Experiments on two groups of tubes of suspensions show that the rate of fall of the layer boundaries is independent of the temperature gradient within wide limits, and the position of the layers is a function of concentration, time of settling, and thermal gradient. —E. H. **Hall**: The quasi-equation $P = T dV/dT$. If two plates of dissimilar metals are connected through wires made of the same metals, the plates show opposite charges. If unit charge is made to pass from the positive to the negative plate, heat is absorbed; this includes the Peltier effect at the junction. Assuming a mass-law of equilibrium between the ions and electrons of the metals, heat-energy is absorbed at the free surface of the metals in addition. This added to the Peltier effect gives nearer accordance with experimental results.—E. F. **Nichols** and J. D. **Tear**: Joining the infra-red and electric wave spectra. A Hertzian doublet with minute platinum cylinders acted as the source of the waves. The receiver consisted of a Nichols radiometer in which the vanes were mica strips carrying thin deposits of bright platinum. A new form of reflecting echelon analyser was used for the wave-length measurements. By these means electric waves of lengths varying from 7 mm. to 0·220 mm. were produced and detected, thus overlapping previous measurements for infra-red radiation (*e.g.* Rubens and Von Baeyer, 0·320 mm.).

(Proc. Vol. 9, No. 7, July).—A. E. **Kennelly**: On the constant ratio of mean-to-mid potential or current at successive equidistant points along a uniform electric conducting line, real or artificial, in the steady state. The theorem also applies to tables of hyperbolic sine or cosine functions where the angle increases in uniform arithmetical progression, and to tables of $\epsilon^{\pm\theta}$ where θ increases in uniform arithmetical progression.—R. **Brown**: Some recent measurements of transatlantic radio transmission. A high-power vacuum tube transmitter with an output of 200-300 amperes of 57,000 cycle alternating current is used at Rocky Point, Long Island, producing continuous radiation of about 5250 metres wave-length. A receiver in London evaluates the absolute root mean square of the electric field produced. The field rises sharply to a maximum during the period when the route is in darkness, but does not exceed the value calculated from the Austin-Cohen radio-transmission formula. Good night transmission seems to be due to a diminution of losses by absorption rather than to focussing effects.—C. B. **Davenport**: Body build and its inheritance. The ratio, chest girth to stature, or alternatively weight to stature, was used as an index of build in man. A solid figure generated by combining the variability curves with developmental curves shows two main ridges, indicating two main types, medium build and fleshy; the latter seems to refer to the progeny of fleshy and slender strains, showing dominance of fleshiness.—G. C. **Evans**: A Bohr-Langmuir transformation. Mathematically, Langmuir's completely static atom can apparently be shown to be equivalent to the Bohr atom with a circular orbit.—G. A. **Miller**: Form of the number of the subgroups of a prime power number.—G. **Breit**: (1) The interference of light and the quantum theory. Assuming that radiation momenta are transferred in quanta, expressions are derived which represent the effect of (*a*) a diffraction grating of infinite width, (*b*) a finite number of narrow, parallel, co-planar and equal slits, and (*c*) a slit of finite width. (2) Note on the width of spectral lines due to collision and quantum theory. The amounts of the broadening appear to be nearly equal to those given on the wave theory of light and can be accounted for similarly.—P. A. **Ross**: Change in wave-length by scattering. Experiments were made to detect the change in frequency of X-rays and γ-rays on scattering by paraffin, aluminium, and graphite suspected by Compton. Relevant equations indicate that the change of wave-length is independent of the primary wave-length. No such shift was observed by scattering the green mercury line at 180° from paraffin. Using photographic methods and X-rays, the required displacement (about 0·025 Å.) was observed by scattering the α_1 and α_2 lines from calcite at 90° from paraffin. Another unshifted line was recorded.—E. L. **Nichols**: Notes on germanium oxide. The powdered oxide was heated, side by side with a uranium oxide surface, in an oxyhydrogen flame. The radiation of uranium oxide being practically equivalent to black-body radiation, a comparison of the two gives approximately the radiation of germanium oxide in terms of black-body radiation. Preponderance of blue at lower temperatures and of red near fusing point are the characteristics. The reversal point is 1225° C. and melting point 1400° C.—C. **Wissler**: The correlation of respiratory and circulatory data for adult males. Pulse rates in men before and after exercise show a high correlation (+0·73); pulse rate correlates with respiration rate (+0·45) but not with blood pressure and chest mobility. Breathing rate and chest mobility appear to be complementary (correlation −0·46), *i.e.* a man with a mobile chest automatically breathes deeply.—T. W. **Vaughan**: Studies of the larger tertiary foraminifera from tropical and subtropical America. There appears to be no evidence of deposits of Lower Cretaceous age at relatively shallow depths in Florida. Deposits of middle and upper Oligocene age occur in northern Colombia. An evolutionary sequence from ancient Eocene forms of Lepidocyclina with meridional chambers, pointed inner ends, and curved outer walls, to species with hexagonal and rhomboid chambers, is suggested.—S. O. **Mast**: Mechanics of locomotion in Amœba. Three regions are differentiated in *Amœba proteus*: (*a*) a central elongated fluid portion (plasmasol); (*b*) a granular layer surrounding the fluid (plasmagel), and (*c*) a thin elastic surface membrane (plasmalemma); (*b*) and (*c*) are semipermeable and (*a*) is hypertonic. Local swelling of the plasmagel occurs at the tip of pseudopodia with liquefaction on the inner surface at the posterior end. Gelation of plasmasol occurs at the outer posterior border of the swelling. Thus a forward flow is produced which is translated into motion by the adhesion of the plasmalemma to the substratum.

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