

## VERTICAL KYMOGRAPH

*Maker, source:* E. Zimmermann, Leipzig

*Marked:* 1907, No. 271

*l x w x h;* 36 x 19 x 64 cm

"An instrument used to record the temporal variations of any physiological or muscular process; it consists essentially of a revolving drum, bearing a record sheet (usually of smoked paper) on which a stylus or penpoint travels to and fro at right angles to the motion of the cylinder; the drum is rotated by a mechanism at a presumably uniform rate, or the rate is indicated by a time marker which registers on the sheet. In some types the record sheet surrounds the drum, which rotates spirally, to allow a continuous record at different levels of the sheet; in other cases the record sheet is a long roll." Warren (1934).



Physiologists first used Kymographs for recording blood pressure. Experimental psychologists adopted the kymograph as an instrument for recording various time-related events: response times, stimulus presentations, muscle exertion and tuning fork vibrations. The three models on display in this museum were mechanically driven and a "governor" regulated the speed of the brass drum.

The preparation of the smoked paper, an art in itself, consisted of placing a blank sheet of paper over a stand and exposing it to petroleum lantern fumes. The experimenter then wrapped the smoked paper around the drum ready for the touch of the inscriber. The signal marker would contact the drum as it rotated, leaving a line record. Following the recording, the experimenter varnished the paper for permanent keeping. (Titchener, 1918)

*In the Literature:*

Titchener, E. B. (1918). *Experimental Psychology, a Manual of Laboratory Practice: Volume I, Quantitative Experiments, Part II. Instructor's Manual*. New York: Macmillan. pp. 172-176.