

the colour transmissions can be received (in black-and-white) on the very large number of television receivers in current use. Apart from this, the system gives on the tri-colour tube a colour picture of high quality and good resolution with freedom from flicker; and there is no doubt that, if the economics of the more complex receiving circuits and cathode-ray tube can be made satisfactory, this dot-sequential system is a serious rival to the field-sequential system already described.

#### Other Advances

This rapid and widespread development of television and the obvious advantages of transmission in colour have attracted a number of other workers and organizations who are making substantial contributions to the technique of the subject. A 'line-sequential' system has been developed, for example, in which the picture is scanned and reproduced in successive lines in the three primary colours. In addition, the General Electric Co. in the United States has announced a new system in which bandwidth is economized by a process of frequency

interlacing of the signals which simultaneously carry the colour information<sup>10</sup>. Other research is providing a better understanding of the subject of colorimetry, including especially its physiological aspects, and the advantages and limitations of the sampling process of transmitting and building up a colour picture. All these developments will be watched with great interest, as will also the present deliberations of the United States National Television System Committee, the conclusions of which should materially assist the Federal Communications Commission in making future decisions on the public television-broadcasting service to be developed in the United States.

<sup>1</sup> Swinton, A. A. Campbell, *Nature*, **78**, 151 (1968).

<sup>2</sup> C.C.I.R. Documents of the Sixth Plenary Assembly, Geneva, **1**, 209 (1951).

<sup>3</sup> Report of the Broadcasting Committee, 1949, *Nature*, **167**, 617 (1951).

<sup>4</sup> *Nature*, **122**, 233 (1928).

<sup>5</sup> *Wireless World*, **45**, 145 (1939) and **48**, 31 (1942).

<sup>6</sup> Ives, H. E., *Bell. Lab. Record*, **7**, 439 (1929). Ives, H. E., and Johnsrad, A. L., *J. Opt. Soc. Amer.*, **20**, 11 (1930).

<sup>7</sup> *Wireless World*, **50**, 316 (1944).

<sup>8</sup> *Proc. Inst. Radio Eng.*, **39**, No. 10 (1951).

<sup>9</sup> *R.C.A. Review*, **12**, No. 3, Part 2 (1951).

<sup>10</sup> *Wireless World*, **56**, 443 (1950).

## NEWS and VIEWS

### Fifty Years of Service to Microscopy, 1901-51

THE firm of Flatters and Garnett, Ltd., has issued, under the title of "50 Years' Service to Microscopy, 1901 to 1951" (pp. 24+12 plates; 1952), a brief account of its history with justifiable pride of achievement. From very small beginnings its contacts now extend into the five continents, and its name has become a household word in biology. The firm was started by Abraham Flatters, who as an unskilled labourer attended lectures for working men by Prof. Milnes Marshall, a teacher of zoology of rare gift for creating enthusiasm and interest in his subject. Flatters' interest in microscopy was so stimulated that, not being able to spare money for purchases, he used the broken glass of railway carriage windows to make his slides, and, borrowing Asa Gray's "Botany" from the library, he made a complete copy of it, including the illustrations. Marshall, recognizing Flatters' keenness, obtained for him a post with Sinel and Hornell, of Jersey; with this experience, Flatters returned to Manchester and set up in business, making microscopical preparations and lantern slides. He was appointed a lecturer in microscopical technique in the Manchester College of Technology and published several small papers dealing with aspects of microscopical work. Mr. Charles Garnett, also after an interesting career, joined Flatters in 1901; but later the latter withdrew and the present firm includes Flatters only as a name. Manchester saw the birth and development of the firm, and Manchester institutions, notably the University and Microscopical Society, have been closely correlated with its growth. A very friendly atmosphere has always existed, and still does exist, between the biology departments of the University and the firm. Mr. John B. Garnett, who is the head of the firm, and his son, Mr. Wilfred J. Garnett, himself a graduate of the University, are always ready to discuss optical problems and offer friendly and helpful advice. After fifty years, in spite of serious setbacks such as two World Wars and a destructive fire, Flatters and Garnett, Ltd., is still

extending its sphere of usefulness by keeping its finger on the pulse of biological teaching and research.

### Medical and Human Problems in the Coal Industry

THE National Coal Board has set up four panels as follows to advise on research into medical and human problems in the coal industry. *Epidemiology Panel*: Dr. D. D. Reid (*chairman*), reader in epidemiology, University of London; G. Bridgmore Brown, assistant secretary (safety), Production Department, National Coal Board; R. F. George, chief statistician, National Coal Board; J. C. Hobbs, Ministry of National Insurance; J. F. Houldsworth, Central Research Establishment of the National Coal Board, Stoke Orchard; Dr. W. P. D. Logan, chief medical statistician, Registrar General's Office; Dr. J. Rogan, chief medical officer, National Coal Board; and Dr. T. D. Spencer, divisional medical officer, North Western Division, National Coal Board. *Psychology Panel*: Prof. G. C. Drew (*chairman*), Department of Psychology, University of Bristol; Dr. C. B. Frisby, director, National Institute of Industrial Psychology; Dr. C. G. Gooding, divisional medical officer, Scottish Division, National Coal Board; Dr. N. H. Mackworth, assistant director, Applied Psychology Research Unit, University of Cambridge; Dr. J. Rogan; J. W. Whitfield, lecturer in psychology, University of London; and Dr. T. Macbeth Wilson, director, Tavistock Institute of Human Relations. *Physiology Panel*: Prof. E. Killok (*chairman*), Department of Physiology, Royal Free Hospital School of Medicine; Dr. K. W. Donald, reader, Medical Professorial Unit, Queen Elizabeth Hospital, Birmingham; Dr. T. K. Elliott, divisional medical officer, West Midlands Division, National Coal Board; Dr. H. R. Noltie, lecturer in physiology, School of Medicine, Leeds; Dr. R. Passmore, lecturer in industrial physiology, University of Edinburgh; Dr. J. Rogan; and Dr. A. G. M. Weddell and Dr. J. S. Weiner, readers, Department of Human Anatomy, University of Oxford. *Industrial Medicine Panel*: Dr. J. G. Scadding (*chairman*),