helmholtz had advocated the three fibre, three color theory.

R. Rothe and Hering invented the colour-blind apparatus while they both lived and worked in Prague, circa 1890. Hering succeeded Purkinje in the chair of physiology at Prague from 1870-1895. R. Rothe began his career as a scientific instrument maker in Prague and moved to Leipzig later in his career.

*In the literature:*

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Hering, Ewald. (1890). Zur Diagnostik der Farbenblindheit, *Arch. F. Ophthalm.* 36: 217-233

Boring, E. G. (1942). *Sensation and Perception in the History of Experimental Psychology*. New York: Appleton - Century. pp. 182-197.

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