

organisation. A resistance-capacitance beat-frequency oscillator covering the range 0-5,000 cycles per second is described by D. S. Robertson and L. C. Nye, certain features underlying the design having been developed theoretically in another paper by L. E. V. Lynch and D. S. Robertson. A description is also given by L. G. Alexander of an equal-ratio impedance bridge by means of which impedances can be measured to a precision of 1 per cent or better at frequencies up to 3 Mc./s.; while two special-purpose receivers covering the range of frequencies from 50 kc./s. to 50 Mc./s. are described by B. Sandel. In a paper entitled "Directional Patterns of Rhombic Antennæ", W. N. Christiansen examines the spatial radiation patterns of typical rhombic antennæ in relation to that of a large tuned array, to which a single rhombic is inferior. After discussing various simple designs, the author shows that it is possible to arrange several rhombics in the form of an interlaced 'end-on' array so as to produce over the whole frequency range of the rhombic a directional radiation characteristic which compares well with that of a tuned array at its single designed frequency. Other papers in this issue deal with such subjects as the application of a Geiger counter for determining the thorium content in wire used in valve manufacture, a radio-frequency form of high-tension supply for cathode-ray tubes, and a vacuum-sealed relay designed for operation with aircraft aerials transmitting at high voltages.

#### Bacteriology in the Kitchen

AN interesting article by Dr. Irene Hutchinson (*Brit. Med. J.*, 134, Jan. 25, 1947) directs attention to the unsatisfactory methods employed in many communal feeding centres for the cleaning of utensils used for eating. In a London dormitory town in which food inspection was kept at a very high level, unannounced visits were made to twenty-five kitchens of hotels, restaurants of multiple stores, day-nursery kitchens, tearooms, snack bars and a civic restaurant. Samples of washing-up water in actual use were taken at the peak hour between 12.30 and 1.30 p.m., when conditions were at their worst, and swabs were taken from spoons, cups, forks, glasses and plates which had been used and washed and were ready to be used again. The organisms obtained from these sources are listed, and Dr. Hutchinson concludes that the cleaning of eating utensils is "very unsatisfactory, and that pathogenic organisms are likely to be spread by the users of different articles". The lack of washing machines, the difficulty of getting soap and washing powders and the scarcity of drying towels make it very difficult to feed people hygienically. In one only of the twenty-five kitchens were dysentery bacilli found on spoons, and Dr. Hutchinson comments that this "may suggest the origin of the sporadic case of 'diarrhoea'". Other findings of pathogenic staphylococci may help to explain the high incidence of septic mouth lesions so common during recent years. The proprietors of the various premises visited showed great interest in the work and helped it in every way that they could. An annotation in the same issue of the *British Medical Journal* (p. 143) critically discusses the results obtained, and suggests that the greatest need is for education of the people who handle food. In the United States much progress has been made in this matter, and in Great Britain the Central Council for Health Education is arranging courses of instruction on food hygiene for food handlers (*Health*

*Educ. J.*, January, 1947, p. 11). Facilities for dish-washing and for the cold storage of food, says the annotation, need to be greatly improved. Few people will disagree with this conclusion. It may be compared with the need for the adequate treatment and care of milk bottles which was discussed in *Nature* (153, 31; 1944).

#### Agriculture in Malaya

AFTER a break of five years, the *Malayan Agricultural Journal* has reappeared, though for 1947 it will be published as a quarterly only. Vol. 30, No. 1, contains a message from the governor of the Malayan Union, Sir Edward Gent, and a foreword from the Director of Agriculture. The Department was fortunate in being able to resume active work through its field branch shortly after the liberation of Malaya, the staff being now almost back to pre-war strength. Food production and general rehabilitation have been its chief immediate concern, but long-range plans are already under consideration. These include the establishment of a Central Government Fruit Experiment Station, the rehabilitation of rubber small-holdings of high-yielding clonal material, canning and food preservation, the expansion of the School of Agriculture at Serdang, and development of the livestock industry. Among the original articles in this number is an account of intensive gardening in a prisoner-of-war camp which cannot fail to be of interest to all readers.

#### 'Positex'

AN 8-page pamphlet, 'Positex' Pamphlet No. 2, published by the British Rubber Development Board, 19 Fenchurch Street, E.C.3, and written by Dr. C. M. Blow, deals with the compounding, pigmenting and thickening of 'Positex', a form of rubber latex in which the particles carry a reversed or positive charge. There are also some notes on the removal of rubber from fibrous materials. The research work referred to in the pamphlet was carried out by the Wool Industries Research Association, in collaboration with the Technical Research and Development of New Uses Committee of the Rubber Growers' Association, and later with the British Rubber Producers' Research Association. The introductory pamphlet to the series gave a general account of the material and of its possible commercial applications. Licensees for 'Positex' in Great Britain are Messrs. Revertex, Ltd., King William Street House, Arthur Street, London, E.C.4, and Messrs. Veedip, Ltd., St. Helens Works, Slough.

#### Engineering Degree Courses for Ex-Servicemen

MR. O. S. PUCKLE, of R. F. Equipment, Ltd., Langley Park, Nr. Slough, Bucks, recently invited inquiries from engineers and others wishing to study for science and engineering degrees (*Nature*, April 12, p. 497). He now states that he has received a total to date of ninety-three completed questionnaires. Of these, fifty-one are from the London area, including Dartford and south-west Essex, and ten from Stoke-on-Trent. The numbers in each of the other localities are too small to make it possible to ask the Ministry of Education to take action; but it is hoped that in London and Stoke it may be possible to arrange the suggested courses. He is communicating with the Ministry of Education, to whom the questionnaires and an analysis of the results are being sent. Those who have not yet returned the questionnaires for