a potentiometer to a digital voltmeter. The heights of peaks on a record can be read or punched out digitally to $\pm 0{\cdot}1$ mm. Small excursions on ultraviolet oscillograms can thus be analysed to their limits of accuracy.

The record is scanned by a magnifying lens and cursor mounted on a saddle which slides along a helical groove of 15 mm pitch on a brass rod of 18 mm diameter, as shown in Fig. 1.

The rod is connected to the spindle of a ten-turn potentiometer which is activated by two mercury cells. The activating voltage can be adjusted to calibrate the potentiometer against a calibrating scale on the record.

## A method for heating and cooling the hypothalamic area of the conscious cat's brain with simultaneous perfusion of the third ventricle

A. S. MILTON, D. J. TULETT and SABINE WENDLANDT, *Department of Pharmacology, School of Pharmacy, University of London*

A method is demonstrated which can be used to vary the temperature in the region of the hypothalamus and third ventricle with simultaneous recording of hypothalamic and deep body temperature and perfusion of the third ventricle or administration of drugs to the third ventricle.

The method for altering the hypothalamic temperature is a modification of that described by Hellon (1967). A stainless steel plate is screwed into the skull and four water thermodes implanted. The temperature of the water passing through the thermodes may be changed by the use of an external heating coil, controlled by a variable D.C. power supply. The hypothalamic temperature is measured by implanting a thermistor mounted in the end of a fine stainless steel cannula, the external end of which is attached to the stainless steel plate. A " push-pull " cannula is implanted with the tip lying in the third ventricle and with the external end also attached to the stainless steel plate. Fluid is circulated through the cannula using a modified Braun infusion pump. Rectal temperature is measured with a thermistor probe, and the hypothalamic and rectal temperatures are displayed on a Honeywell chart recorder. All surgical procedures were carried out under pentobarbitone anaesthesia.

This work was supported by a grant from the Medical Research Council.

REFERENCE

HELLON, R. F. (1967). Thermal stimulation of hypothalamic neurones in unanaesthetised rabbits. *J. Physiol., Lond.*, **193**, 381–395.

## Actions and interactions of prostaglandins administered intradermally in rat and in man

PEARL CRUNKHORN and A. L. WILLIS (introduced by W. E. BROCKLEHURST), *Departments of Biochemical Pharmacology and Pharmacology, Lilly Research Centre Limited, Windlesham, Surrey*

Prostaglandin $E_1$ induces an increased vascular permeability in the skin of the guinea-pig (Horton, 1963) and rat (Kaley & Weiner, 1968). Following identification