

News and Views

Mr. W. T. Astbury

THE University of Lille has recently awarded a medal to Mr. W. T. Astbury, lecturer in textile physics in the University of Leeds, in recognition of the valuable work which he is carrying on in the Textile Industries Department of the University of Leeds in connexion with the investigation of the structure of animal fibres by means of X-rays. His recently published book on "The Fundamentals of Fibre Structure" shows great originality and has been very well received. Readers of NATURE will recall that much of Mr. Astbury's work has been described in letters and articles in our columns. Mr. Astbury received an invitation to deliver a lecture on this subject at a full session of the Thirteenth Congress of Industrial Chemistry which was held at Lille in September of this year. The University of Lille, in bestowing this honour upon Mr. Astbury, has wished to testify its appreciation of the value of his work in this field, and in particular to commemorate, in a tangible form, his contribution towards the success of the Congress at Lille.

Future of International Broadcasting

WE are afraid that next month will be an anxious time for the future of international broadcasting. Eight countries, including some not far distant from Great Britain, have refused to ratify the plan agreed to by the majority at Lucerne. It is highly probable that some of them will not accept the new wave-lengths suggested to them. Parts of the wave band of broadcasting will therefore become useless to many owners of receiving sets. The interference also is much increased by the excessive power used by many of the transmitting stations. Luxembourg, which uses the most powerful broadcasting transmitter outside Russia, is now at work on an unauthorised wave-length. Another difficulty, but not a serious one, is the use of broadcasting for advertising. The attempt to prevent this by the B.B.C. is neutralised to a certain extent by foreign transmissions. Several French stations will limit this in the future, but we suppose that Athlone will continue its advertisements of Irish sweepstakes, a practice forbidden in Great Britain. More objectionable is the increasing use of broadcasting in languages other than that of the country of the transmitting station for propaganda purposes. The new 500 kw. station of the Comintern at Moscow is apparently used for transmitting Communist propaganda in English, French, German and Italian at a strength which enables it to be heard by a small set almost anywhere in Europe. This may lead to retaliatory measures which will not improve the hearing of broadcasting. In Luxembourg and Alsace-Lorraine, the emissions are of necessity in both French and German. The *Electrician* of November 24 suggests that this demonstrates the impossibility nowadays of building a ring fence against new ideas and may possibly in the long run have a salutary effect.

New Wave-lengths for Broadcasting Stations

IN accordance with the Lucerne plan, a considerable redistribution of the wave-lengths allocated to European broadcasting stations will take place early in 1934. Recent issues of the *Wireless World* have given the first details of the scheme which has been organised by the International Broadcasting Union to effect a smooth and orderly change-over on the night of January 14-15, 1934. Broadcast listeners who are sufficiently interested have here a valuable opportunity both of calibrating their receivers and of following each broadcasting station on to its new wave-length. According to the arrangements described, all European stations will cease transmission at or before 11 p.m. G.M.T. on January 14. Then, one by one, according to special schedules now being prepared, the stations will resume broadcasting on their new wave-lengths. These will be checked systematically by one or other of the ten official control points which are under the direct supervision of the Union's own frequency-checking station at Brussels. Immediately a control station has completed its measurement of the frequency of a transmitter, the fact will be announced through one of five high-power stations specially selected by the International Broadcasting Union. To assist rapid identification, each transmitter will broadcast its name and country at least every two minutes during its transmission period. The transmissions will consist of gramophone records the titles of which will have been previously communicated to the control posts. Most British listeners will probably tune-in Radio-Paris, which will be announcing the progress of the change-over at the broadcasting stations in Belgium, France, Great Britain, Holland, Iceland, Ireland, Luxembourg, Morocco, Portugal, Spain and Switzerland. It is anticipated that this scheme will obviate the difficulties experienced in making changes under previous 'plans' due to the varying accuracies of the calibrations of wavemeters at individual broadcasting stations.

Electrical Interference with Radio Reception

AN outstanding difficulty in the engineering development of the reception side of radio broadcasting services arises from the operation of electrical machinery. Any device in which the electric current varies produces a parasitic current in the receiving set, often causing an objectionable noise at the loud speaker or headphones. In the case of television it produces mutilation of the picture. In a paper on this subject read to the Institution of Electrical Engineers on November 22 by Mr. A. Morris, the effects produced on the receiving set by a number of domestic electric appliances were shown both aurally by gramophone records and visually by a cathode ray oscillograph. Experiments indicate that in order to ensure high quality reception the ratio of signal to noise must be at least 40 decibels. Amongst domestic apparatus the chief offenders are vacuum cleaners, electric bells, vibrators, electric wiring and