

B·B·C ANNUAL 1937



THE PROGRAMME PERIOD COVERED BY
THIS BOOK IS FROM 1 JANUARY TO
31 DECEMBER 1936

THE BRITISH BROADCASTING
CORPORATION
BROADCASTING HOUSE
LONDON. W1

Readers unfamiliar with broadcasting will find it easier to understand the articles in this book if they bear in mind the following:

(1) The words 'Simultaneous(ly) Broadcast' or 'S.B.' refer to the linking of two or more transmitters by telephone lines for the purpose of broadcasting the same programme.

(2) The words 'Outside Broadcast' or 'O.B.' refer to a broadcast outside the B.B.C. studios, not necessarily out-of-doors; e.g. a concert in the Queen's Hall or the commentary on the Derby are equally outside broadcasts.

(3) The B.B.C. organization consists, roughly speaking, of a Head Office and six provincial Regions—Midland Region, North Region, West Region, Welsh Region, Scottish Region, and Northern Ireland Region. The Head Office includes the administration of the National programmes, wherever they originate, and also the London Regional programmes. The provincial centres supply the bulk of the Regional programmes broadcast from their respective Regional transmitters, although there is a considerable interchange of material between the various Regional services. The words 'Region' or 'Regional' refer throughout the book to this system of organization.

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T.M. King George VI and Queen Elizabeth

BROADCASTS BY
H.M. KING GEORGE VI

(As Duke of York)

- | | | |
|----------|------|--|
| May 23 | 1924 | Empire Day Banquet at Hotel Victoria. |
| May 2 | 1925 | Royal Academy Banquet at Burlington House. |
| 9 | | Opening Ceremony of British Empire Exhibition at Wembley. |
| July 22 | | Entertainment given by City Corporation to 10,000 London School-children at Wembley Stadium. |
| Oct. 15 | | Law Society Centenary Banquet at the Guildhall. |
| 31 | | Closing Ceremony of British Empire Exhibition at Wembley. |
| Apr. 13 | 1926 | Dinner of National Safety First Association at Savoy Hotel. |
| Aug. 2 | 1927 | Duke of York's Camp, New Romney. |
| Sept. 21 | | St. Andrew's Hall, Glasgow. |
| Feb. 10 | 1928 | Civil Service Dinner at the Connaught Rooms, London. |
| May 23 | | Royal Institute of British Architects' Annual Dinner at Lincoln's Inn. |
| July 6 | | Opening of Queen Alexandra Memorial Hospital, Weston-super-Mare. |
| 17 | | Launching of the <i>York</i> at Jarrow. |
| Aug. 10 | | Stirling Royal Infirmary. |
| May 28 | 1929 | Edinburgh Sixth Centenary. |
| Oct. 2 | | General Assembly of Reunited Church of Scotland. |
| Nov. 28 | | Annual Dinner of National Institute of Industrial Psychology at Hotel Victoria. |
| May 3 | 1930 | Royal Academy Banquet at Burlington House. |
| Feb. 22 | 1932 | British Industries Fair Banquet at the Mansion House. |
| Sept. 20 | | Uniting Conference of the Methodist Churches at the Royal Albert Hall. |
| May 11 | 1934 | Unveiling of Memorial to Adam Lindsay Gordon at Westminster Abbey. |
| Oct. 24 | | Jubilee Banquet of the Royal Geographical Society, Edinburgh (North British Hotel). |
| May 4 | 1935 | Royal Academy Banquet at Burlington House. |

BROADCASTS BY
H.M. QUEEN ELIZABETH
(As Duchess of York)

- Sept. 21 1927 St. Andrew's Hall, Glasgow, and Kelvin Hall Health
Exhibition.
- July 6 1928 Opening of Queen Alexandra Memorial Hospital,
Weston-super-Mare.
- 17 Launching of the *York* at Jarrow.
- Aug. 10 Freedom of Stirling.
- Oct. 5 1929 Livingstone Memorial, Blantyre.
- June 30 1931 Laying the Foundation Stone of the new Medical School,
St. Mary's Hospital, Paddington.
- Aug. 31 1932 Naming of the new Motor Lifeboat *Arbroath*.
- Apr. 4 1935 Launching of the *Strathmore* at Barrow Shipyard.
- May 11 Jubilee at Murrayfields, Edinburgh.
- Dec. 1 1936 Freedom of the City of Edinburgh.

Board of Governors

R. C. NORMAN (*Chairman*)

(*Vice-Chairman*)

MRS. M. A. HAMILTON

THE RT. HON. H. A. L. FISHER, O.M., D.C.L., F.R.S.

CAROLINE, VISCOUNTESS BRIDGEMAN, D.B.E.

CAPTAIN SIR IAN FRASER, C.B.E.

J. J. MALLON, LL.D.

Director-General

SIR J. C. W. REITH, G.B.E., D.C.L., LL.D.

Deputy Director-General

VICE-ADMIRAL SIR C. D. CARPENDALE, C.B.

Controllers

SIR NOEL ASHBRIDGE, B.SC., M.I.E.E. (*Engineering*)

B. E. NICOLLS (*Administration*)

C. G. GRAVES, M.C. (*Programmes*)

SIR STEPHEN TALLENTS, K.C.M.G., C.B., C.B.E.

(*Public Relations*)

B. B. C. REGIONS

LONDON REGION

covering the Counties of
Bedfordshire, Berkshire, Buckinghamshire, Cambridgeshire, Essex, Hampshire,
Hertfordshire, Huntingdonshire, Kent, Middlesex, Norfolk, Oxfordshire (South),
Suffolk, Surrey, Sussex, Channel Islands, London County Area

MIDLAND REGION

Regional Director, P. F. EDGAR, O.B.E.

covering the Counties of
Derbyshire (South), Gloucestershire (North), Herefordshire, Leicestershire,
Northamptonshire, Nottinghamshire, Oxfordshire (North), Rutland, Shropshire,
Staffordshire, Warwickshire, Worcestershire

NORTH REGION

Regional Director, E. G. D. LIVEING

covering the Counties of
Cheshire, Cumberland, Derbyshire (North), Durham, Lancashire, Lincolnshire,
Northumberland, Westmorland, Yorkshire, Isle of Man

WEST OF ENGLAND REGION

Regional Director, E. R. APPLETON

covering the Counties of
Cornwall, Devonshire, Dorset, Gloucestershire (South), Somerset, Wiltshire

SCOTTISH REGION

Regional Director, M. DINWIDDIE, D.S.O., O.B.E., M.C.

covering the Counties of
Aberdeenshire, Argyllshire, Ayrshire, Banffshire, Berwickshire, Bute, Caithness,
Clackmannan, Dumbartonshire, Dumfriesshire, Edinburgh, Fifeshire, Forfarshire,
Haddington—East Lothian, Inverness-shire, Kirkcudbright, Lanarkshire,
Linlithgow, Morayshire, Orkney, Peebles, Perthshire, Renfrewshire, Ross & Cromarty,
Roxburgh, Selkirk, Shetland, Stirlingshire, Sutherland, Wigtownshire

WELSH REGION

Regional Director, R. HOPKIN MORRIS

covering the Counties of
Anglesey, Breconshire, Caernarvonshire, Cardiganshire, Carmarthenshire,
Denbighshire, Flintshire, Glamorganshire, Merionethshire, Monmouthshire,
Montgomeryshire, Pembrokeshire, Radnorshire

NORTHERN IRELAND REGION

Regional Director, G. L. MARSHALL

covering the Counties of
Antrim, Armagh, Down, Fermanagh, Londonderry, Tyrone

Dissolution and Winding-up

20. It shall be lawful for the Corporation to surrender this Our Charter subject to the sanction of Us, Our Heirs or Successors, and upon such terms as We or They may consider fit and to wind up or otherwise deal with the affairs of the Corporation in such manner as may be approved by Our Postmaster General.

21. Upon the voluntary or compulsory dissolution of the Corporation the property and assets of the Corporation shall be applied in satisfaction of the debts and liabilities of the Corporation and subject thereto shall be disposed of in accordance with the directions of Our Postmaster General.

General Declaration

22. Lastly We do by these Presents for Us, Our Heirs and Successors, grant unto the Corporation hereby established and their successors that these Our Letters Patent or the enrolment or exemplification thereof shall be in and by all things good firm valid sufficient and effectual in law according to the true intent and meaning thereof and shall be taken construed and judged in the most favourable and beneficial sense for the best advantage of the Corporation and their successors as well in all Our Courts of Record as elsewhere by all and singular Judges Justices Officers Ministers and other subjects whatsoever of Us, Our Heirs or Successors, any non-recital mis-recital or any other omission imperfection defect matter cause or thing whatsoever to the contrary thereof in anywise notwithstanding. And this provision shall apply to this Our Charter as altered amended or added to in manner aforesaid.

IN WITNESS whereof We have caused these Our Letters to be made patent.

WITNESS Ourself at Westminster, the *first* day of *January* in the *first* year of Our Reign.

BY WARRANT under The King's Sign Manual.

Schuster



A Reproduction of a page from the new B.B.C. Charter



Major the Rt. Hon. G. C. Tryon, H.M. Postmaster-General, being televised while
Opening the new London Television Station, Alexandra Palace
(2 November 1936)

BRITISH BROADCASTING IN 1936

Some General Notes

For the British Broadcasting service, 1936 has been, from the constitutional point of view, one of major importance. The Charter of January 1927 ran for ten years, and it was therefore necessary for the Government to provide for the continuance of broadcasting after the 31st December 1936. Accordingly, a Committee was appointed in 1935, presided over by Lord Ullswater, and having as its other members Major the Hon J. J. Astor, Mr. C. R. Attlee, Mr. E. Clement Davies, K.C., Lord Elton, Sir William McIntock, the Marchioness of Reading, Lord Selsdon and Mr. M. H. Graham White. The Committee reported in February 1936 (Cmd. 5091) expressing in their Report their concurrence in the 'wide-spread approval of the broadcasting service in this country'; they recommended the extension of the Corporation's Charter for a term of ten years from the 1st January 1937. They also made a number of suggestions for the future.

The Report was debated in the House of Commons in April, and the Government's observations and proposals were published in June (Cmd. 5207), these again being debated in July. In this document the Government endorsed and adopted the views of the Committee, with certain variations. The more important of these were as follows:

(a) The Committee had proposed a division of Ministerial responsibility for broadcasting—that for the technical field to remain under the Postmaster-General, and that for the cultural field to come under another Minister. The Government, however, decided to adhere to the existing system, under which the Postmaster-General is the responsible Minister in all contexts.

(b) The financial proposals of the Committee were varied by the Government. The allocation proposed for sound broadcasting was made to include television with the proviso that more might be allotted if found necessary.

(c) In addition to broadcasting, the Committee had been instructed to report on the future of Wireless Exchanges. They recommended, in effect, an immediate transfer to public control; the Government, on the other hand, decided to extend the existing system subject to certain conditions for three years.

The new Charter and Licence were published in draft form and debated by the House of Commons in December, and came into force on the 1st January 1937.

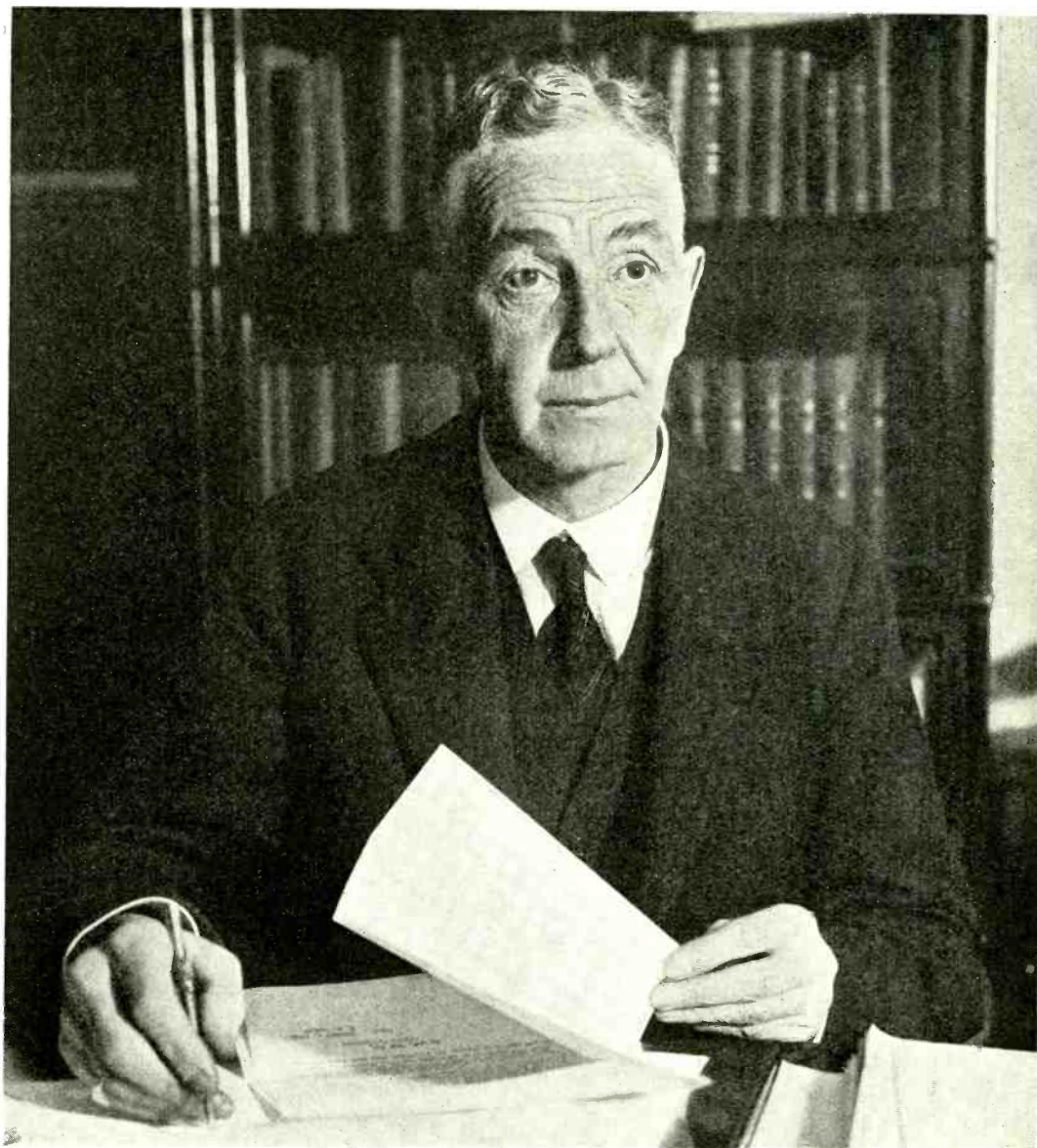
In November a Board of Enquiry, with Sir Josiah Stamp as Chairman, was appointed to inquire into certain matters connected with the action *Lambert v. Levita*, tried in the High Court in the previous month, so far as these concerned the B.B.C. The Report of this Committee was published in December (Cmd. 5337).

* * *

With the coming into force of the new Charter, two additional Governors, Sir Ian Fraser and Mr. J. J. Mallon, took office. Mr. Harold G. Brown, hitherto Vice-Chairman of the Board, retired at the end of the year.

* * *

Turning now to the operations of the year, the most important development has, naturally, been the launching of the Television



MR. HAROLD G. BROWN

Governor, January 1932 to September 1935, Vice-Chairman, September 1935 to December 1936

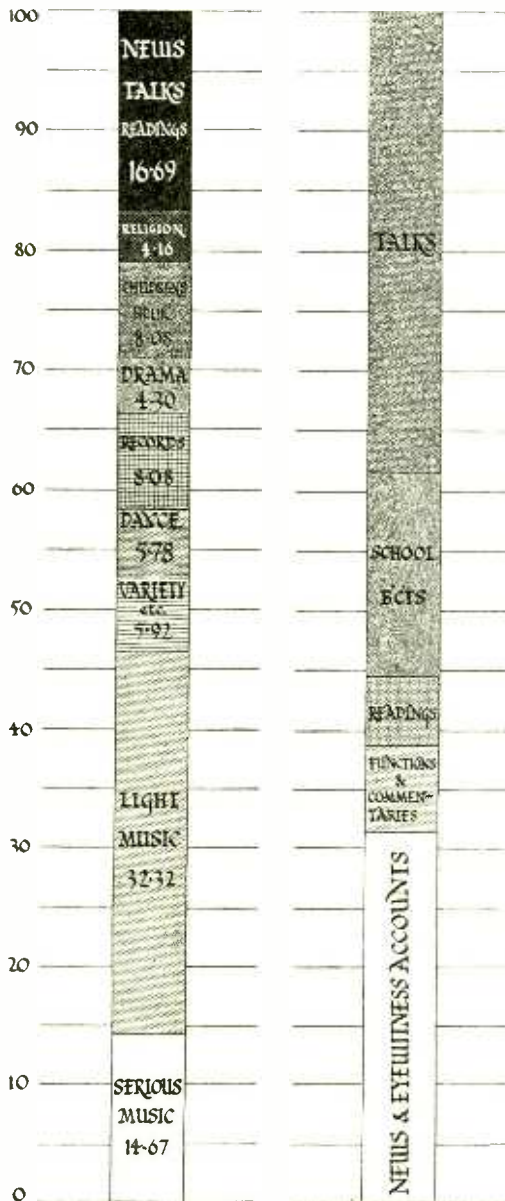
service. This is fully dealt with in a separate section of this book (pp. 147-163).

* * *

A B.B.C. Region (of which there are six), has, in principle, its own transmitter, its own engineering and its own programme staff.

The strong desire of the public for Regional stations has been shown in recent months by the zest with which the West Country and Wales have demanded separate treatment. Nothing except technical difficulties has prevented the speedier dissolution of this mutually uncomfortable partnership. Both

Allocation of Programme Time 1936



(a)
Classes of programme matter as percentages of total time

(b)
Proportion of different categories within the class 'News' etc. (16.69% of total).

Wales and the West Country will from next July have transmitters of their own, and their programme staffs will no longer have to look two ways at once.

It is not quite true to say that licence holders in any corner of the country can get good reception from a Regional station, but only a very small fraction of the population is still incompletely served. The ideal is, of course, for every listener to be able to pick up perfectly at least two stations—the National and one Regional. It will be some time before that ideal is realized, but, meanwhile, not only is it within reach of most people, but the numbers who can pick up several Regional programmes are on the increase. This development of Regional listening has created both opportunities and difficulties. It is easy to ignore the balance sheet and to demand that all Regions shall send out programmes of their own through all their working hours. The expense of such diversity would be prohibitive. Nor, even if the money were available, would the public appreciate too rigid an upholding of local autonomy. Some borrowing from other programmes not only has its practical advantages to the B.B.C. but also lends richness and variety to the programmes.

The B.B.C. has, then, two aims in its regional policy. First, by putting staff down on the spot it strengthens its hand in getting hold of what is most original and interesting all over the country. A National programme that owed nothing to the Regions would be a contradiction in terms. Secondly, there is the need, never stronger than to-day, for reflecting the individuality and variety of local life, and avoiding the dullness of over-centralization. Each Region, in fact, has a job to do for itself and also a share to take in the national network of the broadcasting service. There is room for expansion on both these sides. The National programme will, it is hoped, tend to take more from North, West, and Midlands and from Welsh, Scottish or Northern Ireland sources. Equally (as the programme builders themselves are the first to agree), broadcasting has only begun to

NOTES TO CHART:

- (1). The percentages relate to *originated matter* only; i.e. the relaying of matter by stations other than the originating station is not taken into account.
- (2) In column (a) Religion includes Appeals.

reflect all the many sides of regional personality. Vigour and integrity still flourish in local life, and it is the duty of the B.B.C. to express this fact in its Regional programmes. Among the practical steps taken towards this end are the making of co-operative arrangements with important local orchestras and the exploration of similar schemes to cover repertory companies and other organizers of entertainment. More music halls up and down the country are being wired for broadcasting, and, in many cases, the managements are ready to re-organize their shows, on the evening of the broadcast, so as to give the best possible value to listeners. Local dance bands are being brought to the studios for Regional and sometimes for National performances. Beyond these practical measures, there is a good deal of discovery for the B.B.C. to do in the field of talks and of what are called 'actuality' programmes. Here listeners can help by looking to their own Regional station as their centre of broadcasting, offering its suggestions, telling it what they think of its programmes.

* * *

Methods of securing and adapting recorded material for programme purposes have been further developed during 1936. This is a two-fold activity, consisting, on the one hand, of the collection of material and, on the other, its exploitation in the frame-work of the programmes. The collection of the material is largely the work of the three mobile recording units, the interior of one of which is illustrated on page 70. These units contain a special system of disk recording by which the disks can be 'played back' a minute or two after they have been cut. The 'editing' of the disks obtained by the mobile units is done on a special bank of turntables and control panel, by means of which, if necessary, single sentences or even single words can be extracted from a disk, and, further, linking commentaries from studios or 'live' items from outside sources can be mixed with the recorded material in the final edited version of the programme.

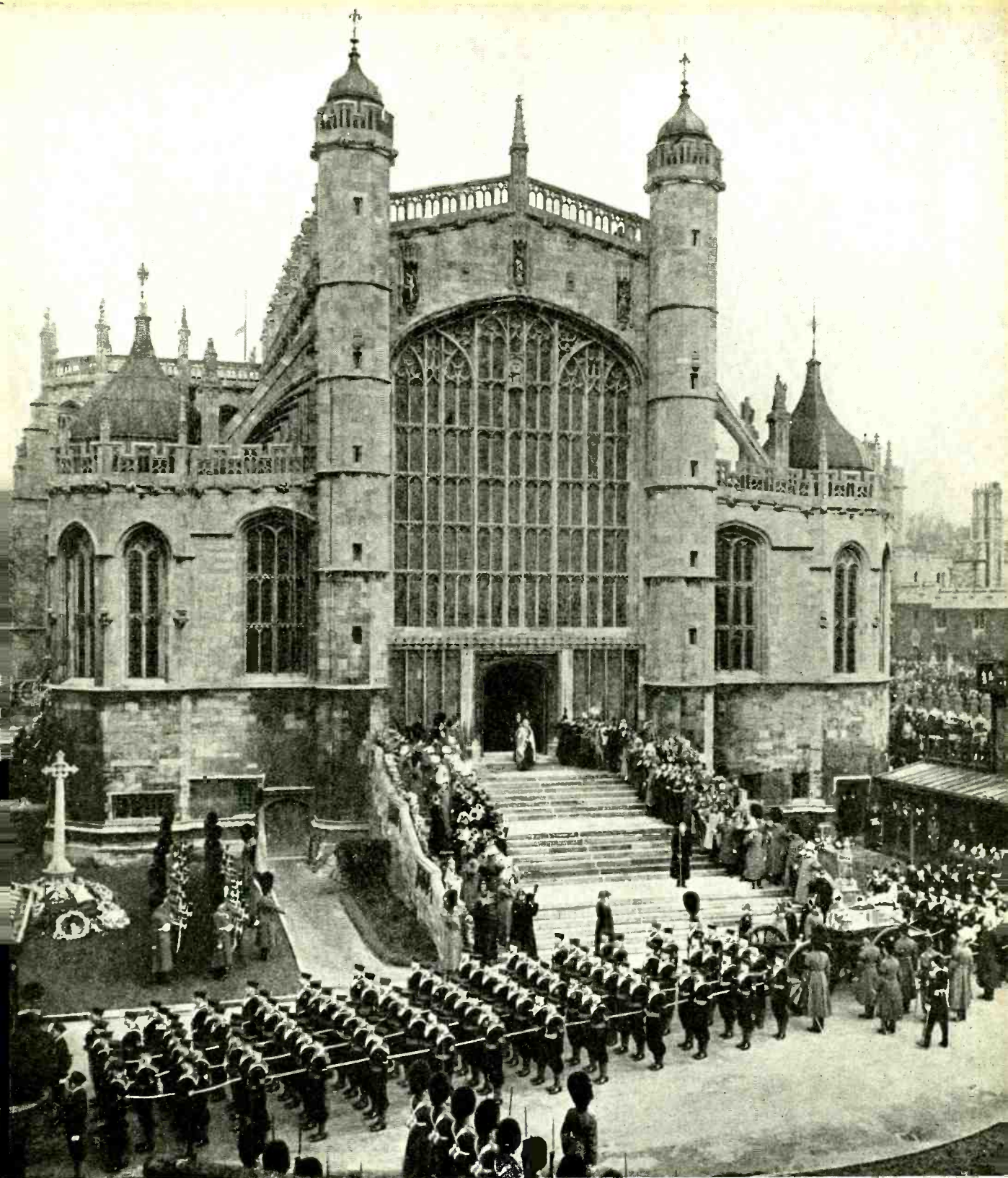
Examples of programmes built in this way are those dealing with the work of Scotland Yard and with life in the Navy; a series of surprise items from the Midlands bearing the general title 'Sealed Orders'; and a com-

posite picture of traditional May Day Ceremonies in the West. The use of this system for the illustration of news bulletins is also increasing, and it will be obvious that it enables not only very out-of-the-way programme sources to be reached, but a set of events held at varying times and places to be grouped together in a single production.

The most valuable of the records obtained in the course of this work, together with records of other outstanding programmes and of historical events at home and abroad, are collected in the Recorded Programmes Library. This library, which is separate from the larger musical library, now contains some 5,000 records; most of the outstanding personalities and events of the last four years are represented, and the historical value of the collection, which is unique, will undoubtedly increase in the course of time.

* * *

On the 1st October 1936, the Corporation started a new enterprise in the shape of a Staff Training School. Though, of course, many schools of music, drama and elocution specialize in radio courses, it is believed to be the only school in existence dealing with broadcasting as a whole, and it has accordingly aroused considerable interest both in this and other countries. Such staff training as existed before 1936 was, by comparison, irregular and incomplete. The new school is housed in premises adjacent to Broadcasting House, and is equipped with lecture rooms, dummy studios and standard broadcasting gear. Students are given theoretical instruction in broadcasting policy and practice, in addition to which many practical exercises are set them, with the two-fold object of giving them as much practical experience as possible and of ascertaining their abilities. The course of instruction lasts for three months and any member of the B.B.C. staff is eligible for it. There was at one time a common but erroneous belief that the school was intended as a channel of entry to the B.B.C. staff, and many applications from outsiders were received. The existence of the school does not in any way alter the Corporation's method of recruitment, which is normally carried out by means of public advertisement, successful applicants being required, as a general rule, to undergo a



The Funeral of King George V at St. George's Chapel, Windsor
(28 January 1936)

course of training in the school during the early part of their B.B.C. careers.

* * *

This retrospect would be incomplete without some notice, however brief, of two important staff activities, the 'B.B.C. Club' at headquarters and 'B.B.C. House' at Gateshead.

For the former, the Corporation has provided a sports' ground of approximately 20 acres of ground at Motspur Park, Surrey. The Club caters for most forms of sport, and is organized in eighteen sections, corresponding to the different activities, with a full-time secretary and assistant-secretary. Membership is voluntary, but nearly the whole of Head Office staff are members of the Club, the affairs of which are administered by a committee elected by the members. The subscription—which is based on salary—varies from 2*d.* per week for a junior to 2*s.* 6*d.* per month for a senior.

'B.B.C. House', Gateshead, came into existence, like many other social-service efforts, as the result of the series of talks on the Unemployment problem given during 1934. It is an Occupational Centre, maintained by subscriptions from B.B.C. staff and administered through the Tyneside Council of Social Service, and it caters for some 300 unemployed men and 100 women. Many activities are carried on, such as 'keep-fit' classes, woodwork and crafts, dress-making, amateur theatricals, table tennis, billiards, chess, and other recreations. Although a

supervisor is in charge, the Club is, as far as possible, run by the members, who have their own house committee with its various section committees.

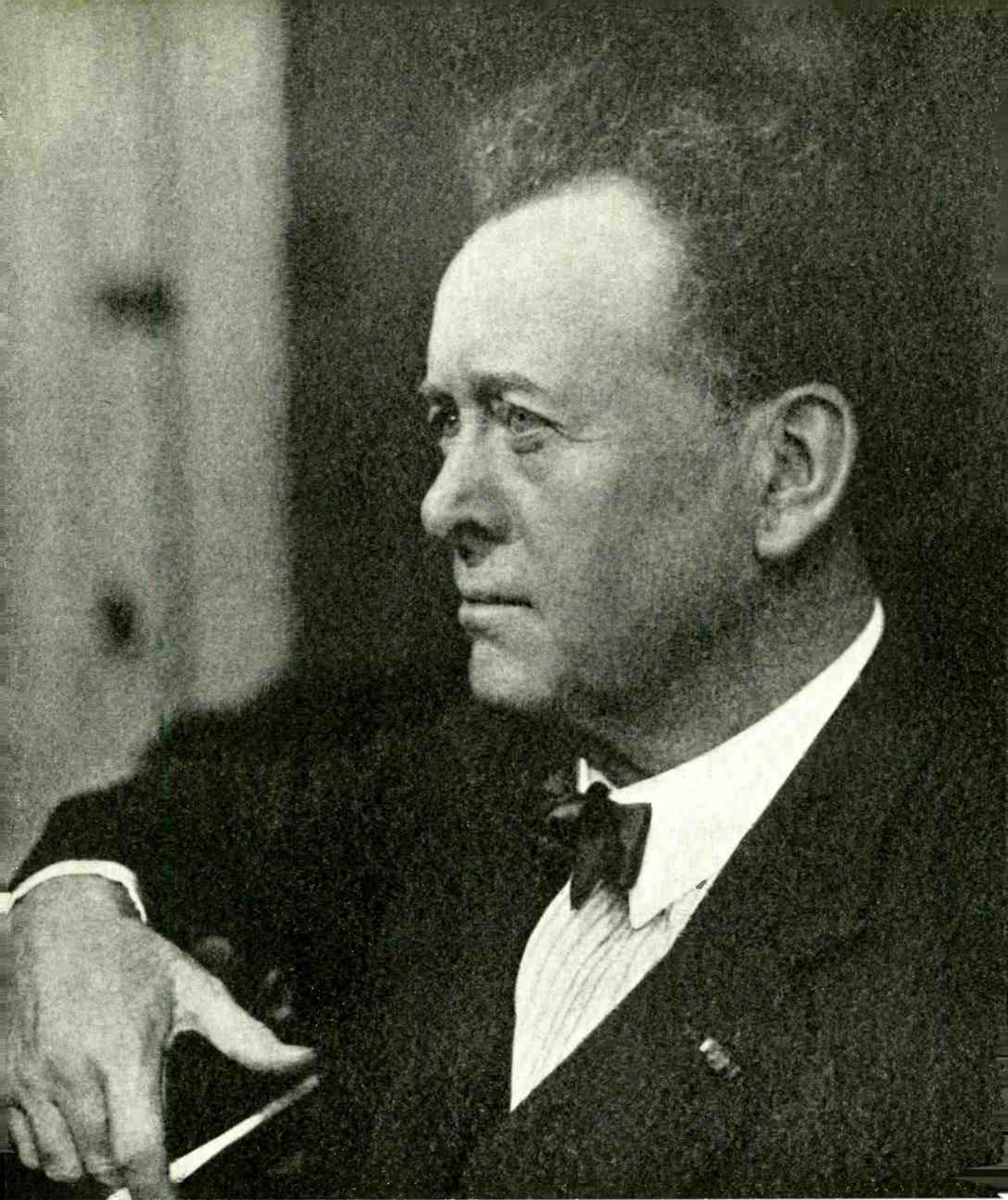
The Centre does not dispense charity; it aims at helping those who, through force of circumstance, cannot find employment. As an example of what is done, several children's parties were held last year and at these parties over 1,000 wooden toys, made by the members, were distributed to the children. Membership of the Centre is not free; the subscription is a penny a week. These subscriptions cannot keep the Club running, but they are quite as much as the members can afford, and give them a feeling of contributing to the facilities they enjoy.

'B.B.C. House' cannot be an employment bureau, but it endeavours to keep alive the spirit of men and women whose daily lot makes life seem rather a hopeless affair, and gives them a practical interest in handcrafts, which must to some extent keep them tuned up against the day when employment will return. As and when opportunity arises, men are helped to find jobs and provided with clothes and other things to enable them to re-start work, or to take advantage of the Land Settlement scheme.

The Centre has been in operation now for close on eighteen months, and so successful has it been, and so sincere the appreciation of the members, that plans are now well advanced to provide them with a hall, adjacent to the present Club, for 'keep-fit' classes, dramatic shows, debates, and other communal activities.

Hours of Transmission

The aggregate time for all transmitters (excluding the Empire Station) was 71,123 hours 1 minute. The corresponding figure for 1935 was 68,795 hours 38 minutes. The breakdown percentage was 0.031 per cent as compared with 0.026 per cent for 1935. The aggregate time for the Empire transmitters was 16,577 hours 19 minutes as compared with 11,662 hours 28 minutes for 1935, the increase being due to an extension of broadcasting hours and to the use of a third transmitter during the year.



Willem Mengelberg
who conducted the B.B.C. Symphony Orchestra on 4 November 1936



Pau Casals
(18 November 1936)

MUSIC

It is not unnatural, in reviewing the Corporation's musical output of the past year, to think first of its orchestral concerts. The Symphony Orchestra and its sections, the Theatre, Variety and Empire Orchestras, the B.B.C. Military Band and various Regional Orchestras, contribute an enormous proportion of the whole music broadcasting. Over 2,000 concerts have been given in studios and in public by these orchestras during the last twelve months, apart from collaboration in dramatic and similar productions, and of these over 350 have been played by the (complete or sub-divided) Symphony Orchestra.

In June, Arthur Catterall, who had led the Symphony Orchestra from its formation, resigned in order to resume his solo career. He was succeeded in the autumn by Paul Beard, formerly leader of the London Philharmonic Orchestra. In the interim Marie Wilson had again led in the Summer 'Proms'.

These are days of universal musical contact, and when a country has something good to offer, it is available to the whole of the world. But there remains the thrill of personal contact in the concert hall; and the widening interest aroused by broadcast performances brings the public in increasing numbers to welcome famous foreign orchestras in their tours of this country. The Vienna Symphony Orchestra, for instance, on its recent visit played to full halls in thirteen cities. Yet this country has seldom sent one of its own musical organizations on a reciprocal tour of the continent: and the year 1936 will be remembered for the April tour of the B.B.C. Symphony Orchestra, under its permanent conductor, to Paris, Zürich, Vienna, and Budapest. In each city it played music of the country visited, some standard classical work, and some representative British music. The reception by public, press, and, be it added, musicians of both the Orchestra and the British music was highly gratifying.

At home the full Orchestra, besides playing in Leicester, Glasgow and Hanley—in accordance with the policy of visiting as many parts of the country as possible once a year—gave twelve concerts in the Queen's Hall, London, and two seasons of Promenade Concerts—two weeks in

January and eight in the summer—these last, of course, under Sir Henry J. Wood. During the summer season fifty-three works by British composers received performance, and William Walton had a well-deserved programme to himself for the first time. The Orchestra has also been concerned in most of the eight concerts of Contemporary Music, for works which included Alban Berg's last work, the Violin Concerto played by Louis Krasner (repeated later in the Queen's Hall), Frank Bridge's 'Cello Concerto, Malipiero's opera 'Filomela e l'Infatuato', Vogel's oratorio 'Wagadu', Lennox Berkeley's oratorio 'Jonah', and excerpts from Hindemith's opera 'Cardillac'. All these were first performances in England. A special feature was the broadcast of the four Symphonies of Vaughan Williams within a few weeks during the summer. Of other notable choral performances of the year may be mentioned Sir Hamilton Harty's revival of Berlioz's 'Symphonie Funèbre' and 'Grande Messe des Morts' in the Queen's Hall in March, the 'Parsifal' concert on Good Friday under Sir Henry J. Wood, and Elgar's 'Dream of Gerontius' under Dr. Adrian Boult.

After nine years of useful development, the 'Foundations of Music' series ended in June. In the autumn they were revived in different guise; the new programmes are now inserted at main listening times, and each set is devoted to some particular composer, school or style of music. Outstanding series have been the concerts of French choral music by Nadia Boulanger and her singers; five Busoni recitals by his pupil and friend Petri; unusual and valuable music by William Locke; and works of the important but little-known Richard Dering, the last of the great British madrigalists.

A modification in policy of the Sunday Symphony Concerts broadcast from the studio has been to alternate them between 6.30 p.m. and 9.5 p.m. so as further to extend their already large audience. While these are devoted largely to the great classical and romantic composers, they include modern works of interest, such as the first performance of a new symphony by E. J. Moeran, and a repeat of William Walton's exhilarating symphony.

While the Corporation welcomes opportunities to invite outstanding international

figures, it endeavours never to lose sight of its responsibilities towards the British musical profession and music.

Foreigners are only engaged when they are of international reputation and interest, or offer something exceptionally valuable or even unique in performance and repertoire. Furthermore, they are as a rule invited only if and when they are in this country on other business. The B.B.C. does not feel itself responsible (as the impresario sometimes feels it should) for bringing forward unknown foreign talent visiting England unless the artist is not only musically mature, but promises a quite exceptional and valuable future. Such new artists are naturally very seldom to be found.

This year's list included a return, after an absence of five years, of the Spanish musician, Iturbi, not only as pianist but also as conductor; Casals, playing for the first time the Elgar 'Cello Concerto, and also conducting; Mengelberg, the famous director of the Amsterdam Concertgebouw concerts, conducting his first concert with the B.B.C. Symphony Orchestra in the Queen's Hall; and Georg Szell directing a studio concert of attractive Czech music. The Vienna Symphony Orchestra, on the night before it left England after its tour, gave listeners Viennese music in the authoritative manner, and the B.B.C. Orchestra afterwards returned the compliment that had been paid to them in April in Vienna by entertaining the Orchestra in the great studio at Maida Vale. Other artists from abroad—opera singers, lieder singers, instrumentalists, conductors, folk music players, not to mention yodellers and a youth movement choir from Germany—could, if space permitted, make an imposing list.

The year has offered more than the usual amount of opera music. Each Covent Garden season has provided its quota of broadcasts. There was the International Season of German and Italian opera mainly under Sir Thomas Beecham, Reiner and Bellezza, in May and June. The Dresden State Opera came in October and gave Mozart and Strauss; Strauss himself directing 'Ariadne auf Naxos' which was broadcast complete. The new British Music Drama Opera Company's season contributed Albert Coates's new opera 'Pickwick' and Roger

Quilter's 'Julia' as well as the seldom given Musorgsky opera 'The Fair at Soroshchinsk'. At the close of the year Sir Thomas Beecham was beginning again another Christmas Season. Sadler's Wells and the Carl Rosa Opera Company have contributed their share; and relays from abroad have indicated improving conditions for live transmission of complex operatic music. Nor must mention be omitted of various operatic programmes from the studio, whether comic opera and operetta under Stanford Robinson; concert performances like Hindemith's 'Cardillac' under Clarence Raybould; Shostakovich's 'Lady Macbeth of Mtsensk' in the Queen's Hall under Albert Coates; chamber opera by the Opera Group under Ernst Schoen and Georg Kneppler; or the Meyerbeer programme commemorating the centenary of the first performance of 'The Huguenots', under Charles Webber.

Outstanding events in the musical record of the **Midland** Region included a concert of Béla Bartók's works, played by the composer, with the B.B.C. Midland Orchestra; a studio performance of Purcell's 'Dido and Aeneas'; and the performances of Mozart's 'Bastien und Bastienne'; and W. H. Bell's 'Hatsuyuki'. But from the general point of view proper to a survey like the present, the most important development of the year was perhaps the strengthening of Midland Choral broadcasts by enabling the various Societies to have the assistance of the City of Birmingham Orchestra. This applied to Nottingham Harmonic Society, Stoke-on-Trent Choral Society, Gloucester Choral Society, and Rugby Philharmonic Society. A joint concert was broadcast by the Birmingham Festival Choral and Derby Choral Union. Two concerts at the Coventry Festival were broadcast; one of these was given by the City of Birmingham Orchestra and a Warwickshire choir conducted by Dr. Adrian Boult. Another interesting development was the introduction in the autumn of a service, so to call it, of replies to musical queries by listeners, given by Leslie Heward and illustrated by the B.B.C. Midland Orchestra. Lastly, a significant step in the integration of musical activities in the Region was the formation of a Music Advisory Committee.

Development in the **North** Region has been steady during the year, and it is only



PAUL BEARD

Leader of the B.B.C. Symphony Orchestra

necessary to mention that the great musical resources of the Region have been exploited as fully as ever. There were regular concerts by the leading orchestral and choral societies—such as the Hallé, the Liverpool and Leeds Philharmonics, the Leeds Choral Union, the Huddersfield Glee and Madrigal Society, and the Sheffield Musical Union—conducted by musicians and soloists of international repute, among whom it would be invidious to particularize. In the sphere of chamber music there were regular concerts by the Manchester Tuesday Midday Concerts Society, concerts by the Rodewald Society of Liverpool, and midday recitals from Leeds and Sheffield Universities. Here, too, the year has been signalized by the formation of a Music Advisory Committee.

The B.B.C.'s own Northern Orchestra of thirty-five players gave regular orchestral concerts, and on October 9 the strings of the Orchestra collaborated with the Choir in Lincoln Cathedral in a programme of the

works of William Byrd, sometime organist of the Cathedral.

As to the music in the **West** Region, under the title 'Western Salon' a new experiment was tried this year. Chamber music was played to an audience gathered round the players so that a more intimate atmosphere might be created than in the concert hall. Broadcasts in this series included the Griller Quartet from Dartington Hall, the Grinke Trio from Marston Court, and the Bristol Chamber Music Players from the studio. Broadcasts from public concerts included the opening concert of the Torquay Musical Festival and the concert to mark the re-opening of the Colston Hall, and the newly formed Bath Pump Room Orchestra gave its first concert under its new conductor, Maurice Miles, in October.

In the **Welsh** Region an important step was taken in the formation of the 'B.B.C. Welsh Singers', a body of fifty experienced choristers who are used in small combinations



WILLIAM PARSONS AND DENNIS NOBLE IN COATES'S OPERA 'PICKWICK'
(30 November 1936)

according to the demands of the various programmes. Scope was given to the younger Welsh composers, and there were many first performances of chamber and orchestral music. Works by the late Vaughan Thomas have been given special attention, and the holding of string orchestral concerts, open to the public free, has been continued.

Undeniably, the outstanding musical feature of the year's work in the **Scottish** Region has been the continuance of the task of covering 'Music from the Scottish Past' and arranging it for the microphone. The research was undertaken by Mr. H. M. Willsher, Dr. Henry Farmer, and Father Long. Altogether thirteen recitals have been broadcast. The repertoire of this, arranged for solo voice, choir and orchestra, now numbers over a hundred items and the work is likely to go on for some years. It is hoped that some of the

music may, by publication, be made available for public performance. As a balance to this, seven concerts of 'Scottish Music of To-day' were broadcast, comprising works by Eric Chisholm, Francis G. Scott, W. B. Moonie, Cedric Thorpe Davie, Robin Orr, David Stephen and Guy Warrack. In the general musical programme, portions of eight concerts by the Reid Symphony Orchestra, Edinburgh, and portions of seventeen concerts by the Scottish Choral and Orchestral Union, were broadcast, besides the concert, above-mentioned, of the B.B.C. Orchestra at Glasgow. The B.B.C. Scottish Orchestra itself, in programmes other than dance and choral, broadcast for approximately 151 hours.

In **Northern Ireland** programmes of outstanding interest included two series of public concerts in co-operation with the City of Belfast Corporation and the Belfast City Y.M.C.A.



'Cavalcade'
(24 June 1936)



Constance Cummings
who gave her first broadcast in 'Episode' on 9 September 1936

DRAMA

From the point of view of radio drama, certainly the most important event of 1936 was the recognition given to the development of that side of its work known within the B.B.C. as the 'Feature Programme'. The development of these programme items has been one of the most interesting in this sphere of broadcasting. An exceedingly wide field is covered by this term 'Feature', which is admittedly unsatisfactory but continues to be used for lack of a better: it ranges from the borders of 'Talks' territory on the one hand—e.g., of programmes of the 'Mosaic' type—to small-scale actualities—e.g., 'Gale Warning', 'Fog' and 'Trinity House'—large-scale actualities—e.g., 'Post Haste' (dealing with the work of the General Post Office), 'Scotland Yard', and 'Underground'—literary features, such as 'Erasmus', 'Coleridge', and 'Sicilian Expedition'—commemorative programmes of the type of 'Gallipoli', 'Coronel and the Falklands', 'Scott in the Antarctic', and 'Kitchener'—the series of Famous Trials, and such programmes as the 'Review of the Year', and, until the present year, the Christmas Day 'Round-the-Empire' programmes. It is obvious, therefore, that the 'Feature Programme' employs every kind of production technique and that the field of material is almost unlimited. But what is principally important is that, with the shadow of television falling ever nearer and nearer upon the broadcasting of plays, the 'Feature Programme', which has no link with any other type of art or entertainment, is bound to have an ever-increasing significance from the point of view of broadcasting by sound alone. It has to be admitted that the broadcasting of plays without vision is a handicap: it is very questionable whether the same thing is true of 'Feature Programmes'.

In addition to those quoted above, Nationally broadcast 'Feature Programmes' for 1936 included several particularly interesting specimens of the type. In particular it is worth remembering 'London Calling—1600', in which Mary Allen and Herbert Farjeon most successfully put a cross-section of Elizabethan life before the microphone; the first broadcast of selected stories from Kipling's works—a reading in which Denis Johnston and Ronald Simpson distinguished themselves;

'The Marseillaise'—an experiment in vocal counterpoint, not altogether successful, yet definitely from some points of view stimulating; and the Armistice Day programme, which proved once and for all—if proof were necessary—that brevity is not the least of the virtues of a good 'Feature Programme'.

Among original radio plays, D. G. Bridson's 'March of the '45' stands out as the most distinguished radio piece of the year. Here, probably for the first time, radio drama and art definitely met. Both from the poetic and the broadcasting point of view the level of this play was remarkably high. Apart from this, the year was not particularly fertile in plays specially written for broadcasting, though Philip Wade increased his reputation with 'Jenny Meade', Owen Rutter and Cyril Nash with 'The Bounty Mutineers' provided an admirable antidote to the flamboyant inaccuracy of Hollywood on the same subject, and Horton Giddy's 'Off Finisterre' and Lord Dunsany's 'Mr. Faithful' both deserve mention as achieving success within comparatively narrow limits.

Adaptations of stage plays were probably more successful than ever before. 'Cavalcade', 'The Silver Cord', 'The Breadwinner', 'Autumn Violins' and 'Sailors of Cattaro' were perhaps the outstanding examples, with Ronald Squire and Edna Best responsible for the two most remarkable performances of the year. In 'The Lady with a Lamp' and 'The Queen of Baltimore' respectively, Diana Wynyard and Carol Goodner competed in ageing from the 'teens to the 'nineties and proved that this was possible without the assistance of stage make-up, while 'Laburnum Grove' and 'Youth at the Helm' provided some much-needed comedy relief. Two adaptations were made from films in 'Episode' and 'The Thin Man', the former, in which Constance Cummings made her first broadcast appearance, being the more successful of the two.

An agreeable new field for the broadcasting of plays has been made by the opening of Sunday programmes to dramatic classics outside Shakespeare, and advantage was promptly taken of this opportunity with three examples of plays in verse—'Murder in the Cathedral', Professor Gilbert Murray's translation of 'Hippolytus' of Euripides, and Clemence Dane's translation of Rostand's



'THE MARCH OF THE '45'
(28 February, 10 and 12 November 1936)

Brush Museum

'L'Aiglon', in which Marius Goring played the Duke of Reichstadt. These, and a more than competent revival of Wilde's 'The Importance of being Earnest', provided a good background of classic drama. It should be added that seven of Shakespeare's plays were presented in the course of the year.

Among adaptations of novels and short stories, 'Four Meetings' by Henry James, and Francis Dillon's versions of two of Hans Andersen's fairy tales, together with a revival of Compton Mackenzie's 'Carnival', deserve to be remembered, while the work of both Francis Beeding and Mrs. Belloc Lowndes found a place for the first time.

In both feature and dramatic work, the year has been marked by closer liaison and greater co-operation between Head Office and regional staffs and consequent increased exploitation of regional resources. The outstanding instance, is, of course, that already mentioned of the 'March of the '45', which was the joint effort of **North** and **Scottish** Regions. But this very fact—the exploitation of dramatic and feature resources all over the country—makes it difficult to exhibit the total dramatic activity, according to local labels, otherwise

than in the tabular form used for 'The Year's Events' (see page 115). In that place will be found listed the outstanding dramatic programmes of each Region. Here, in a general review, it must suffice to indicate the tendencies of 'Regional' policy by a few instances. In the newly formed **West** Region, two nationally famous works—'Treasure Island' and 'Under the Greenwood Tree'—were brought to their proper regional setting. **Midland** and **North** Regions collaborated in a programme dealing with the legends of the mountains common to both, which was presented from Bakewell, while individually the former directly related two of its feature programmes to the Malvern Drama Festival and the Three Choirs Festival at Hereford, and the latter presented further explorations of its own countryside by D. G. Bridson's 'Harry Hopeful'. The visit of the Company of the Shakespeare Memorial Theatre to the Birmingham studios, and the broadcast of John Brandane's 'The Glen is Mine' by the Scottish National Players, may stand as typical of co-operation in another form, viz., the enlistment of the aid and sympathy of outside dramatic organizations.

CHILDREN'S HOUR

In the issue of the *B.B.C. Annual* in 1935 (page 68) there were incorporated details of the considerable changes made in the Children's Hour, including the creation of Regional Hours. Those changes have been consolidated during the past two years, including the one at present under review, but intensive work is being carried out with a view to improving the programmes and considerably widening their scope during 1937.

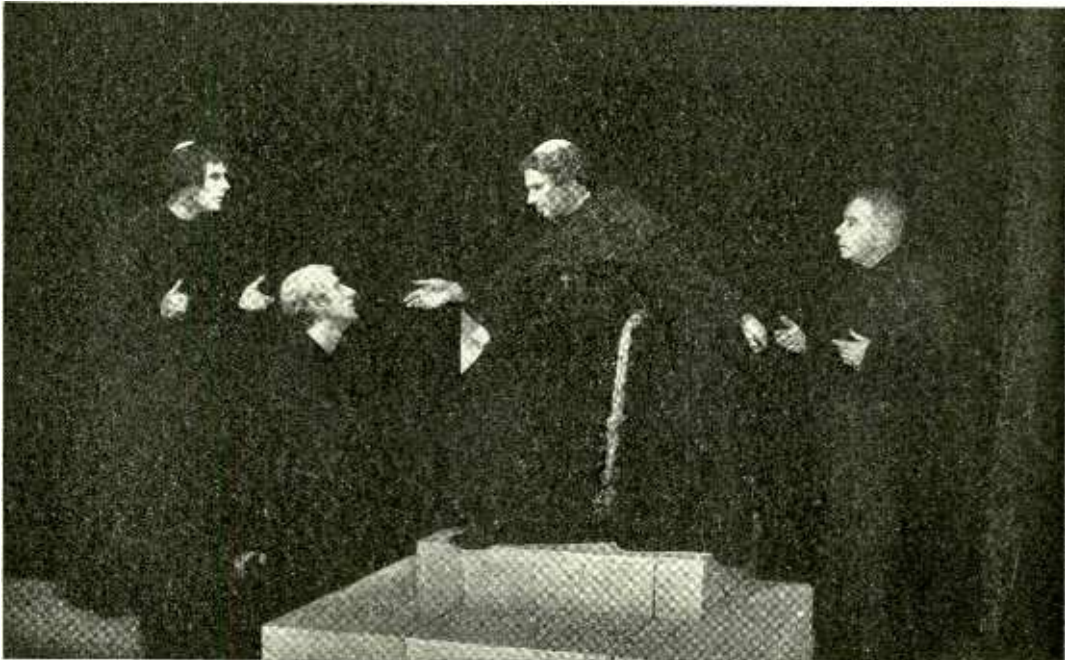
It would appear that the talks during the daily 5.15 period are more popular than ever, while the three leading speakers in the past year's schedule, viz., Commander Stephen King-Hall, David Seth-Smith, and Commander R. T. Gould, evoked an enormous amount of youthful correspondence. On 29th July the children heard about 'Safety First' from the Minister of Transport in person.

In the sphere of drama, particular mention may be made of the new series of plays, 'The Castles of England', by L. du Garde Peach, 'St. Michael's Mount' being re-

peated in 'Request Week', while later in the year there was just as great popular reaction to the new serial thriller 'The Prowlers of the Deep' by Franklyn Kelsey, whose plays have now been mentioned in three successive *Annuals*.

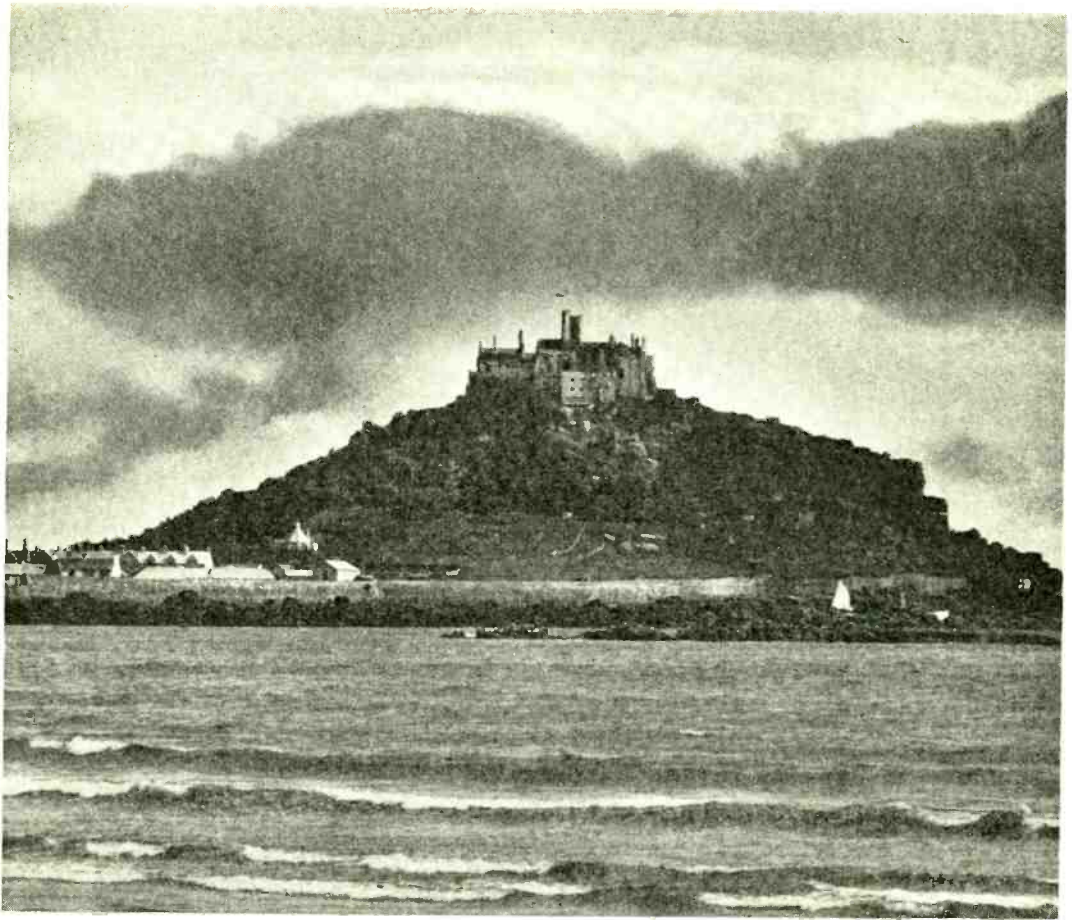
Of music it may be said—and not without some sense of pleasure, for music has always been one of the major problems of Children's Hours as a whole—that this year there has been rather more response to music generally, and in particular to the weekly recital of gramophone records. Good poetry, also, has been placed in the programmes, a notable inclusion in this category having been a number of Kipling's poems. In the story world, a strong feature has been the reading of 'The Just So Stories', and also some of the 'Jungle Stories', while the most sought-after dialogue story still remains the evergreen 'Toytown', by the late S. G. Hulme-Beaman.

Personal contact between Children's Hour and the younger listener is maintained by means of a regular series of popular competitions for all ages, and also by the Charitable Appeals, which have become a vitally strong link between listeners and



'MURDER IN THE CATHEDRAL'

(5 January 1936)



ST. MICHAEL'S MOUNT

Children's Hour. Since December, 1935, about £3,000 has been raised by London Children's Hour alone, of which the Christmas Appeal for poor children on London's Housing Estates brought in £1,330. Finally it can be recorded that the response to London's last 'Request Week', when 8,179 votes were tabulated, is the highest since the National Hour was replaced by the system of Regional Hours.

The Regional Hours, other than London's, included some noteworthy features. The **West** serialized 'King Solomon's Mines'. In the **Midland** Region an interesting development was the use of outside broadcasts (from Birmingham General Post Office, Birmingham Mint, and the Warwickshire County Cricket Ground).

North Region signalized 1936 by the introduction of a monthly series of programmes, 'Your Own Ideas', written by young listeners; thousands of contributions have already been received, some of the contributors being only six years old.

Wales broadcast programmes in Welsh throughout the year, including two serial plays: 'Y Seren Ddu' by John H. Griffiths and 'Twm Siôn Cati' by Rhys Davies-Williams; and three English serials by J. D. Strange on 'The Lost City', 'Forgotten Island' and 'The Mandarin's Coat' proved very popular.

Finally may be mentioned **Scottish** Region's talks on Canada and **Northern Ireland's** broadcasts from the Agricultural Show at Balmoral.

VARIETY

Operettas and musical comedies still stand out as the most elaborate items of the Variety Department's programmes. Adaptations of pre-War successes are always popular, particularly amongst middle-aged listeners, and these listeners were catered for by broadcasts of 'The Gipsy Princess'; 'My Lady Frayle' (with Edith Day and Cecil Humphreys); 'The Arcadians'; 'Gipsy Love' (with Heddle Nash); and 'Princess Caprice', which latter production owed no small measure of its success to the fruity witticisms of George Graves, the famous comedian, who was playing his original part. A younger generation welcomed 'The Student Prince'; 'Rio Rita'; 'No, No, Nanette' (with Binnie Hale); 'Monsieur Beaucaire'; 'La Vie Parisienne'; and 'The Vagabond King', in which Bebe Daniels played the leading part.

Perhaps one of the chief features of 1936 has been the encouragement given to rising authors and composers, with the result that a greater number of original productions than ever before has found its way into the programmes. Gertrude Lawrence was the heroine of Phillip Leaver's musical play 'Never Talk to Strangers', while Marie Burke and an all-star cast performed 'The Three-Cornered Hat' by the same author, a delightful comedy with music of Andalusia of a hundred years ago. For both these productions the music was written by Kenneth Leslie-Smith. A brilliant but good-natured satire upon the 'One Night of Love' type of film was Spike Hughes's 'I Scream Too Much', which featured Nora Grünh with Aubrey Mather; while in the same category fell Holt Marvell's 'Lots of Love', described as 'an improper story very properly cut to an hour'. It afforded excellent opportunities for Adèle Dixon, Eric Portman and Bruce Winston. Drama to music included 'Death in the Dressing Room' by Max Kester, Betty Laidlaw and Bob Lively; and a revival of 'Away to the Hills' by C. Denis Freeman and Mark H. Lubbock. Lighter trifles, more in the musical comedy vein, were 'Cottage Loaf' (A. A. Thomson and Ashley Sterne); 'Love at Par' (Mabel and Denis Constanduros and George Barker); 'Mr. Barley's Abroad' (Henrik Ege, Christopher Hassall, and Geoffrey Henman), and 'Money for Jam' (Max Kester and Peter

Mendoza), the latter noteworthy for the fact that it brought to the microphone the amusing musical comedy pair, Bobby Howes and Wylie Watson. John Watt, who has developed a new technique in radio musical plays with his narrative-cum-dialogue treatment, was responsible for 'Lovely Women and Ugly Men' (featuring the well-known comedian, W. H. Berry). For this production, as for the others, the music was written by Harry S. Pepper.

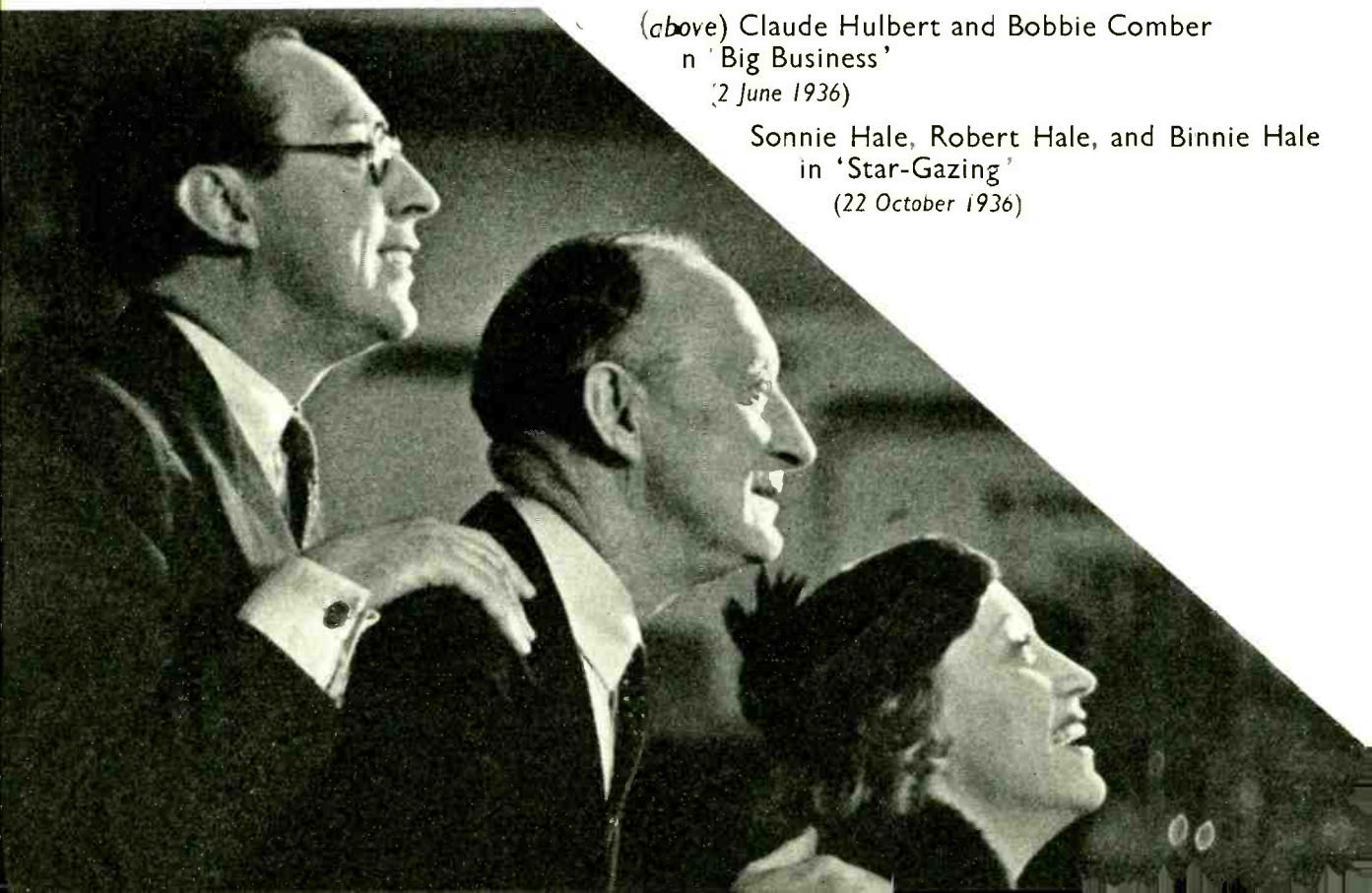
Entertainment of the revue order was provided by George Robey in 'Here's George'; Ronald Frankau and his company in 'You Ought to See Us'; and Rex London who wrote words and music for 'London's Latest', besides appearing in it himself; while Lauri Wylie, famous as a revue author for the stage, established a radio name with 'Wireless Puppets', two editions of which starred Billy Merson. The popular North Country comedian, Sandy Powell, appeared in three editions of his 'Album'; while three late-night revues of the more sophisticated order were broadcast in the late spring and autumn.

Almost in the revue category fall 'The White Coons' and 'Kentucky Minstrels'. Until this year 'The White Coons' had only been a summer feature, but such was their success that it was decided to continue them throughout the winter, alternating with 'Kentucky Minstrels', in which the leading comedy figures were Scott and Whaley. 'The White Coons' team remained practically the same throughout their successful run; Wynne Ajello, Jane Carr, Paul England, C. Denier Warren, and Stanley Holloway (later, in his place—Tommy Handley), with Doris Arnold and Harry S. Pepper at the pianos.

Concert party was very much to the fore in 1936. During the spring 'The Air-do-Wells' and Greatorex Newman's 'Fol-de-Rols' broadcast regularly from the studio, followed by Clarkson Rose's 'Twinkle'. The summer season witnessed the initiation of a series of outside broadcasts from the seaside resorts. These were organized by Harry S. Pepper in conjunction with Davy Burnaby, and embraced all the leading parties. Perhaps the greatest success—it was certainly the most original idea—was achieved in Bank Holiday week, when an hour's programme was broadcast from the three 'Fol-de-Rols' companies



(above) Claude Hulbert and Bobbie Comber
in 'Big Business'
(2 June 1936)



Sonnie Hale, Robert Hale, and Binnie Hale
in 'Star-Gazing'
(22 October 1936)

around the coast—at Eastbourne, Hastings, and Llandudno—the programme terminating with a burlesque melodrama whose characters were divided between the three parties. Touch was kept by means of headphones and portable receiving sets, and, in this way, Eastbourne, Hastings and Llandudno were on the air at one and the same time. Even the three respective audiences shared the success, since they were called upon to take the part of ‘villagers’. Not a hitch marred this experiment.

The record of the Theatre Orchestra includes several pot-pourris arranged by Julius Buerger—‘Liebestraum’, ‘A Festival of Folk Music’, and ‘Johann Strauss’—while it combined with the Variety Orchestra for two large-scale features—‘The Life of Verdi’ and ‘Puccini: the Man and his Music’. The second programme brought to the microphone two operatic stars, Eva Turner and Dino Borgioli. Eight programmes of excerpts from light and comic operas have been broadcast, involving a great deal of careful and judicious selection on the part of the arranger and producer, Gordon McConnell.

The Variety Orchestra supported all the Variety and ‘Music Hall’ programmes broadcast from St. George’s Hall. In the autumn ‘Music Hall’ was billed weekly, international stars appearing as and when available, in addition to the other established and popular acts of the British variety stage. Variety was also represented in other guises—John Watt’s ‘Floor Shows’, Archie Campbell’s and Bryan Michie’s ‘Little Shows’, and ‘Variety in Miniature’. Ernest Longstaffe’s ‘Light Fare’ and ‘Savoy Hill Memories’; Mungo Dewar’s ‘Eight Bells’; and an ex-Air Force feature ‘Flying High’, composed entirely of one-time members of the Royal Naval Air Service, the Royal Flying Corps, and the Royal Air Force; two coloured variety programmes—‘Molasses Club’ and ‘Tone and Colour’; Stanelli’s ‘Bachelor Party’; and the Yiddish broadcasts in the shape of Esta Stein’s ‘Yiddish Chauve Souris’ and Joseph Halter’s ‘Almonds and Raisins.’

The Variety Orchestra must also be given credit for a great deal of the success of John Watt’s clever adaptations for radio of Walt Disney’s ‘Mickey Mouse’ features. This producer also had their help in ‘Songs from the Shows’ and ‘Tunes from the Town’.

Light musical features by outside orchestras form a part of the Variety Department’s responsibilities, and outstanding successes were ‘Romance in Rhythm’ and, later, ‘The Music Shop’ presented by Geraldo, ‘Music from the Movies’ by Louis Levy, Carroll Gibbons and the Savoy Hotel Orpheans, and Van Phillips and his Two Orchestras. Walford Hyden not only continued his ever-popular ‘Café-Colette’, but was responsible for the musical background to Wilfred Rooke-Ley’s attractive series, ‘The Table Under the Tree’. Smaller but popular musical features were ‘Camp-Fire on the Karroo’, with a South African background, which followed ‘The Rocky Mountaineers’, and ‘Evergreens of Jazz’ by Leonard Feather and George Scott-Wood.

‘Saturday Magazine’, which started the year, reverted, after a summer vacation, to its old—and indeed, in the record of broadcasting, historic—title of ‘In Town To-night’. The autumn, moreover, witnessed the inception of a new experiment in radio variety. ‘Entertainment Parade’ set out to present to the public in tabloid form information of what was going on in the show world, not only in London and the provinces, but abroad. Famous musical, operatic, dramatic, film and variety stars came to the microphone, not to murmur platitudes, but to give excerpts from the particular production or programme in which they were at the moment before the public.

Reminiscence is an ever-welcome offering in radio, so that it is not surprising that ‘Scrapbooks’, presented by Leslie Baily and Charles Brewer, are high in popular favour. These, too, present well-known personalities from every walk of life and the artistic world to the public. ‘Scrapbooks’ for 1924, 1901 and 1908 have been broadcast during 1936, including contributions from the Countess of Oxford and Asquith, Lord Desborough, the Marchese Marconi, Dame Sybil Thorndike, and Shaw Desmond. Listeners have to thank Leslie Baily for yet another broadcasting idea in ‘Star-Gazing’, a series of radio biographies in which well-known figures of the musical stage present a panorama of their careers, assisted by other equally famous names in whose company they have graced the West End theatre world. The first programme of this series brought together for

the first time on any stage that versatile actor, Robert Hale, with his daughter and son, Binnie Hale and Sonnie Hale. The second programme featured the striking personality of José Collins, whose dramatic story of her meteoric rise to fame via the 'Ziegfeld Follies', 'The Maid of the Mountains', and other colourful Daly's Theatre productions made one realize that here was a production formula only possible to radio.

'Strange to Relate', a programme of curiosities, with contributions by Ripley of 'Believe-It-Or-Not' fame, and others, quickly established itself with listeners. 1936 also saw the development of the variety feature series. Listeners followed closely the amusing adventures of Claude Hulbert and Bobbie Comber in 'Big Business', Fred Beck and George Buck in the 'Mrs. Higgins' episodes, Olive Blakeney as 'Mrs. Tuttle', and musically, the sentimental adventures of 'The Vagabond Lover'.

Dance music continued to develop. Henry Hall and the B.B.C. Dance Orchestra (now in its fifth year) added many novelties to the programmes, in the way both of talent and of material, while Ambrose, Lew Stone, Roy Fox, Billy Cotton, Harry Roy, Maurice Winnick, Jack Payne, Jack Hylton, Sydney Lipton, Jack Jackson, Bram Martin, Billy Gerhardt, and the other best-known dance band leaders from the hotel and restaurant worlds contributed their share to the broadcasting of dance music.

This survey cannot conclude without a few notes on 'Regional' variety. Mere notes must, of course, serve in a national survey, because it is of the nature of regional variety that the tastes it reflects should be local. The English Regions, therefore, maintain close touch with the music halls of numerous different towns. **Midland** has drawn upon theatres in Coventry, Aston, Leicester, Nottingham, Cheltenham, Worcester, Bedford, Peterborough, Northampton, Oxford, Derby, and Hanley. **North** broadcast variety from a rota of fourteen theatres; and the **West of England** Region reports an unexpected revival of interest in the Variety world 'down West'; a number of theatres

having started variety seasons which provide many new sources for broadcasts. Apart from this, interesting features in the Midlands included examples of Variety entertainment heard from Working Men's Clubs in Birmingham, Leicester and Derby; in the North a composite variety feature from Blackpool called 'Top o' th' Tower' (perhaps the most ambitious programme of its kind ever undertaken), and in studio variety, the performances of a number of young artists, none of them over sixteen, 'spotted' during a talent-finding tour.

In **Wales**, as mentioned in last year's *Annual*, the variety tradition as understood elsewhere scarcely exists; the problem of light entertainment here is consequently to develop something that in form and content can take the corresponding place in the programme as a whole. Items noteworthy of mention included successful broadcasts from Coney Beach, the Porthcawl fun-fair, a concert by Ader Tregaron, the only all-Welsh concert party and a series of programmes consisting of popular songs entitled 'When Day is Done'.

In **Scotland** light entertainment included 'Highland Holiday', by John Weir; 'Bees in the Bonnet', a monthly series by 'The Gomeril'; 'Dick Whittington', by John R. Allan and 'The Adventures of Bella Houston' by William Jeffrey; and in **Northern Ireland** the most characteristic tendency of the year was the discontinuance of the practice of importing cross-Channel material and the corresponding intensification of the search for local talent. As reflected in the programmes, this produced some interesting, if unassuming, variety bills; Ulster certainly appears richer in instrumentalists than in comedians, and in particular, four programmes entitled 'Stop Dancing' exhibited Ulster's possibilities in that type of music which lies between the light and the dance band styles. Other noteworthy programmes were the reviews 'Ballymagraw Gazette', 'Easter Cruise', and 'Linenhall Blues', a second edition of the variety programme 'Winnie's Hour', and among light feature programmes, 'Musical Oleograph'.



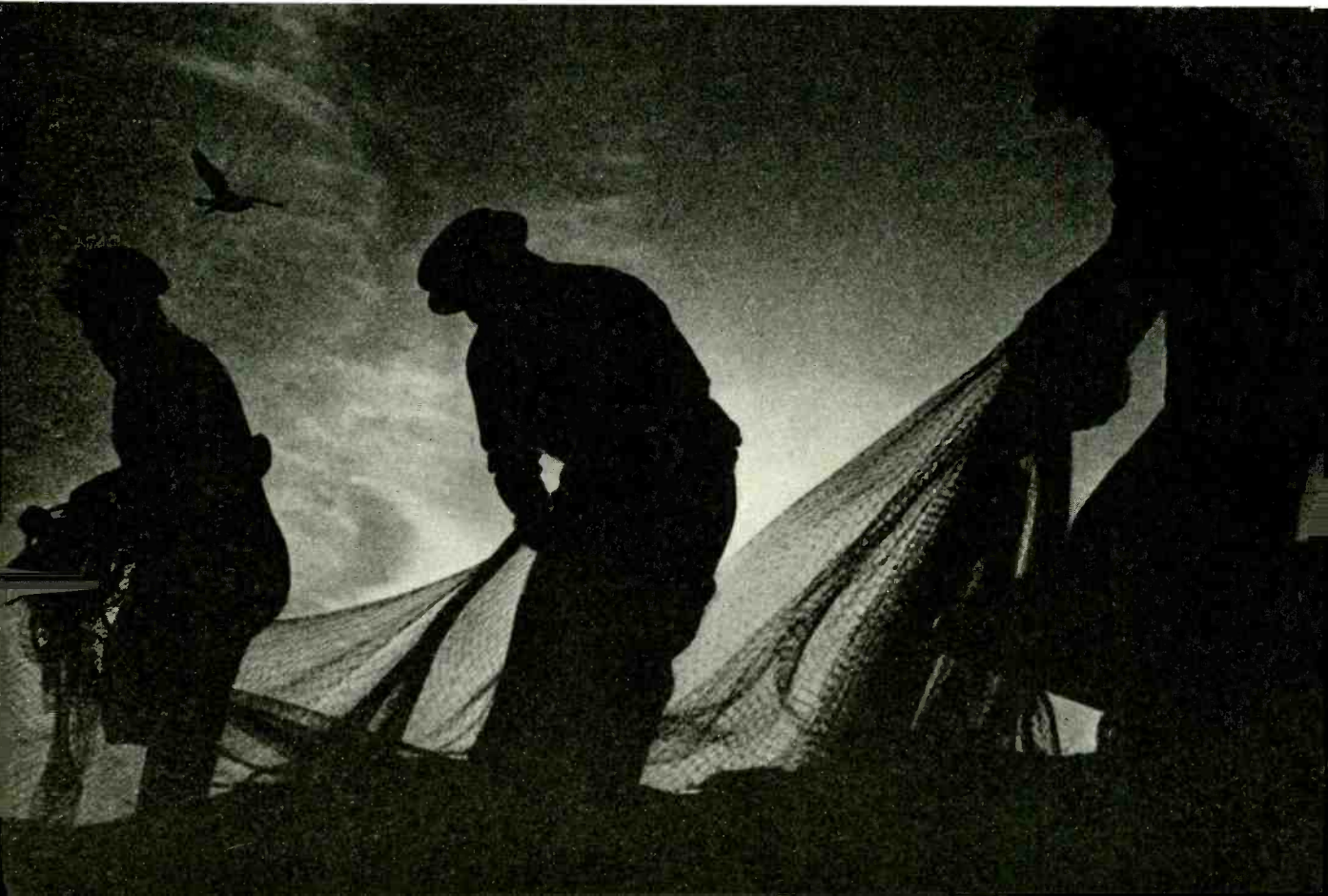
George Robey



(above) 'Sea Power'

'Down to the Sea in Ships'

(below) 'Sea Harvest'



TALKS

In the field of Talks each year brings new problems and new contacts. 1936 was no exception. The list of Talks, Discussions, etc., given on pages 103 to 106 indicates the ground covered, but some description of particular series is necessary to bring that bare list to life.

A plan to carry through nine consecutive months a series called 'Down to the Sea in Ships' meant a good deal of research, and brought in a number of new speakers. This ambitious series began after Easter with a group of talks on 'Sea Communications', which brought owners, officers and men of the British Mercantile Marine to the microphone. They told the public how ships are designed, manned and run, how cargoes are sought and loaded, and finally what is the nature of the problem now facing the industry in these days of economic instability. In the summer, 'Sea Harvest', a group of a dozen talks, dealt with the fishing industry of Great Britain—inshore and deep sea. Here, too, men who earn their living in the industry, as well as those who organize it and help to solve its problems, took part, and in a short feature programme a picture was given of the life of the great fishing port of Hull, with a brief glimpse of the work on board a trawler.

In both these groups of talks attention had been focused on the importance of the sea as the foundation of the nation's livelihood. There remained the question of how through the storms and calms of international politics that livelihood is protected. 'Sea Power', therefore, was the title given to the final group of six talks broadcast in October and November. First, a number of eminent speakers contributed to a survey of the meaning of sea power, its instruments, and the personnel of the Navy. Then the problems of the control and the protection of shipping in time of war were frankly discussed by Sir Arthur Salter and Paymaster-Rear-Admiral Sir Eldon Manisty, who were during the War respectively Chairman of the Allied Maritime Transport Executive and Organizing Manager of Convoy at the Admiralty. Finally, the First Lord, Sir Samuel Hoare, described the part played by the Admiralty as a centre for devising means

to protect the communications not only of this country, but of the Empire as a whole.

In composing such a series there were many difficulties, and they could not have been overcome without the very full co-operation given by the national organizations and individual firms in the shipping and fishing industries, and, in the section on 'Sea Power', by the Admiralty. In the result it became possible to give listeners first-hand information on vital problems, which they could not otherwise have obtained save by arduous study, and in some cases could not have obtained at all.

Somewhat similar in form and in content was 'The Conquest of the Air', a short series in February and March, in which aeroplane designers, pilots and operators spoke of the present and the future of aviation. What is being done to make flying safe; the lack of international arrangements to facilitate civil aviation; the question of Government subsidies to air-line companies; and the relation between civil and military aviation were among the subjects dealt with. A feature programme depicting the history of aviation prefaced the talks, and the series was strikingly rounded off by a symposium of the views of British and foreign experts about the future.

To the most casual observer of affairs it has been increasingly obvious that nationalist sentiment in Scotland and in Wales has been developing, but to those who were not already within the orbit of these movements, and particularly to the English, it was not very clear what were the claims and aims of the Nationalists. It was, therefore, decided to devise some means of letting the whole nation hear the views of nationalists, anti-nationalists, and disinterested students of the problem. This was achieved in a series of six talks in April and May, under the title of 'Three Nations'. Mr. Arthur Bryant opened with an account of the historical background; Scotland was represented by Professor Dewar Gibb of the Scottish Nationalist Party, and Mr. Joseph Duncan; Wales by Mr. Saunders Lewis of the Welsh Nationalist Party, and Mr. Clement Davies; Lord Howard de Walden spoke for England; and the series was concluded with a summary by Professor Ernest Barker.

Space does not permit of more than allusion to the series 'If Plato Lived Again'—a critical examination of the philosophical basis of dictatorship and democracy in the present day; to that on international co-operation which dealt with ways in which the nations do in fact collaborate; to Mr. Frank Birch's analysis of the freedom enjoyed in law and in fact by the people of this country; to the debate on the Means Test; to the informative series on the history and organization of the British Commonwealth and Colonial Empire by Professor Coupland and Mr. H. V. Hodson; and to the fact that Mr. Max Beerbohm gave two more talks—'Speed' and 'Victorian Politicians'—in his inimitable style before he returned to Italy in the summer; but some of the experiments made during the year are worth dealing with at greater length.

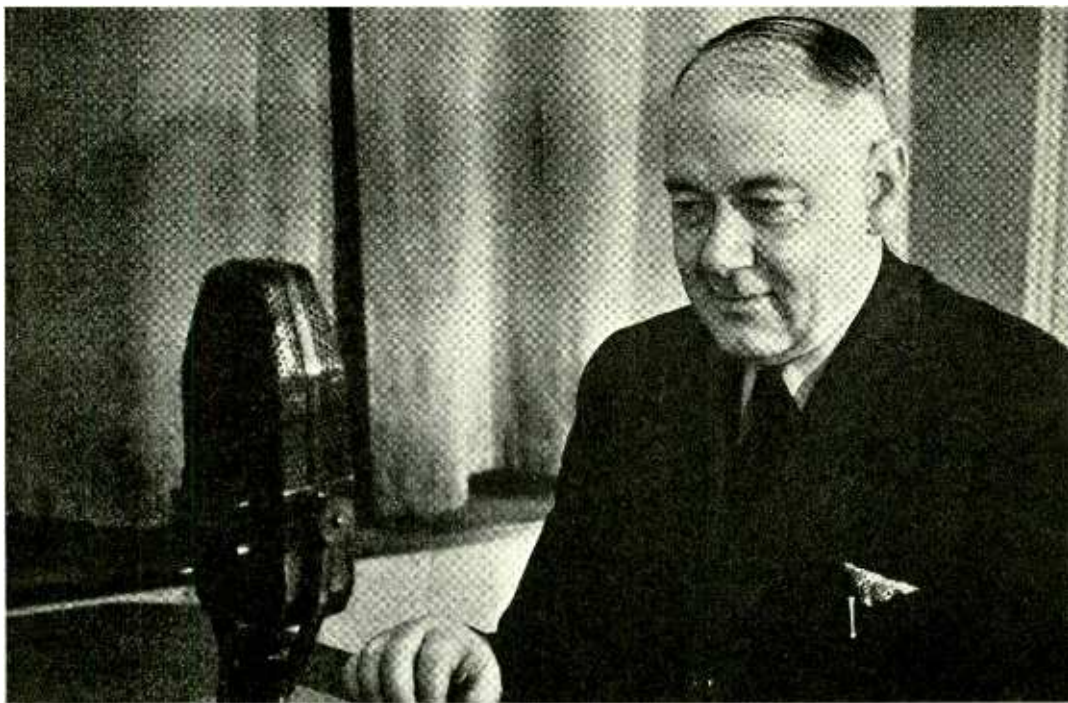
The Foreign Language talks were discontinued as instructional courses for students and were replaced in the autumn by a weekly talk in French on subjects of general and topical interest. Monsieur Stéphan undertook the editorship of the series, and his experience of teaching and of broadcasting was of great value in planning the scheme, one of the essentials of which was that the talks should be simple and that the tempo of the speakers should be adjusted to British ears. The subjects of the talks included French cooking and politics, a French view of the way in which the Briton regards foreigners, and French fashions for women; and there was a very charming 'mosaic' of French poetry and music. From all accounts, this experiment has been welcomed both by serious students of French and by those who, though not students, are interested in France, its language and its people.

The fortnightly reviews of new books were also discontinued, and talks of a more general nature took their place, intended to induce listeners to read books and to help them to choose books to read. Representatives of various types of readers described their own choices; General Sir Ian Hamilton, a barrister, Mr. Bernard Darwin, a miner, Mr. J. M. Keynes, and many others contributed to an experiment which proved successful enough to justify a progressive development during the autumn.

An experiment was also made with the

aim of introducing 'Science' to those not already interested in it. On the assumption that many people still regard the scientist as a curious creature, remote from everyday affairs, hardly human, and quarrelsome in his dealings with his colleagues, talks under the title of 'Scientists at Work' were given mainly by the research workers of the younger generation in various branches of Science, describing their daily life, their objectives and their relations to other branches of research. The human aspect, the teamwork amongst scientists, and the relation of their researches to everyday life, were brought out with considerable success. After an introduction by Professor D. M. S. Watson, Jodrell Professor of Zoology and Comparative Anatomy, University College, London, who whetted the appetites of listeners for further information, one talk was devoted to each of the following: bed-bugs, plant diseases, development of animals, colours in flowers, how the ear works, limestone formation, weather research, cosmic rays, anthropological research, cold storage problems. The concluding talk was given by Professor A. V. Hill, the Secretary of the Royal Society. The experiment certainly succeeded in giving the lay listener a real opportunity of getting a clearer view of the scientist in his various modes and types.

Another experiment of very considerable interest was based on the view that, whilst listeners had the fullest opportunity, by means of broadcasting and the Press, of learning the official views of foreign Governments and official representatives of foreign countries, they were unable, unless they could travel abroad, to hear the views of private citizens like themselves, and would welcome an opportunity of hearing the opinions of the 'man in the street'. In a group of talks entitled 'Vexed Questions' nationals of European countries were invited to give their personal views of their countries' politics. In all cases, the speakers were private individuals holding no official position. Speakers were found holding diametrically opposed views on (a) Italian home and foreign policy; (b) the Soviet Russian constitution; (c) the Civil War in Spain; (d) the National Socialist philosophy in Germany; (e) the activities of the Rexist Party in Belgium. They spoke anonymously from separate



E. M. STÉPHAN

studios, and the order in which they spoke was settled by the spin of a coin. The sincerity and frankness of all the speakers were such that listeners could feel as if a window had been suddenly opened, through which they could look into a foreign country and hear the 'man in the street' giving expression, without equivocation, to all his hopes and fears.

Of interest, too, was a series of personal reminiscences by people who were present at great events which have now passed into history. Under the title of 'I Was There', a survivor of Rorke's Drift, a survivor of the *Titanic* disaster, one who was present at the siege of the Legations in Peking, together with other participants in historic events or scenes described their memories of what they had seen and heard at the time. The research undertaken for the purpose of arranging these talks revealed that this method of presenting history is capable of considerable development. There are, alive and discoverable, people who can describe at first-hand events such as celebrations at the

end of the Crimean War in 1856, the great eruption of Krakatoa in 1883, and what London was like in 1868.

Turning now to Regional Talks—which continue to develop as specific services for their respective communities—here, too, space only permits of mentioning a few outstanding items and asking the reader to deduce (with the aid of the lists on page 106) how steadily the output was maintained.

In the **Midland** Region there was much evidence of increased interest in the discussions of industrial topics by 'Midland Parliament', now in its third year. Notable guest speakers included Miss Margaret Bondfield, Miss Ellen Wilkinson, and Mr. Austin Hopkinson. In a very different field, a series giving the story of all the Midland Football Clubs in the first three divisions of the League was begun in the autumn.

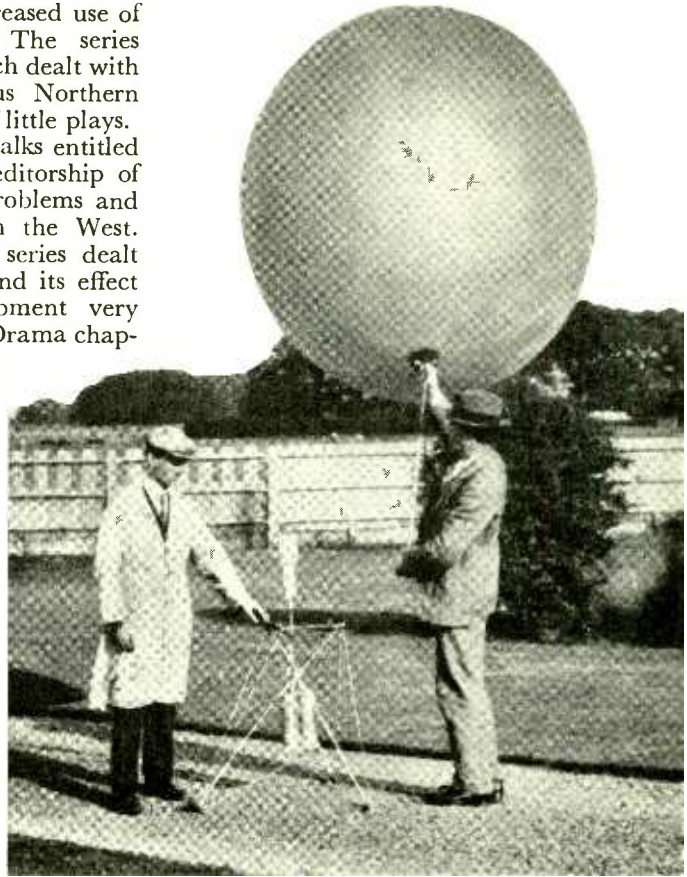
In the **North** Region, the 'Cockpit' discussions dealt in much the same way as the 'Midland Parliament' with problems equally actual but, in general, more homely. But perhaps the most marked feature of Northern

Region talks policy was the increased use of the semi-dramatic technique. The series called 'Writing on the Air' (which dealt with the lives and works of famous Northern writers) was, in effect, a series of little plays.

In **West** Region, a series of talks entitled 'Nets in the Sea', under the editorship of W. B. Luard, dealt with the problems and difficulties of inshore fishing in the West. The 'Books and Backgrounds' series dealt with the Western countryside and its effect on great literature—a development very similar to that alluded to in the Drama chapter of this book—namely the re-setting of nationally famous art products in their region of origin. Further, the predominantly rural character of this region lent particular importance to the series of talks headed 'Farmer's Tales', 'Village Opinion', 'Running the County', etc.

In the **Welsh** Region, the 'Interludes', which brought leading figures in Welsh life to the microphone, were continued. Other series in the programmes of Welsh talks included 'Discovering Wales' and 'For Welsh Farmers'. Two discussions have been outstanding—'The Drift of Employment', a joint discussion with Midland Region (the Welsh speakers were Lady Rhys Williams and Mr. Arthur Jenkins), and 'Conflict or Conciliation in the Coalfields'. Further, each series of talks broadcast in the National programme was supplemented by two talks in the Welsh language for listening groups.

To the Talks programme of the **Scottish** Region, Eric Linklater contributed a series of four talks, entitled 'A Scot Abroad', and Mrs. Edgar Dugdale 'Portraits from Memory'. Of talks in discussion form the most outstanding series was 'The Everlasting Heritage', contributed by distinguished people like Sir John Orr, Sir Robert Greig, Sir John Stirling Maxwell, Miss Elizabeth Haldane of Cloan, and Mr. Joseph F. Duncan. For listening groups, the principal event of the year was a series entitled 'Scotland's Living Past'. The speakers were Dr. George S. Pryde and



Air Ministry, Crown Copyright reserved
'SCIENTISTS AT WORK'—WEATHER RESEARCH
(Sounding Balloon ready to rise at Kew Observatory)

W. D. Ritchie, and the series concluded with a discussion between Mr. Thomas Johnston and Mr. J. Henderson Stewart. Other series broadcast were 'For Young Scots' and 'Talks for Scottish Unemployed'.

Talks in **Northern Ireland** were considerably increased during the year, and among series of special interest, two should be mentioned here. Under the general title 'Six Men Went Forth', the lives and work of six Ulstermen who had gone forth from their native land to achieve distinction elsewhere were dealt with by their descendants or by people who had made a special study of their subject; and Mr. E. Maxwell Fry's talks on Town-planning, given under the auspices of the Government of Northern Ireland.

NEWS

Two developments in the organization of the news service occurred during the year, one minor, the other major. The former was the provision of a short news summary at 11.30 p.m., for the benefit of late home-comers. The major development took place in the autumn. The number of news bulletins and summaries was increased, and the length of the two existing main bulletins, namely the 6.0 and 9.30 p.m., altered from 30 to 20 minutes. One or two points in this new arrangement will be of especial interest to listeners. The first concerns sport. Sports experts have been added to the News staff, with the object of making the sports service as efficient and comprehensive as is possible in the time available. During the summer, extra time was allotted for a sports bulletin, and this practice will be followed again this year, since the special sports bulletin was found to meet a widespread demand.

The relegation of practically all topical talks to one fixed period (10.15 to 10.25), has, it is believed, given general satisfaction, for now nobody can complain that the news is being held up by the inclusion of a talk.

During the past year much attention has been given to including among topical talks what are known as 'actuality items', that is, the broadcasting of events as they are actually happening. Among outstanding incidents in this actuality reporting may be mentioned the report of the Crystal Palace fire by an observer who was actually in the blazing building with the firemen, a report from inside a gas-filled chamber by an observer who had a microphone inside his gas-mask, and a broadcast from the banks of the Mississippi at Memphis whilst the floods there were at their height. During this last broadcast the shouts and songs of workers, the sound of sandbags being flung down, the lapping of water against the bank and the noise of motor-boats on the river could be heard behind the speaker. This feature of the news service is an extension of the practice which has been followed for the past two years of 'cutting in' to important sporting events, such as championship fights, ice hockey matches and other games, which experience has proved to be very welcome to

all listeners. Regular listeners, too, will not have failed to notice the great increase in the number and the extension of the range of the topical talks, properly so-called.

Another noteworthy feature of the year—prefiguring, one may hope, a world-wide and systematic service of the future—has been the further development of the 'observer' service from Geneva and elsewhere.

There have been, for example, talks on matters of immediate interest or importance from the United States, France, and Spain, notable amongst these was a graphic account of the fighting in the Northern Sector, given by an observer fresh from the scene.

Special efforts have been made to give an interesting and efficient Parliamentary service. The B.B.C. News Department has no seat in the Press Gallery of Parliament, and thus works under handicap. Nevertheless, it may be claimed that a well-balanced and interesting account of the proceedings of Parliament is contained in the news bulletins from day to day.

Of special interest in this connexion is the beginning of the service of talks from the various British Dominions overseas. Up to date talks have been given from Canada, Australia and South Africa. At present these talks are limited to one a month, but it is greatly to be hoped that they may become more frequent in future.

There has been no change in the general policy towards the handling of news. The aim of the News Department has been to give the most important of the day's news, and treat it with complete impartiality—a policy which is meeting with increasing appreciation.

This objective presentation of news is one of the most difficult of tasks. The ideal of impartiality is faithfully upheld, but the very conditions under which the work has to be done are such as to give occasionally an appearance of tendentiousness, or at any rate incompleteness, to reports. When this happens, listeners should remember that it is certainly due to the incompleteness of the news received. It may be useful to repeat here that the B.B.C. relies for its news bulletins on the four agencies, Reuter, Press Association, Exchange Telegraph, and Central News—apart of course, from such as comes in the form of official communiqués.

SCHOOL BROADCASTS

It was thought in 1935 that a turning-point had been reached in the service of school broadcasts. This was confirmed in 1936.

At the beginning of the year the Ullswater Committee stated explicitly, 'We are satisfied as to their value, and look forward to the time when every school will have wireless receiving apparatus as part of its normal equipment, to the benefit both of the children and of the teaching staff.'

Later in the year the Board of Education and the London County Council began official enquiries into the value of the service and the use to which it was being put.

By the end of the year there had been a remarkable increase in the number of listening schools. In England and Wales there are now 5,645 listening schools on the B.B.C. register, as against 3,759 twelve months ago. The sale of pamphlets has increased by 60 per cent during the same period; 455,526 pamphlets were sold to listening schools in the Autumn Term.

There are now 76 Local Education Authorities in England and Wales which have agreed to contribute towards the cost of providing receiving apparatus. Sets have been, or are shortly to be, installed in the Senior Schools of most of the larger Urban areas. In the Rural areas the position is not so satisfactory, as although in Merionethshire sets are being installed in all the Senior Schools, and it is known that certain Authorities have made provision for apparatus in their estimates for 1937-38, many schools have to raise the funds required through their own efforts.

On the technical side, the Council is pursuing inquiries in connexion with the suggestion made in the Ullswater Report that the B.B.C. or the Council, in consultation with manufacturers, might design a set (or series of sets) especially for school use. In the vitally important matter of the sympathy and assistance of teachers, it is seeking the co-operation of University Training Departments and Training Colleges to secure that teachers going out into the schools should have some experience of handling a broadcast lesson with a class.

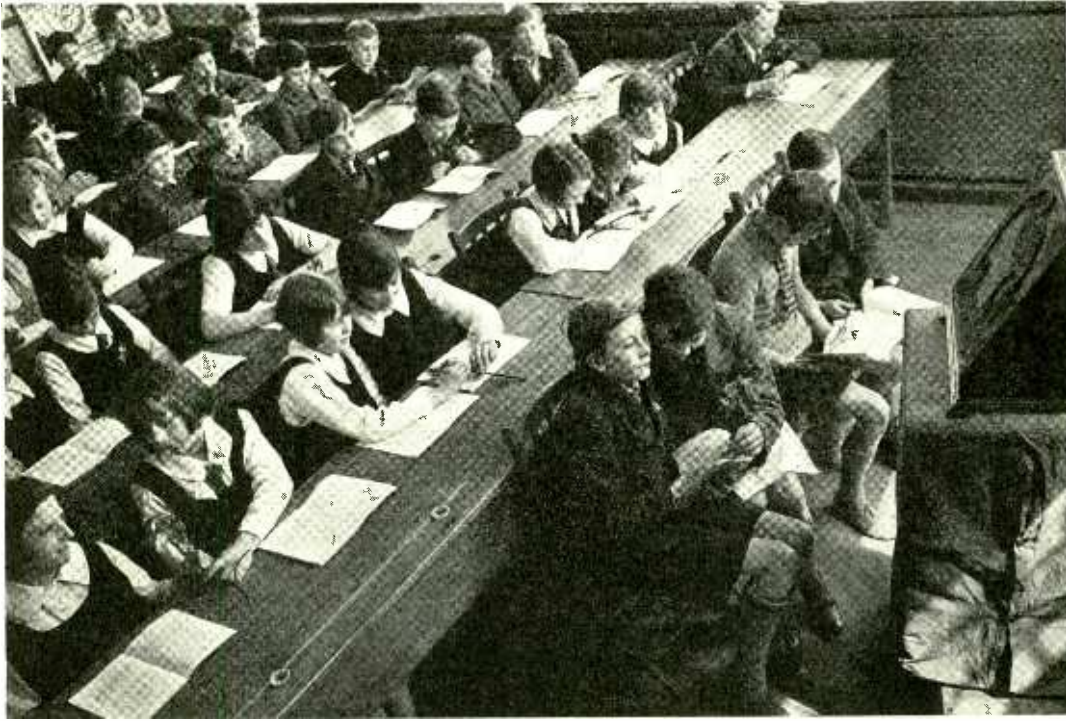
With regard to the programme itself, at the request of the schools themselves, more broadcasts have been arranged for junior schools. Much of the work this year has been devoted to modifying old techniques and devising new ones for these children aged between seven and eleven.

For example, Ann Driver has adapted the technique she uses for children of five to seven for the purpose of an additional 'Music and Movement' course for children of seven to nine. Some 1600 schools listen to these broadcasts. She makes the younger children simply beat time to the tunes they hear, but she makes the older ones pretend they have drums. The younger children imitate with their arms and hands the signs for minims and crotchets and quavers, but the older children learn to recognize the signs when they are written on the board, and to beat out first a time and then a tune on imaginary drums, perhaps singing as well. The problem, of course, is to negotiate the transition between the informal infants' work, which is designed to encourage spontaneous and rhythmical response to music, and the more formal musical instruction which comes later. In each of these broadcasts a balance has been kept between movement and blackboard work—with always a period in the middle of the broadcast for relaxation, the children lying on the ground and listening to music.

The dramatic interludes in the history lessons have been much appreciated and this year there have been more broadcasts of this 'performance' type than before, also more dramatic readings, readings of poetry, concerts, etc. In the Senior English Course there have been not only dramatic readings from Shakespeare and from Nativity plays and modern plays, but also stories of famous writers in dramatic form and readings of poetry in appropriate settings.

For example, a recent broadcast dealt with Ballads. It began with a description of a mediaeval village, with the men and women hurrying to the village green at the end of the day's work, and discussing what ballads they should do that evening. 'Where be Diccon the shepherd? Diccon, what ballad shall we say to-day?' 'If the choice be mine, Mack, we will have first the ballad of the Riddling Knight.' The parts are divided out and the ballad is said, with a chorus joining in the refrain. Presently, the scene changes to a castle. A minstrel arrives and discusses with two servants what he shall sing to the lord and his lady. Finally they decide on 'a sad song of a slain knight and his faithful lady', the 'Three Ravens', and afterwards the lord asks for the new song about Agincourt.

There has been development, too, in talks on current events. There were special broadcasts at the time of the death of King George V, and there have been topical broadcasts on the Opening of Parliament and



LISTENING TO THE BROADCAST LESSON ON 'NATURE STUDY'

the war in Spain. A more ambitious type of presentation has been attempted in the series 'History in the Making', in which contemporary problems are discussed against their backgrounds, the idea being that children may see controversial subjects from more than one point of view, and to use history in their approach to contemporary affairs.

Side by side with these more marked developments and novelties, the familiar fields of Nature Study, Regional Geography, English, Foreign Languages, Music, etc., have been covered as usual.

This survey, brief as it is, would be still more incomplete if it failed to refer to the school broadcasts which are special to Scotland and Wales.

In **Scotland** the year 1936 witnessed marked development. 762 schools were registered representing an increase of 227 schools since the beginning of the year, and there was a corresponding increase in the sale of pamphlets, of which 83,000 copies were issued in connexion with the Autumn courses.

An extension of listening to school broadcasts is expected in the Northern Counties with the opening of the new transmitter at Burghead. In 1935 most of the Senior Schools in Ayrshire were equipped with apparatus and this provided the opportunity for the Director of Education for that county, Mr. W. A. F. Hepburn, in co-operation with the Scottish Council for School Broadcasting, to carry out an extremely interesting experiment in the study of classroom technique. An account of this has been printed as one of the research pamphlets sponsored by the Central Council for School Broadcasting.

In **Wales** the policy of giving talks in Welsh twice a week was continued, the following talks having been given during the year—in the Spring: 'Daeuar a Dyn' by Iorwerth C. Peate and 'Cestyll Cymru' by Ambrose Bebb; in the Summer: 'Gwyddor Gwlad' by R. O. Davies, and 'Cerddoriaeth' by D. R. Parry Williams; and in the Autumn: 'Hanes Cymru' by R. T. Jenkins, and 'Y Canu Rhydd' by Tom Parry.



H.M. King Edward VIII presenting Colours to the Guards in Hyde Park
(16 July 1936)

OUTSIDE BROADCASTS

A review of the year's work must not be taken up with an account of such recurrent broadcasts as the Trooping of the Colour, 'The Derby' or the Cenotaph Service on Armistice Day. After fourteen years of broadcasting these must now be taken for granted—or at least left to the lists of events on pages 98, 100, and 126, and attention must rather be directed towards new broadcasts and new developments in technique.

Every year seems to yield its own crop of special events, and in this 1936 was no exception. For the celebrations of 1935—Jubilee Year—were succeeded by the more sombre pageantry of a Royal Funeral, by the accession proclamations of King Edward VIII in London and Edinburgh, by the unveiling of the Canadian War Memorial at Vimy, and by the signing of the London Naval Pact at St. James's Palace, and, lastly, the accession proclamations of His present Majesty. These probably were the year's principal ceremonies of state and they can all be classed together as needing—and this applies particularly to the Royal Funeral—a rather special treatment for broadcasting purposes, though the historic accession and abdication addresses of King Edward VIII took place under what were essentially studio conditions. The listener's natural desire for a wealth of detail from the 'observer'—on such occasions more properly so-called than 'commentator'—must yield to the dignity of the occasion. 'Effects' must be allowed to play the fullest possible part and the observer must only fill in the blanks. Unfortunately, the more important and solemn the occasion, the more likely that the broadcast will be listened to on the other side of the world or by audiences too large for the output of an ordinary receiver. In such circumstances there is need for continuous speech, interrupted only by clearly defined and strong 'effects', and there results a difficulty in satisfying these special types of audience as well as the ordinary home listener.

Amongst other major events more or less peculiar to 1936, and so broadcast for the first time, were the presentation by King Edward VIII of new Colours to the

Brigade of Guards, the maiden voyage of the *Queen Mary*, the Westchester Cup Polo matches, and the Olympic Games at Garmisch-Partenkirchen and Berlin. These last were covered fairly fully in a series of broadcasts, in the course of which the commentator aroused a certain amount of criticism by the frankness of his comments. It was an occasion when choice had to be made between the expression of preconceived and carefully selected sentiments and the reaction of the moment. The commentator chose the latter, and rightly so, for it is felt that the carefully selected sentiment and the prepared 'continuity', so much in use abroad, is better left to the studio or to the after-dinner speaker.

The major routine events taking place each year all over the country are covered by the broadcaster as a matter of course, so that any analysis of annual progress—or the reverse—reaches a more significant stage when it comes to the consideration of the day-to-day output of outside broadcasts. This last year shows a development in the variety of events and places of less insistent, yet not less real, interest 'visited' by the microphone—a youth hostel at Ludlow, a lambing-pen in Wiltshire, a midnight bowling match at Thurso. This development depends on the belief that most people are limited to a fairly close horizon by force of economic circumstance, by ill-health or by their own inertia. It is possible to extend that horizon at second-hand through the experiences of the more fortunate book-writer or camera-man. But broadcasting can help too, and the outside broadcast in particular. For although it must always lack the consistencies and finish of the printed page, the film reel, or the sound record, it has the actuality value of simultaneous co-experience. Whatever happens the listener knows it as soon as the spectator, and sometimes where an event is happening over a considerable area, sooner than any single spectator.

That then is the principle underlying a development which in practice has resulted in visits to all sorts and conditions of events and places—the Eton Wall Game and a London sewer, a gipsy encampment and the Royal Mint, fly-fishing and village cricket, a 'haunted house' and Cruft's Dog Show, a lambing-pen on the Wiltshire Downs and a



Polo : Westchester Cup, Hurlingham
(10 and 20 June 1936)

diver under Waterloo bridge. But it has not always been easy to make the most of the actuality. Events sometimes do not take place according to plan, and often to the harassed broadcaster they do not appear to have been planned at all. At any rate when things do go wrong it is felt that it is better to explain a difficulty than to fake a solution.

Many of these 'visits' have been paid to sporting events of rather specialized interest—but always with the uninitiated as well as the expert listener in view. In this way such sports as darts, gliding, pigeon-racing, fencing, clay pigeon shooting and table tennis have for the first time been put into the programme as actuality broadcasting appealing on their own values.

It would be wrong to assume from the foregoing claim to increased activity that there is any complacency with the result.

The 'visit' to the event or place of minor interest can only be justified by a combination of skilful commentating and well handled 'effects'. It is recognized that success must often be a 'hit-and-miss' affair, but the excuse of experiment can only be made for a limited number of misses, and the technique of outside broadcasting still leaves ample room for new development.

Many would-be commentators have been 'tested' during the last twelve months, and nearly all broadcasts have been recorded and listened to, sometimes more than once, with a view to profiting from past mistakes. But there is much more to be done, and during the next twelve months there must be better commentaries and better blending of sound effects, and at the same time as strict an adherence as ever to the integrity of the outside broadcast.

RELIGION

Never perhaps, in the history of the B.B.C., have religious broadcasts been more highly or widely valued than at the time of King George V's illness and death. The Daily Service was adapted to the spiritual needs and aspirations of the successive days: special Epilogues were broadcast in the late evenings; and on 26th January a Memorial Service was held in the Concert Hall.

Since 5th October, a new prayer-book has been used at the Daily Service. For nearly two years a committee, on which sat representatives of the Anglican and Free Churches and the Church of Scotland, had been conferring with the B.B.C. Director of Religion, and in the early autumn 'New Every Morning' was published. A Foreword was contributed by the Archbishop of Canterbury; and over 80,000 copies were sold before the end of the year.

Three other new broadcasts have found a place in the year's programmes. When the Westminster Abbey organ was dismantled, to make way for the new instrument which is to be ready for the Coronation, many listeners requested that some alternative week-day afternoon Service might be provided. The Dean and Chapter of St. Paul's gladly consented to fill the gap, and Evensong is now broadcast from the Cathedral every Wednesday afternoon.

The Central Council for School Broadcasting considered the possibility of broadcasting talks on religious and biblical knowledge, and—though they felt unable to sponsor these themselves—recommended that the Corporation should try the experiment of arranging for such talks to be given once a week during the school terms. This has been undertaken; and much appreciation has been expressed of the Monday morning talks given by Canon A. C. Deane and the Dean of Durham, not only by teachers on behalf of their pupils, but also by other adult listeners.

Dramatic sequences of music, poetry, and prose have also been added to the religious programmes. These are given at appropriate times of the Christian year; the seasons commemorated during 1936 were Christmas-tide, Holy Week, and All Saints' Day. In addition to these, Sir Walford Davies has

continued his monthly broadcast of 'Melodies of Christendom'.

General interest in the fundamental problems of religion is as widespread as ever, and no stronger evidence for this could be found than in the reception given to the Sunday evening lectures broadcast early in the year by the Dean of St. Paul's and President J. S. Whale. Several thousand letters were received by the lecturers, and a large sale followed the publication of Dr. Matthews' 'The Hope of Immortality' and Mr. Whale's 'The Christian Answer to the Problem of Evil'.

A list of the principal Services broadcast during the year will be found on page 113. Once more the Corporation's thanks are due to ministers of all denominations who have freely given their time and their service, especially to those who have broadcast at 9.30 a.m. on Sunday. Although this is perhaps the most inconvenient hour for a broadcast from a church, there has been no difficulty in finding ministers ready to help; and this widely appreciated service is now an established feature. A special word of gratitude is due to the Archbishop of Canterbury, who broadcast at no fewer than four Sunday evening services in the year.

The Sunday afternoon period, in which three religious items were given within an hour, has now been split up, half an hour being given to a children's programme at 4.30 (Regional), and talks being broadcast at 4.0 and 5.0 p.m. (National). The latter have, as usual, covered a wide area of thought and action. Among these talks the series 'What is the Church For?' evoked the widest interest and correspondence.

How important are the contributions by the provincial Regions of England, of Scotland, of Wales and of Northern Ireland to the work of religious broadcasting may be seen from the list of outstanding services of 1936, of which (if we omit National ceremonies necessarily taking place in London) we find that one-half took place elsewhere than in the South. Apart from this, each Region records some special contribution.

In the **Midland** Region the number of churches from which broadcast services are given has increased of recent years, and during 1936 there were further additions, including St. Michael's and All Angels,

Bishop's Cleeve, Gloucestershire; Stoke Parish Church; St. Michael's Collegiate Church, Tenbury; Castlegate Congregational Church and Musters Road Methodist Church, Nottingham; Carlton Road Congregational Church, Derby; Woodhall Memorial Church, Burslem; and the Birmingham Citadel of the Salvation Army. Great interest was taken in a series of recitals of 'Recent Church Music' with programmes arranged by Mr. G. H. Heath Gracie, Organist of Derby Cathedral.

In the **North** Region there has been a tendency to reassert the value of the purely devotional service, and to limit elaboration to some few specialized services, as, for example, those for Harvest Thanksgiving. Those who know the North will recognize that this tendency most aptly accords with the nature of its worship.

Amongst the religious activities of the **West of England** Region in 1936 should be mentioned the first broadcast service at the beginning of the year from the Roman Catholic Pro-Cathedral, Clifton, Bristol, the Good Friday Morning Service at St. Nicholas Church, Bristol, at which the address was given by the Bishop of Bristol; and a very unusual Sunday event in December at which a whole village united in praise. Shoscombe, the village which was visited, has only 300 inhabitants, but supports a male voice choir, a ladies' choir and a children's choir, which embrace practically the whole village. Services and the hymn-singing feature, 'Carolare', have been broadcast from many churches in the area.

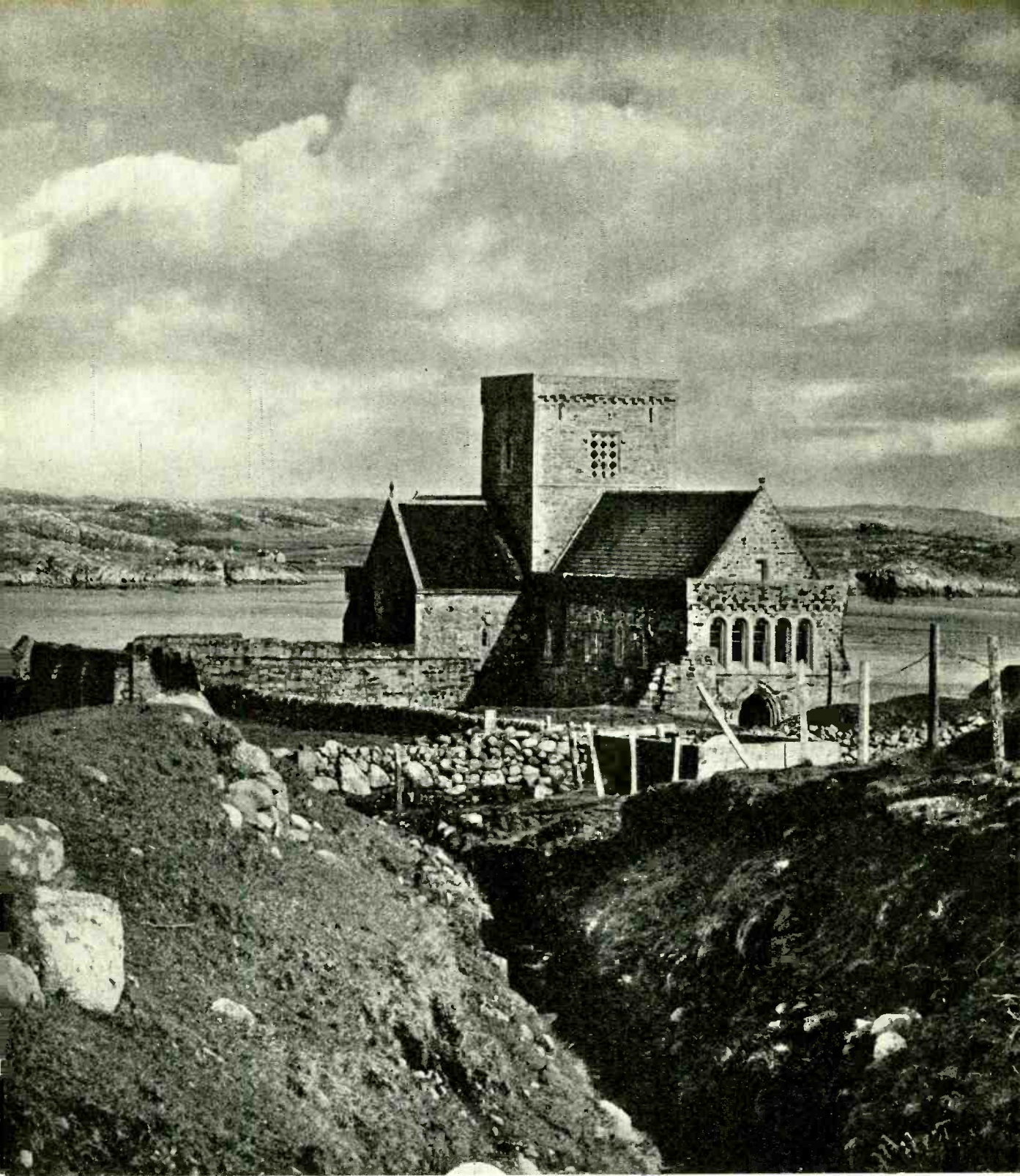
In **Wales** twenty-four religious services were broadcast in Welsh and twenty in English by the various churches, and there was one united service conducted partly in Welsh, partly in English. The opinion generally expressed at the Executive Committee on the Welsh services was that while the character of the sermons varied, and some preachers did not do themselves justice, the majority were exceedingly good. The chairman, Dr. Lloyd Williams, reporting on the music, stated that the singing of the majority was marked by excellent voices and well-balanced harmony. There was an increase in the number of Nonconformist services where chants were sung, and the rendering of these was generally good.

The fact that **Scotland** has a National Church results in perhaps a more direct contribution to religious broadcasting from that Region than from most others. The distinctive characteristics in the services broadcast from Scotland are the high standard of preaching, and the singing of the Metrical Psalms and Paraphrases. Recitals of the old Psalm tunes were much appreciated. During the summer months, broadcasting helped to bring the activities of the Church to the notice of listeners in a series entitled 'Highways and Byways'. This included Seaside Missions, Holiday Camps, work amongst the berry-pickers at Blairgowrie, and a summer camp for the unemployed. Lastly, special mention should be made of a service in Gaelic from the ancient Abbey of Iona, the first ever broadcast from that island.

In **Northern Ireland** religious services are now broadcast from nine churches, of which two have been added to the list during the year—namely, Agherton Parish Church, Portstewart, and Downshire Road Presbyterian Church, Newry. But perhaps the most interesting event of the year, under the heading of Religious Broadcasting, is the series of programmes of Metrical Psalms, sung unaccompanied by members of the B.B.C. Northern Ireland Chorus under the conductorship of Frederick Stone. Metrical Psalms are held in reverent affection by the people of Northern Ireland, and form an integral part of the religious life of the community. It is significant that all these programmes of Metrical Psalms, with the exception, of course, of the first, were compiled exclusively from listeners' requests.

'Good Causes'

The year 1936 has been a year of records. For the first time over £200,000 has been subscribed by listeners, a total which exceeds the record figure for 1935 by over £75,000. Other records were the largest response to an individual appeal—£27,408 from the appeal for Red Cross Work in Abyssinia made on 5th January by Canon H. R. L. Sheppard (in Scotland by Lord Kinnaird); the two best Regional appeals—£7,783 for Nottingham General Hospital from a Midland appeal by Sir Louis Pearson, and £5,362 for Tower Hill Improvement from a London appeal by Lord Wakefield; and the highest



Gaelic Service at Iona Abbey
(7 June 1936)



CANON H. R. L. SHEPPARD

figure—£18,600, at the time of writing, for the annual Christmas appeal for Wireless for the Blind, which was made this year by Mr. Christopher Stone. A remarkable achievement appears among the Children's Hour appeals, where the record appeal made a week or two before Christmas in the London Children's Hour for Poor Children on London's Housing Estates realized over £1,330; this is the first time a Children's Hour appeal has brought in over £1,000.

An interesting appeal was made by a mother and her daughter, who showed their gratitude to the Church Army for a seaside holiday by undertaking a broadcast which brought in over £1,400.

Outside London there is occasionally a

shortage of suitable applicants; a particularly successful effort to bring the Week's Good Cause service to the notice of other deserving institutions was made by means of a Press statement by Sir Charles Hyde, Chairman of the Midland Appeals Committee.

There can be few examples of 'something for nothing' to compare with the Week's Good Cause. The only expense in obtaining an appeal is the postage on letters of application, and the Committees of outside experts which select the causes ensure that only the deserving are recommended. It is hoped that the endless trouble they take will continue to be rewarded by the generosity which listeners have shown in the past.

GOOD CAUSES

(A) National and London Regional Appeals

DATE	APPEAL	SPEAKER	RESULT
1936			
Jan. 5	§ British Red Cross Society (for Red Cross work in Abyssinia)	Canon H. R. L. Sheppard } Lord Kinnaird (Scotland) }	£27,408
12	‡ Deal and Walmer Victoria Hospital	Lady Violet Astor	952
	† Federation of Committees for Moral Welfare of Children	Dame Rachel Crowley	417
19	* Royal Merchant Navy School	Countess Jellicoe	1,358
	† Battersea General Hospital	Lord Ernest Hamilton	222
26	* Council for the Preservation of Rural England (<i>Except Scotland</i>)	Sir Malcolm Campbell	611
	† Metropolitan Visiting and Relief Association	Bishop of London	301
Fcb. 2	* Royal Female Orphanage, Beddington	Bishop of Croydon	367
	† Morley College	Mr. Harcourt Williams	55
9	‡ All Saints' Convalescent Hospital, Eastbourne	Bishop of Chichester	623
	† Boys' Shelter Home	Mr. Alexander Paterson	179
16	§ Personal Service League	Hon. Mrs. Sydney Marsham	6,073
23	* Elizabeth Garrett Anderson Hospital	Lady Robertson	402
	† People's Palace	Mr. George Lansbury	2,510
Mar. 1	* Crusade of Rescue	Archbishop of Westminster	1,496
	† Acton Hospital	Mr. E. F. Hunt	800
8	‡ Bexhill Hospital	Earl de la Warr	574
	† Society for Relief of Distress	Lord Hugh Cecil	152
15	* Ingleton House	Sir Cedric Hardwicke	289
	† Deptford Fund	H.R.H. Princess Alice, Countess of Athlone	220
22	§ National Hospital for Nervous Diseases	Mr. Christopher Stone	11,588
29	* Travellers' Aid Society	Countess Amherst	281
	† St. Mildred's House, Isle of Dogs	Rev. M. P. G. Leonard	215
Apr. 5	* Guild of Aid for Gentlepeople	Bishop of Bristol	2,595
	† Essex County Hospital	Mr. S. A. Courtauld	291
12	‡ Savernake Hospital	Earl of Cardigan	1,034
	† Homes for Motherless Children, Ealing	Lady Newnes	81
19	* Theatre Girls' Home, Paris	Preb. F. A. Cardew	560
	† Nursing Sisters of St. John the Divine	The hon. medical officer	277
26	§ Glasgow Royal Infirmary	Mr. W. S. Morrison	843
May 3	* St. David's Home	Admiral Mark Kerr	6,027
	† Brotherhood of the Holy Cross	Rev. George Potter	221
10	‡ New Sussex Hospital for Women and Children	Miss Irene Vanbrugh	349
	† Kensington Voluntary Infant Welfare Institutions	Countess of Limerick	22
17	* Church Lads' Brigade	Field-Marshal Sir Claud Jacob	236
	† Surbiton New Hospital	Mr. H. M. Troncer	138
24	§ Allotment Gardens for the Unemployed (<i>Except Scotland</i>)	Mr. Arnold S. Rowntree	2,509
31	* Llandudno New Hospital	Mr. D. Lloyd George	280
	† Maurice Hostel Settlement	Canon H. R. L. Sheppard	222

§ denotes all stations; * denotes National programme only; † denotes Regional programme; ‡ denotes Droitwich National only.

DATE 1936	APPEAL	SPEAKER	RESULT
June 7	* St. Francis Leper Guild	Major Raphael Jackson	1,550
	† Metropolitan Hospital Sunday Fund	Hon. Sir William Goschen	114
14	‡ West Cornwall Hospital	Mr. Walter Runciman	263
	† Beauchamp Lodge Emergency Home for Children	Preb. W. G. Pennyman	214
21	* Council for Promotion of Occupational Industries among Physically Handicapped	Mr. Vernon Bartlett	529
	† St. Agnes Central Training House	Bishop of Blackburn	42
28	§ Christian Colleges of India	Marquess of Lothian	575
July 5	* Townsend Needlework	Dame Janet Campbell	375
	† Wireless for the Blind Local Maintenance Appeal (<i>Joint appeal with Midland</i>)	Miss Jane Cain	556
12	‡ † St. Martin's Summer Appeal	Rev. W. P. G. McCormick	5,526
19	* Central Fund for Industrial Welfare of Tuberculous Persons	Lord Rushcliffe	178
	† Bolingbroke Hospital	Rev. Dr. Archibald Fleming	452
26	§ Royal National Hospital for Consumption, Ventnor	Lord Ebbisham	1,113
Aug. 2	* Church Army	A mother and daughter	1,406
	† St. Mary's Convalescent Home, Broadstairs	Rev. Dom Bernard Clements	174
9	‡ Eastern Counties Children's Convalescent Home	Miss Betty Nuthall	489
	† Hop Pickers' Medical Treatment Board	Lord Harris	97
16	* United Service Training Centre, Tenterden, Kent	Sir Charles Igglesden	859
	† Miss Sharman's Homes	Mr. B. A. Glanvill	146
23	§ Hospital for Sick Children, Great Ormond Street	Mr. Christopher Stone	10,760
30	* Victoria Hospital, Guernsey	Major-General E. N. Broadbent	429
	† Essex Training Home for Young Wayfarers	Mr. Edmund Willard	401
Sept. 6	* Guide Dogs for the Blind Association	Mr. Leslie Henson	3,493
	† Samaritan Free Hospital for Women	Mr. Eric Coates	165
13	‡ Children's Heart Home, Lancing	Miss Helen Simpson	521
	† Councils for Moral Welfare in Dioceses of Canterbury and Rochester	Mrs. J. V. Macmillan	39
20	* City of London Maternity Hospital	Mr. James Paterson	972
	† Children's Home, East Grinstead	Mr. Owen Nares	353
27	§ National Council for the Unmarried Mother and her Child	Mr. Cyril Maude	1,502
Oct. 4	* Disabled Soldiers' Embroidery Industry	Major-General Sir Fabian Ware	1,746
	† East London Nursing Society	Mr. George Lansbury	298
11	‡ Cornwall Preventive and Rescue Association	Ven. G. W. Hockley	407
	† Hyelm Movement	Mr. H. W. Austin	659
18	§ Leeds General Infirmary	Rev. Leslie D. Weatherhead	1,713
25	* Coleg Harlech	Sir William Jenkins	157
	† Invalid Children's Aid Association	Dr. H. S. Souttar	399
Nov. 1	* Medical Work of the Church in Central Tanganyika	Bishop of Central Tanganyika	5,670
	† East End Hostels Association	Sir Ernest Benn	240
8	§ British Legion	Major-General Sir Frederick Maurice	2,341

§ denotes all stations; * denotes National programme only; † denotes Regional programme; ‡ denotes Droitwich National only.

DATE	APPEAL	SPEAKER	RESULT
1936			
Nov. 15	*British Hospital for Mothers and Babies, Woolwich	Mr. Leslie Banks	2,516
	† Invalid Kitchens of London	Mr. A. E. Balfour	142
22	* Missions to Seamen	Mr. Rex Palmer	1,031
	† Frances Martin College	Mr. J. J. Mallon	75
29	§ Y.M.C.A.	Mr. Ernest Brown	1,669
Dec. 6	* Hedingham Scout Training and Employment Scheme	Mr. Christopher Stone	8,877
	† Tower Hill Improvement	Lord Wakefield	5,362
13	‡ † St. Martin's Christmas Appeal	Rev. W. P. G. McCormick	13,600
20	* Theatrical Ladies' Guild	Mr. Ivor Novello	600
	† Willesden General Hospital	Bishop of Willesden	647
25	§ British Wireless for the Blind Fund	Mr. Christopher Stone	18,600
27	* Southampton Children's Hospital and Dis- pensary for Women	Bishop of Southampton	425
	† St. Pancras House of Fellowship	Miss Marion Hill	146

TOTAL .. £173,391

TOTAL .. £27,716

(B) Other Regional Appeals

(C) Appeals in 'Children's Hours'

March	Crippled Children		
and April	London Regional	Mr. Richard Goolden	
	Midland Regional	Mr. H. F. Harvey	
	North Regional	A pupil of a cripple school (Victor Cawley)	
	N. Ireland Regional	Mr. J. R. Mageean	
May	Children's Country Holidays		
and June	London Regional	Mr. Derek McCulloch and two children	
	Midland Regional	Miss Ruth Field and two children	
	North Regional	Mr. Frank A. Nichols ('Harry Hopeful')	
	West Regional	Miss Mary Gallyon	
October	Children's Hospitals		
	London Regional	Mr. Gordon Harker	
	Midland Regional	Mr. Percy Edgar	
	North Regional	Mr. Robert Donat	
	Scottish Regional	A hospital matron	
December	Christmas Presents for Poor Children		
	London Regional (<i>for London's Housing Estates</i>)	Mr. Derek McCulloch	
	Midland Regional	Mr. Bobbie Comber	
	North Regional	'Anna' and the Northern Children's Hour Aunts and Uncles	
	West Regional	Miss Bronwen Davies and Mr. Elwyn Evans	
	Scottish Regional	Miss K. Garscadden	
	N. Ireland Regional	Mr. J. S. N. Sewell	

4,198

GRAND TOTAL .. £205,305

§ denotes all stations; * denotes National programme only; † denotes Regional programme; ‡ denotes Droitwich National only.

FINANCE

1936 was the last year of the Corporation's first ten-year Charter period. On 1st January 1927, the Corporation took over, free of cost, the fixed assets of the British Broadcasting Co., Ltd., valued at £174,938. This formed, in effect, the Corporation's initial capital and no other capital was provided. The Corporation's further resources consisted of the share of licence revenue defined in its Licence from the Postmaster-General and the profits which might be earned by the publications which had been started by the Company. In addition, borrowing powers up to £500,000 had been granted in the Charter though without any special privilege (such as government guarantee) compared with ordinary commercial borrowers.

The broadcasting system taken over from the Company consisted of one high-power long-wave station and twenty low-power transmitters which, through the rapid development of technique and the changes in the international situation, were already obsolescent. The Corporation was faced, therefore, with the problem of creating a new distributing system, and this would have to be financed out of income. The one practicable policy was, obviously, to reserve as much out of income for capital purposes, current and future, as could be spared from the operating requirements of the service. This applied particularly in the earlier years, for it was obvious that development would probably have to continue on a considerable scale even when income had reached its maximum. Capital development proved to be so rapid, however, that, by the end of the ten-year period, it had overtaken the reserves.

The licence income allotted to the Corporation was, after allowing for a deduction (latterly 10%*) to cover Post Office costs of collection, etc.*—90% of the proceeds of the issue of the first million licences, 80% of the second, 70% of the third, and 60% of all further issues. The percentages were based on the previous year's issues and the Corporation therefore received the benefit of increased issues in arrear. The balance of

*'Etc.' represents certain auxiliary services such as technical work in connexion with the prevention of electrical interference (see p. 71).

current collections was retained by the Treasury, which also benefited by the income tax payable by the Corporation on so much of its income as was reserved for capital expenditure, which in the circumstances was necessarily considerable. This last item has always been looked upon as a reduction of the Corporation's licence income, since the amounts payable were not available for the broadcasting service.

Gross receipts from licences for the ten years were approximately £24,402,000, of which the Corporation, after allowing for income tax, received £13,031,000, or just over 53%. The Post Office retained £2,599,000. The Treasury took the balance of £8,772,000, which sum included contributions amounting to £637,500 from the Corporation during the years of financial crisis.

Net profits from publications, net interest, etc., for the period amounted to £2,746,000, making the Corporation's total effective income £15,777,000. Out of that sum £3,211,000 was reserved for capital and depreciation. The Corporation has, with these reserves, financed the replacement of the old distributing system by the Regional scheme of high-power transmitters giving alternative programmes (which is being extended to cover the whole population still more effectively), the construction of a long-wave transmitter of 150 kW at Droitwich, and the building of high-power short-wave transmitters for the Empire service. Broadcasting House, Portland Place, has been acquired and equipped in place of the temporary adapted premises at Savoy Hill. Studio and office accommodation at all centres has been extended and improved. Equipment for the Television service has been installed at Alexandra Palace.

The Balance Sheet given on page 62 shows the position at 31st December 1936. The initial capital of £175,000 has been increased to £2,350,000; there remains of Depreciation Reserve, after writing off £142,000 in respect of scrapped assets, £894,000; and Revenue carried forward amounts to £65,000—altogether £3,309,000. Fixed assets have been increased by £3,218,000 to £3,393,000, which exceeds



SIR ALAN RAE SMITH

of Messrs. Deloitte, Plender, Griffiths & Co., who has audited the Corporation's accounts since the beginning.

these reserves by £84,000. Capital expenditure, however, includes £124,000 for Television, which is to be written off over four years, and which accounts for the deficiency.

The balance of the Corporation's gross income for the period, £12,566,000, was devoted to the direct operating costs of the service—Programmes, Engineering, Administration, etc. Some idea of the development of the service in the ten years may be got from a comparison of the appropriate items in the Revenue Accounts for 1927 and 1936:

	1927	1936
Programmes ..	£487,728	£1,339,202
Engineering ..	131,037	490,289
Premises Maintenance and Overhead Charges ..	43,253	190,770
Administration, Pension Scheme Contributions, Governors' Fees, etc.	64,922	184,336
	<u>£726,940</u>	<u>£2,204,597</u>

It may be interesting to note, also, that the number of licences in force at 1st January 1927, was 2,178,000; by 31st December 1936, it had grown to 7,969,000. The Corporation's licence income was in 1927 £800,959 and in 1936 £2,509,750; and net revenue from publications £93,686 and £442,009 respectively.

This development has affected all sides of the Corporation's work. In programmes it has included the provision of alternative programmes; the building up of resources, such as by the creation of the B.B.C. Symphony Orchestra and of other orchestras and bands in both London and the Regions; the provision and expansion of the Empire service; the inauguration, late in 1936, of the Television service and, generally, improvement in standard and widening of fields of activity. Engineering methods and resources have similarly been developed.

The Revenue Account on page 64 gives the 1935 figures for comparison, and also percentages for both years. One factor on the Expenditure side not brought out by these figures is the application of the increased income in 1936 which was available for direct revenue expenditure. Considerable increases took place in the amounts required for depreciation and income tax, and after allowing for these there remained for increased direct expenditure £363,186. Of this amount 63% was applied to Programmes; 29% to Engineering; 2% to Premises Maintenance and Overhead Charges; 4% to Administration; and 2% to Pensions Scheme Contributions.

Licence income shows a considerable increase, due partly to the greater number of licences issued and partly to a change in basis of payment which was recommended by the Ullswater Committee as a result of full investigation of the Corporation's affairs. The recommendation was that the Corporation should receive the net revenue from licences after deduction of 10% for Post Office costs of collection and £1,050,000 for the Treasury. The resultant benefit to the Corporation was £236,000. This was not available wholly for sound broadcasting, however, as out of it the Corporation had to bear the whole of revenue expenditure on Television for 1936, amounting to £111,500. On the basis obtaining in 1935 this

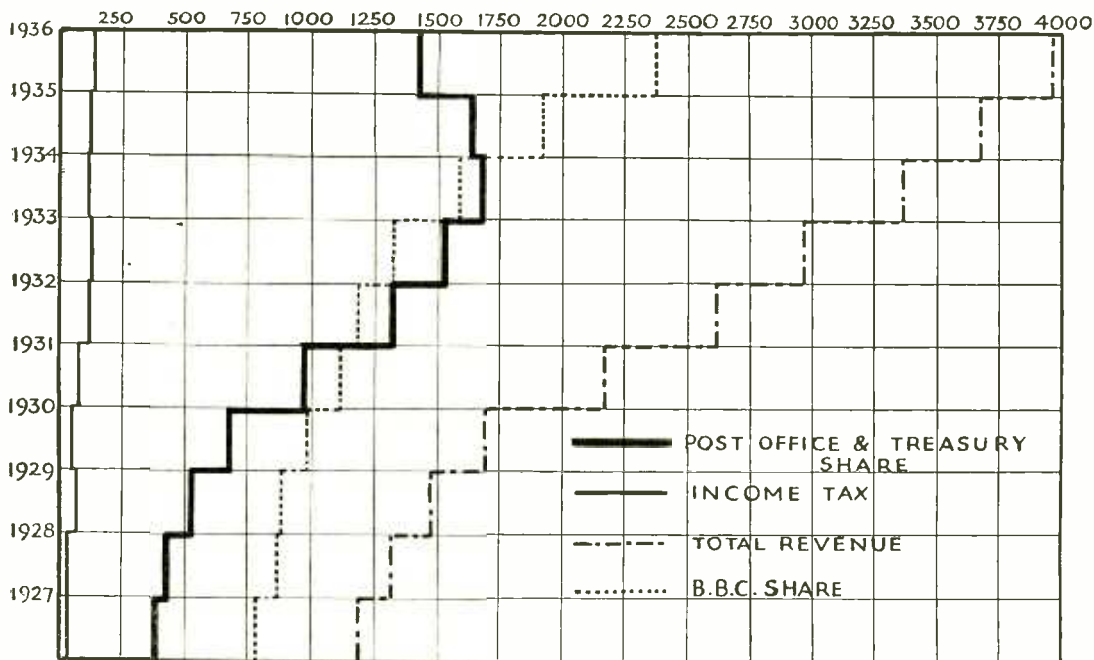
expenditure would have been borne equally by the Corporation and the Treasury.

The Television service will require a rapidly increasing rate of expenditure as it develops, and the 1936 figure is no guide to future costs. It includes a considerable expenditure on preparatory work and tests, but the service was actually in operation for a few months only and covered only two hours' programmes a day for six days of the week from one station. When the trial period is over, an expanded service may be required, the costs of which cannot yet be estimated.

As regards the future, the Committee, recognizing the requirements of the service, recommended that the Corporation should receive not less than 75% of net licence revenue for broadcasting purposes other than Television and that the balance also should be regarded as potentially available for broadcasting. The Government has accepted the recommendation to the extent that 75%

of net licence revenue will be allotted to the Corporation as from the beginning of 1937, but for both the Sound and the Television services—the Corporation being entitled, however, to apply for a further allocation out of the balance if it is required. Estimates show that the development of broadcasting will be severely hampered if Television expenditure has to be borne out of the 75% allotment. There are still many developments urgently required, including further extension of the Regional scheme to ensure that the country is completely covered, and studio improvements at various centres, and these will make considerable demands on both capital and revenue. With licence income and publications profits both approaching their maximum, the necessity for building up capital reserves out of income is becoming urgent. If these reserves have to be reduced to finance Television, the development of the service will be seriously prejudiced.

FIGURES IN THOUSANDS OF POUNDS



TEN YEARS OF BRITISH LICENCE REVENUE

Note: the revenue for the years 1922-1925 (total £2,925,000—B.B.C., £1,768,000, Government £1,157,000) is not included in the diagram, owing to complications arising from a different financial year and (in the first year) royalties on receiving sets.

LICENCES TO POPULATION

as at 31 December 1936

*'Households' includes: (a) private families in the terms of the Census of 1931 based on the average number of persons per family.

†In the case of Oxfordshire, Gloucestershire, and Derbyshire, which are divided between different Regions, the relation of licences to population or 'households' is, to some extent, conjectural.

‡Licenses to 'Households'

County	Population (Census 1931)	Estimated No. of 'House- holds'*	Licences	%‡	County	Population (Census 1931)	Estimated No. of 'House- holds'*	Licences	%‡
LONDON REGION					MIDLAND REGION				
Bedford	220,474	61,243	48,153	79	†Derby (S.)	310,849	79,501	38,957	49
Berks	311,334	85,297	67,351	79	†Glos (N.)	270,229	74,443	55,311	74
Bucks	271,565	74,811	53,553	72	Hereford	111,755	29,961	16,927	57
Cambs	217,709	62,025	48,862	79	Leicester	541,794	146,431	102,693	70
Essex	1,755,240	469,316	352,665	75	Northampton	361,273	100,914	78,586	78
Hants	1,102,515	307,965	229,361	74	Nottingham	712,681	188,042	151,186	80
Herts	401,159	109,308	107,141	98	†Oxford (N.)	82,804	22,811	17,644	77
Hunts	56,204	15,656	8,814	56	Rutland	17,397	4,664	2,284	49
Kent	1,218,565	334,771	291,395	87	Shropshire	244,162	63,750	42,739	67
Middlesex	1,638,521	447,683	319,755	71	Staffs	1,431,175	349,067	202,120	58
Norfolk	504,846	140,626	95,971	68	Warwick	1,534,782	401,775	340,432	85
Oxford (S.)	126,795	34,930	27,018	77	Worcester	420,156	111,152	84,202	76
Suffolk	401,114	110,805	71,330	64					
Surrey	1,180,810	321,747	280,334	87		6,039,057	1,572,511	1,133,081	72
Sussex	770,078	220,653	159,704	72					
Channel Is.	93,061	26,068	17,491	67					
London County Area	4,396,821	1,270,758	724,990	57	NORTH REGION				
	14,666,811	4,093,662	2,903,888	71	Cheshire	1,087,544	290,012	121,677	42
WEST REGION					Cumberland	262,897	66,725	37,839	57
Cornwall	317,951	90,327	51,567	57	†Derby (N.)	446,483	114,190	55,956	49
Devon	732,869	209,991	151,347	72	Durham	1,485,978	367,816	124,587	34
Dorset	239,347	67,422	31,920	47	Lancs	5,039,097	1,333,094	898,206	67
†Glos (S.)	515,427	141,991	105,498	74	Lincs	624,553	167,440	114,475	68
Somerset	475,120	134,595	82,089	61	Northum'b'l'd	756,723	193,535	134,830	70
Wilts	303,258	83,773	59,862	71	Westmorl'd	65,398	17,486	7,757	44
	2,583,972	728,099	482,283	66	Yorks	4,389,465	1,164,314	818,805	70
					Isle of Man	49,338	13,820	8,301	60
						14,207,476	3,728,432	2,322,433	62
					ENGLAND	37,497,316	10,122,704	6,841,685	68

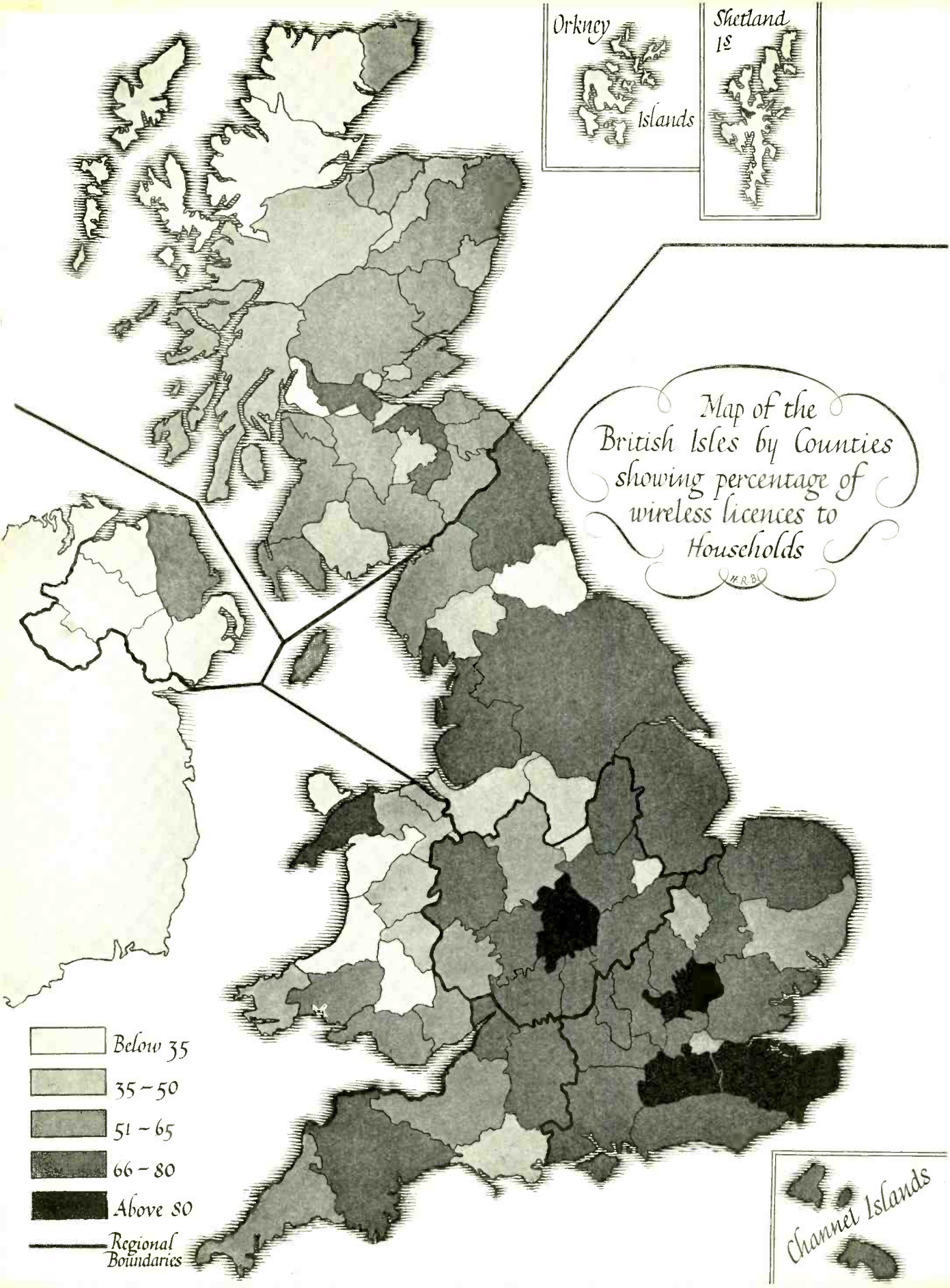
Orkney
Islands

Shetland
Is

Map of the
British Isles by Counties
showing percentage of
wireless licences to
Households
M.R.B.

- Below 35
- 35 - 50
- 51 - 65
- 66 - 80
- Above 80
- Regional Boundaries

Channel Islands



County	Population (Census 1931)	Estimated No. of 'House- holds'*	Licences	% ‡	County	Population (Census 1931)	Estimated No. of 'House- holds'*	Licences	% ‡
SCOTLAND					WALES				
Aberdeen	340,294	84,650	45,021	53	Anglesey	49,025	13,618	2,533	19
Argyll	63,014	16,496	7,408	45	Brecon	57,771	14,738	2,263	15
Ayr	285,182	68,719	39,517	58	Caernarvon	120,810	33,935	27,262	80
Banff	54,835	13,245	5,388	41	Cardigan	55,164	15,852	5,324	34
Berwick	26,601	7,268	4,085	56	Carmarthen	179,063	44,654	25,350	57
Bute	18,822	5,087	1,872	37	Denbigh	157,645	40,630	18,378	45
Caitness	25,656	6,699	2,375	35	Flint	112,849	28,936	12,314	43
Clackmannan	31,947	8,213	3,536	43	Glamorgan	1,225,713	305,664	168,139	55
Dumbarton	147,751	34,602	7,914	23	Merioneth	43,198	11,835	3,631	31
Dumfries	81,060	20,418	12,035	59	Monmouth	434,821	108,978	63,124	58
Edinburgh	526,277	134,598	95,897	71	Montgomery	48,462	12,588	6,288	50
Fife	283,715	72,376	43,213	60	Pembroke	87,179	22,822	10,646	47
Forfar	270,190	73,222	44,324	61	Radnor	21,314	5,410	2,530	47
Haddington—									
East Lothian	47,369	11,414	6,888	60		2,593,014	659,660	347,782	53
Inverness	82,082	20,020	7,557	38	IRELAND				
Kircudbright	30,341	7,780	3,401	44	Antrim	606,794	133,361	68,882	52
Lanark	1,585,968	377,611	219,079	58	Armagh	110,070	26,021	6,266	24
Linlithgow	81,426	18,298	9,125	50	Down	209,228	48,432	6,051	12
Moray	49,099	12,589	6,039	48	Fermanagh	57,984	13,238	1,501	11
Orkney	22,075	5,934	1,806	30	Londonderry	139,693	30,567	7,570	25
Peebles	15,050	4,112	1,750	43	Tyrone	132,792	30,739	5,870	19
Perth	120,772	32,466	17,328	53		1,256,561	282,358	96,140	34
Renfrew	288,575	68,221	37,061	54	<i>Reconciliation of 'London Area' Licences</i>				
Ross & Crom.	62,802	16,062	3,066	19	Post Office Summary of Population by				
Roxburgh	45,787	12,510	6,613	53	Postal Districts 1,041,656				
Selkirk	22,608	6,315	4,138	66	Re-allocated to County Administrative Areas:				
Shetland	21,410	5,634	1,660	29	Essex 120,751				
Stirling	166,447	39,072	26,761	69	Kent 6,209				
Sutherland	16,100	4,351	1,150	26	Middlesex 162,255				
Wigtown	29,299	7,181	4,330	60	Surrey 27,451				
					London County Area 724,990				
	4,842,554	1,195,163	670,337	56					
					1,041,656				

SUMMARY

	Population (Census 1931)	Estimated No. of 'Households'*	Licences	% ‡
LONDON REGION	14,666,811	4,093,662	2,903,888	71
MIDLAND REGION	6,039,057	1,572,511	1,133,081	72
NORTH REGION	14,207,476	3,728,432	2,322,433	62
WEST REGION	2,583,972	728,099	482,283	66
WALES	2,593,014	659,660	347,782	53
SCOTLAND	4,842,554	1,195,163	670,337	56
IRELAND	1,256,561	282,358	96,140	34
	46,189,445	12,259,885	7,955,944	65

BALANCE SHEET AS AT

CAPITAL RESERVES AND LIABILITIES (ADJUSTED TO NEAREST £)

£	1935	£		£	1936	£
			CAPITAL ACCOUNT—			
			Value placed upon Freehold Land and Buildings, Plant, Furniture and Fittings, Musical Instruments, Music and Books, etc., taken over (without payment) from the British Broadcasting Co., Ltd., on 1st January, 1927	174,938		
			Appropriated from Revenue towards Capital Expenditure—			
			Appropriated to 31st December 1935 (per last Balance Sheet)		1,835,062	
			Appropriated at 31st December 1936		340,000	
174,938						174,938
1,535,062						1,835,062
300,000						340,000
2,010,000						2,350,000
			 PROVISION FOR DEPRECIATION AND RENEWAL OF PREMISES, PLANT, FURNITURE AND FITTINGS, ETC.			
			Balance at 31st December 1935 (per last Balance Sheet)		679,335	
			Add: Further provision during 1936, per Revenue Account		230,000	
511,767						679,335
187,000						230,000
698,767						909,335
			Less: Book value (net) of Plant, Furniture and Musical Instruments discarded during 1936		15,155	
19,432						15,155
679,335						894,180
			 REVENUE ACCOUNT—			
			Balance (unappropriated Net Revenue) at 31st December 1936, carried forward as per Account			64,789
30,917						64,789
2,720,252						3,308,969
			 CREDITORS AND RESERVE FOR CONTINGENCIES—			
			Sundry Creditors (including reserve for Income Tax)	632,016		
			Reserve for Contingencies	20,000		
449,984						632,016
20,000						20,000
469,984						652,016
			(Signed) R. C. NORMAN } H. A. L. FISHER } <i>Governors</i> J. C. W. REITH, <i>Director-General</i>			
			£3,190,236			£3,960,985

REPORT OF THE AUDITORS TO THE MEMBERS OF THE

We have examined the above Balance Sheet dated 31st December 1936 with the books and vouchers of the Corporation. The Balance Sheet is, in our opinion, properly drawn up so as to exhibit a true and correct view of the state given to us and as shown by the Books of the Corporation.

5, LONDON WALL BUILDINGS,
LONDON, E.C.2

20th January 1937

REVENUE FOR THE YEAR ENDED

EXPENDITURE (ADJUSTED TO NEAREST £)

1935			1936	
Amount	Percentage of Total Income		Amount	Percentage of Total Income
£	%		£	%
401,380	16.23	To Programmes:		
201,080	8.13	Artists, Speakers, etc.	504,607	17.08
187,361	7.58	Permanent Orchestras	223,314	7.56
54,225	2.19	Performing Rights, Copyright Fees and News Royalties	205,489	6.95
227,200	9.19	Simultaneous Broadcast Telephone System	60,127	2.04
		Programme Staff Salaries	293,161	9.93
		Expenses (including Travelling, Stationery, Postages and Miscellaneous Expenses)	52,504	1.78
39,326	1.59		1,339,202	45.34
1,110,572	44.91			
		„ Engineering		
		Power and Plant Maintenance Costs, Research Materials and Transmitting Patents	116,119	3.93
93,976	3.80	Engineering Staff Salaries	326,216	11.04
257,130	10.40	Expenses (including Travelling, Stationery, Postages and Mis- cellaneous Expenses)	47,954	1.63
35,423	1.43		490,289	16.60
386,529	15.63			
		„ Premises Maintenance and Overhead Charges:		
		Rents, Rates, Taxes and Insurance	64,961	2.20
59,310	2.40	Heating, Lighting and Telephones	36,707	1.24
28,613	1.16	Alterations to and Maintenance of Premises, Extension of Studios, Maintenance of Furniture, etc.	89,102	3.02
94,637	3.83		190,770	6.46
182,560	7.39			
		„ Administration:		
		Administration Staff Salaries	113,444	3.84
94,459	3.82	Expenses (including Travelling, Legal, Audit, Stationery, Postages and Miscellaneous Expenses)	19,590	.66
24,439	.99		133,034	4.50
118,898	4.81			
		„ Contributions to Staff Pension Scheme and Benevolent Fund	45,202	1.53
37,537	1.52	Governors' Fees	6,100	.21
5,207	.21	Provision for Depreciation and Renewal of Premises, Plant, Furniture and Fittings, etc.	230,000	7.79
187,000	7.56	Provision for Income Tax	145,000	4.91
120,108	4.86		2,579,597	87.34
2,148,411	86.89	„ Balance, being Net Revenue for year	373,872	12.66
324,161	13.11		£2,953,469	100.00
£2,472,572	100.00			

REVENUE APPRO- FOR THE YEAR ENDED

1935			1936	
£			£	
300,000		To Transfer to Capital Account, as a provision towards meeting Capital Expenditure	340,000	
		„ Balance (unappropriated net Revenue) carried forward at 31st December, 1936 as per Balance Sheet	64,789	
30,917			£404,789	
£330,917				

ACCOUNT

31 DECEMBER 1936

INCOME (ADJUSTED TO NEAREST £)

1935			1936	
Amount	Percentage of Total Income		Amount	Percentage of Total Income
£	%		£	%
2,038,262	82.43	By Licence Income (net)	2,509,750	84.97
		„ Amount recoverable from the Postmaster-General in respect of a Public Television Service, being one-half of sums expended to date and included under the appropriate headings		
4,582	.19	<i>per contra</i>	—	—
421,576	17.05	„ Net Revenue from Publications, after providing for Bad and Doubtful Debts	442,009	14.97
		„ Interest on Bank Deposit and Current Accounts, less Interest on Bank Loan and Charges	1,710	.06
1,925	.08	„ Profit on Realization of Investment	—	—
6,227	.25			

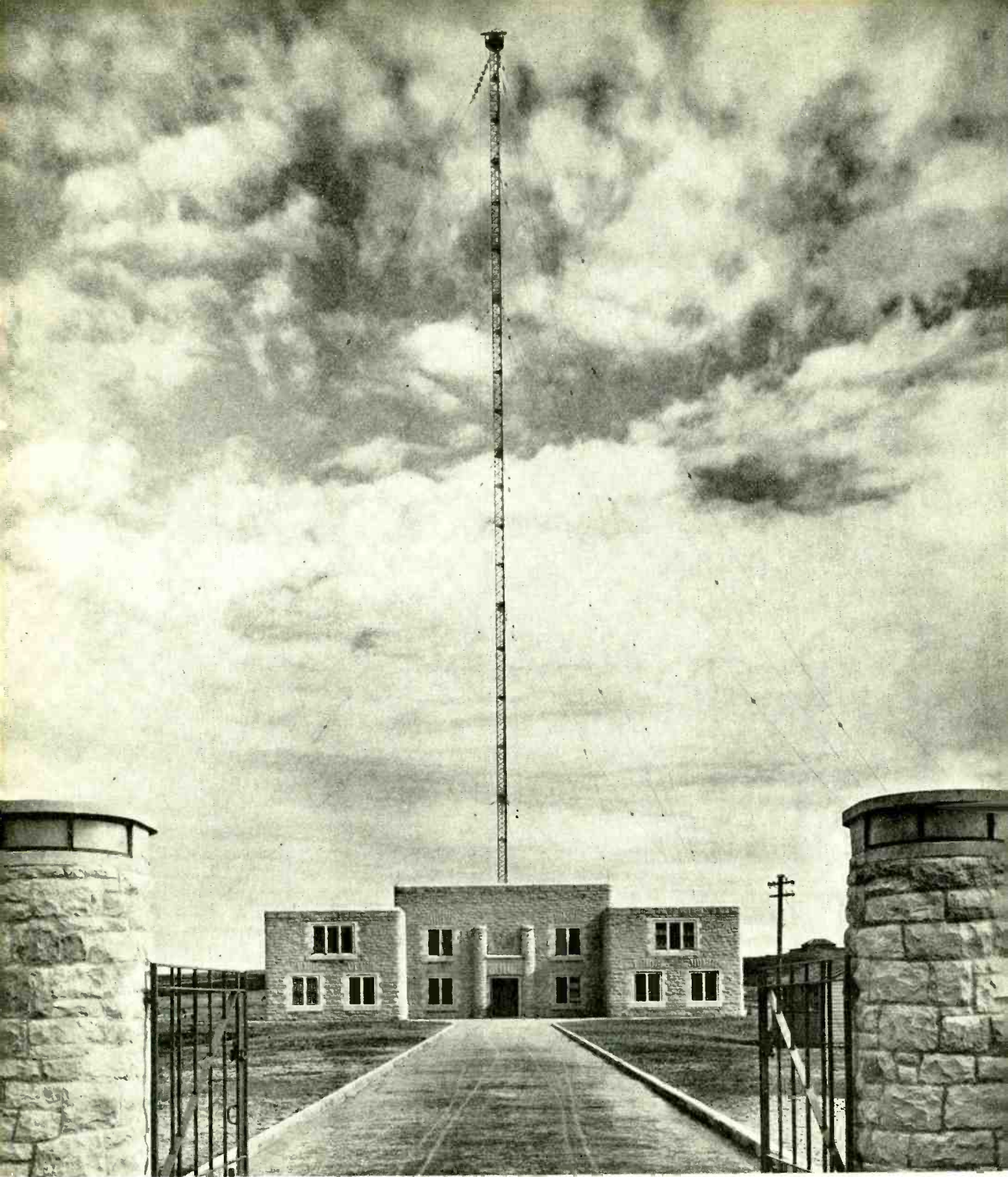
£2,472,572 100.00

£2,953,469 100.00

APPROPRIATION ACCOUNT

31 DECEMBER 1936

1935			1936	
£			£	
6,756		By Balance (unappropriated Net Revenue) brought forward from 31st December, 1935	30,917	
324,161		„ Net Revenue for year per Revenue Account (above)	373,872	
<u>£330,917</u>			<u>£404,789</u>	



Burghead Transmitting Station

ENGINEERING

A General Retrospect

Very early in 1936 the Engineering Division was faced with the important task of making all technical arrangements for broadcasting the funeral ceremonies of King George V. Such a broadcast must of necessity present considerable difficulties; obviously arrangements cannot be made far in advance, and there must be unavoidable doubts up to the last minute as to the precise details of the various ceremonies. When listening to a description of a national event of world-wide importance few people realize that half a dozen or more similar descriptions are being given at the same time in different languages for broadcasting by perhaps a dozen or more foreign broadcasting organizations. Again, for rebroadcasting to the Empire, and for other purposes, three or four independent records are made at the B.B.C. studios at Maida Vale, where all the recording apparatus is housed. On the day of the funeral outside broadcast equipment and staff had to be divided between London and Windsor, and some ingenuity was necessary in order to fulfil all requirements at short notice.

On the 20th March the new Northern Ireland Regional Station at Lisnagarvey was opened by the Duke of Abercorn. This is the first 100-kW. medium-wave station to be built by the B.B.C. and the first station in this country to be provided with an anti-fading aerial of the mast oscillator type. A detailed description of the station is given elsewhere, but it may be mentioned here that results have been very satisfactory, and have, in fact, exceeded expectations.

The next event was a somewhat novel one, consisting of a series of several broadcasts from the *Queen Mary* during her preliminary trials and first voyage across the Atlantic. The equipping of a vessel with a small temporary control room and a large number of microphones to collect programme material from all parts of the ship had never been done before by the B.B.C. on quite such an

elaborate scale. Naturally some doubts were felt as to the reliability of the wiring under the conditions of 'rush' which must exist on a ship during its trials. Again, arrangements had to be made for foreign organizations to give broadcasts to their own countries with special commentators, with the result that preparations were going on for a programme of some kind almost continuously during the first trip to New York. The success of all these broadcasts depended entirely on atmospheric conditions, because even a ship of the very largest class carries only a small short-wave telephone transmitter for communication with the shore, and had conditions been bad during the four or five crucial days everything would have been a failure.

Television, see p. 153.

During the late summer and autumn there was great activity in Scotland, and a long series of tests was carried out in preparation for the opening of the new station at Burghead near Elgin. This is a 60 kW. station serving the more densely populated regions in the north of Scotland, and it was opened by Sir Murdoch Macdonald on the 12th October. The most important technical feature of this station is the synchronizing apparatus, which enables it to use the same wavelength as the Scottish Regional transmitter at Westerglen. This apparatus is not spectacular to look at, but it is highly intricate, and its correct performance greatly affects the area which can be covered by two stations working in this way. The two transmitters are, in effect, locked together by telephone cable, and it is only by very careful adjustment of all the apparatus that undesirable noises and distortion can be eliminated. How this was done is described on pp. 72 and 73. Another station is under construction at Stagshaw, some 16 miles west of Newcastle. This station was started some months after Burghead, and it will not be ready until late in 1937. It will replace the low-power station in Newcastle working on a wavelength of 267 metres (1122 kc/s). Its power will be the maximum allowed by international agreement for

broadcasting stations working on this wavelength, namely 60 kW. A third transmitter, also for improving the home service, has been built at Penmon in Anglesey. This transmitter, formerly styled 'Beaumaris', will be synchronized with the West Regional transmitter at Washford. It must always take the same programme since it is synchronized, and it is equipped with the same elaborate apparatus as is used by the two Scottish transmitters above mentioned. It started testing in December, and is expected to open early in 1937.

During the whole of the year important and extensive constructional work—the largest item, in fact, in the constructional programme of 1936—has been in progress at the Empire short-wave station at Daventry. For an account of this the reader is referred to page 139. Here it is only necessary to say that great efforts are being made to complete, at any rate, all essential work in time for the Coronation in May.

Coming now to the studios, extensive building work has been going on at what was once Queen Margaret College, Glasgow, where new studio accommodation is being provided for the production of a considerable proportion of the Scottish programme. These studios will be equipped with all the recently introduced devices used for the more elaborate type of programme. Towards the close of the year plans were completed for a new studio building in Belfast. This will eventually (for a time at any rate) constitute the largest block of studios in the British Isles, apart from Broadcasting House, London. Other studio developments are in hand at Aberdeen, Swansea, etc.

As is usual in the B.B.C., research has been closely associated on a practical basis with the new developments which have already been described, such as the new apparatus for synchronizing transmitters on the same wavelength, the acoustic design of studios, and problems in connexion with new studio control apparatus. A great deal of work has been done on field-strength surveys for projected stations, and a careful examination made of the service given by new stations,

such as Burghead and the London Television Station. Special efforts are being made to prevent breakdowns due to lightning flashes striking the aerials of a transmitter. This has been a difficulty ever since the introduction of high masts, which are necessary for efficient radiation from a high-power station. At the present time, it is one of the more serious causes of interruption in the service.

The Corporation's checking station at Tatsfield has continued to co-operate with the checking station of the International Broadcasting Union at Brussels in making regular measurements of the wavelengths of European stations. Its activities have been extended to cover measurements of short-wave broadcasting stations. As in previous years, programmes radiated in America and elsewhere have been picked up for re-radiation to home and Empire listeners.

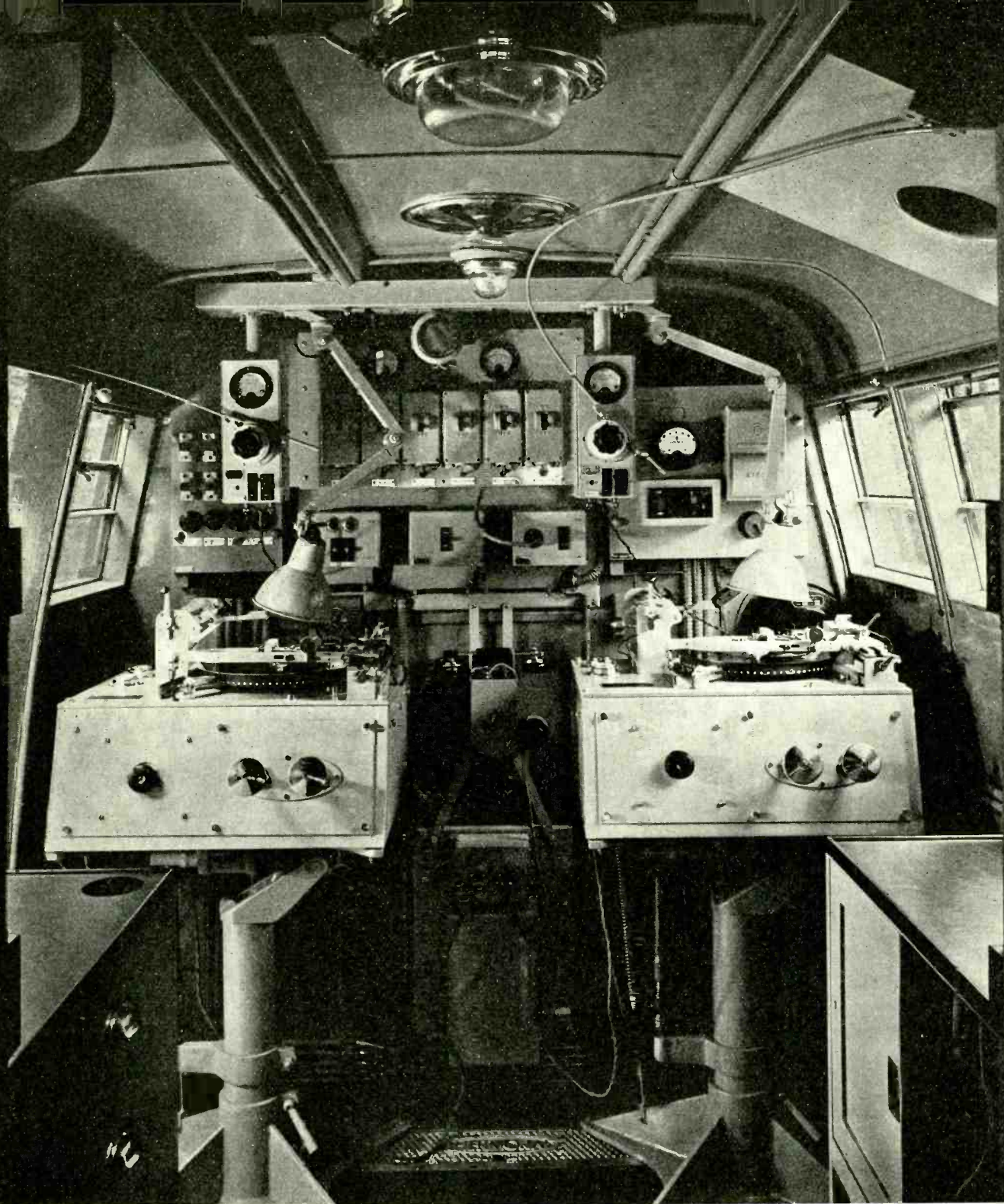
Recording apparatus has been improved and extended, and a small fleet of recording vans has been designed and constructed for collecting programme material from all parts of the country for subsequent inclusion in the programmes. Three distinct methods of recording are now in use. One employs cellulose-coated metal disks, used chiefly for recording short items or components of a programme. Secondly, there is the steel tape recording apparatus, which has recently been very much improved, used chiefly for complete recorded programmes for the Empire Service. The third system, at present only in an experimental stage (so far as the Corporation is concerned) consists of a mechanical method of recording on celluloid strip, similar to that used for films.

During 1936 a special committee, set up by the Council of the Institution of Electrical Engineers in 1933 to consider what steps could be taken to reduce electrical interference with reception of broadcast programmes, made its report, extracts from which are printed below. The outstanding recommendation was that the Electricity Commissioners should be given powers to issue regulations to suppress interference with radio reception caused by both new and existing electrical



Penmon Transmitting Station

[69]



The Interior of a B.B.C. Recording Van

appliances, plant or machinery. The B.B.C. was represented on this committee and, in conjunction with other organizations, notably the G.P.O., had carried out a considerable amount of work extending over several years.

Extracts from the Report of the I.E.E. Committee

Having given due consideration to all these questions, as regards both existing and new plant and apparatus, the Committee make the following recommendations as to the appropriate body for issuing Regulations and also as to the application of the Regulations to existing as well as to new apparatus.

The Electricity Commissioners should be given powers to issue Regulations to suppress interference with radio reception caused by both new and existing electrical appliances, plant, or machinery.

The Commissioners would not issue any Regulations in respect of both new and existing apparatus or plant until after they had been satisfied:

- (i) that the apparatus or plant was causing undue interference;
- (ii) that in the case of new apparatus it could without undue expense be altered in design or equipment so as to bring interference down to a satisfactory minimum; and
- (iii) that in the case of apparatus already installed the interference caused could not be more easily eliminated by reasonable alteration of the receiving apparatus.

The Electricity Commissioners should also have powers to make regulations as to the use of any electric appliances (both new and existing) which may cause interference with radio reception, including requirements as to proper maintenance of all such appliances.

The Commissioners should have power to require any scheduled apparatus sold after dates to be stated in the Regulations to bear a prescribed distinguishing Mark as a guarantee that it complied with the Regulations. This should, of course, apply to imported as well as to British-made apparatus.

All interested parties should have an opportunity of applying for the issue or amendment of Regulations and of being heard before the Commissioners take action in regard to any specific apparatus.

The Regulations in respect of the various classes of apparatus should either define the permissible limit of interference, or, in particular cases, schedule the method which could be used to prevent interference.

The Commissioners should also have powers to amend the Regulations from time to time in order that progress in the branches of the electrical industry affected may be fostered.

The Commissioners should also have powers to hear and allow or disallow appeals against the application of the Regulations in particular cases.

The Commissioners should be empowered to hold any Inquiries and institute such research as they may consider necessary for the purpose of carrying out the duties to be imposed upon them.

The Commissioners may find it desirable to have an Advisory Committee, representative of the principal organizations concerned, to advise them on technical

and other matters arising out of their duties under these proposals.

The Post Office should have powers to enforce the application of the Regulations subject to appeal to the Commissioners.

Although the Committee consider that any recommendation as to meeting the cost of suppressing interference from existing apparatus is outside their province, nevertheless they recommend that where the Post Office ascertain, after complaints have been received, that undue interference is being caused to a substantial number of broadcast receivers by any equipment installed before the prescribed date and of a type scheduled in the Regulations, provision should be made which would enable the Commissioners to require such apparatus to be rendered interference-free within such time as may appear to them reasonable in respect of each particular type of apparatus, having regard to all the circumstances of the case.

All costs incurred by the Commissioners in preparing and issuing the Regulations, and in carrying out any duties which may be imposed upon them, and all costs of the Post Office in investigating complaints and enforcing the Regulations, should be defrayed out of the quota of the Wireless Receiving Licence Fees which the Post Office retain.

The Committee consider that where some appropriate body, other than the Electricity Commissioners, already have powers to require the suppression of interference (as exercised by the Ministry of Transport in connexion with trolley-buses) no alteration of procedure is necessary, provided these powers are adequate. The Committee wish to emphasize, however, that, subject to proper safeguards, adequate powers should be given to some appropriate body to issue Regulations for the suppression of interference wherever it occurs.

(The full report is contained in the Journal of the I.E.E., Vol. 79, No. 476.)

In sum, 1936 was a busy year, and 1937 will be no less so if the programme envisaged is carried out. Three new transmitters for the home service—Penmon, Stagshaw and Aberdeen—are due to be opened at various times. Three additional short-wave transmitters at Daventry will also be put into service before the summer. Two new studio headquarters in the provinces will be under construction, and one at least should be ready before the end of the winter. In London it is anticipated that a start will be made on the new extension to Broadcasting House. It is hoped, too, to inaugurate television outside broadcasts of events taking place at some distance from a studio. Lastly, there are the Coronation broadcasts, for which preparations have been in progress for some months.

Burghead Transmitting Station

The Burghead Transmitting Station provides a broadcasting service to listeners along the whole of the north-east coast of Scotland from Thurso to Fraserburgh. A good service is also assured to Inverness and to a number of other inland towns in this region.

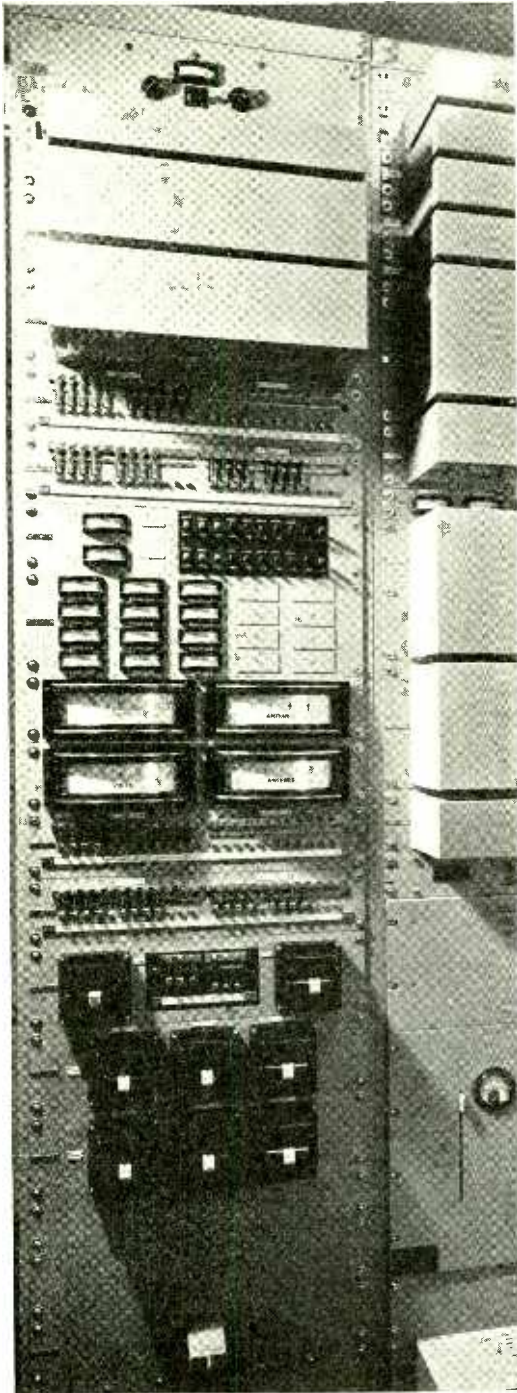
Burghead itself lies some seven miles north of Elgin, and the station is situated a few hundred yards from the sea on a site commanding the Moray Firth. The buildings and the mast radiator occupy approximately 20 acres. The transmitter installed at Burghead is of the same type as that at Lisnagarvey, near Belfast. The system of series modulation, developed by the Marconi Company, is employed, and a carrier power of 60 kW. is delivered to a mast radiator, 500 ft. in height. This radiator consists of a parallel-sided mast of normal design, insulated at the base and provided with insulated stays capable of withstanding the high voltages which are encountered with aerial systems of this type. Radio-frequency power is passed from the output of the transmitter by means of a copper tube transmission line or feeder to the aerial coupling circuits, which are housed in a small building at the foot of the mast; and thence is fed to the base of the mast.

Power is supplied to the station from the Grampian Electric Supply Company at an incoming voltage of 33,000 volts, 3-phase. Failure of supply is guarded against by the provision of a ring main from two independent generating stations, and a 600 h.p. Diesel engine and generator are available in case of complete failure of incoming mains. A sub-station is provided housing transformers which reduce the high-tension supply voltage to 415 volts, and all machines and auxiliary equipment are supplied at this voltage. The high-tension supply for the transmitter is generated by a motor generator capable of an output of 400 kW. at 20,000 volts. Both high-tension generators and all auxiliary plant are provided in duplicate, and means are provided to enable rapid change-over of equipment to avoid loss of programme due to any breakdown which may occur.

The wavelength upon which the transmitter works is 391.1 metres (767 kilocycles per second), the same as that of the

Westerglen (Scottish Regional) transmitter. Owing to the limited number of waves available for broadcasting in this country, it was found impossible to provide a separate wavelength for the service which the Burghead transmitter was intended to give. It was therefore decided early in 1935 to examine the possibility of operating the new transmitter on a common wavelength with the existing Westerglen (Scottish Regional) transmitter. A small transmitter which was arranged to relay the Scottish Regional programme on the wavelength of 391.1 metres was accordingly installed on the Burghead site, and experiments were carried out in order to determine whether there was any likelihood of the service area projected in the North, or that already existing in the South, being reduced on account of any 'mush' or bad quality due to common wave working. In other words, observations were made to find out the extent of fading due to interference from the indirect ray from Westerglen and the direct ray from the experimental transmitter. A continuous series of observations made, particularly during hours of darkness, showed that degradation of quality need not be expected from such a common wave service, nor was there any indication of diminution of the required range of satisfactory reception within the areas to be served. The experience which has been gained since the opening of the transmitter has confirmed the conclusions drawn from these preliminary experimental observations, and further measurements and listening tests have shown that the service is satisfactory.

A feature of interest is the method of operating the Westerglen and Burghead transmitters on the same frequency. This is similar to that which is at present used for synchronizing the London, North, and West National transmitters. Improvements in the apparatus have been effected and further provision has been made in order to reduce the likelihood of breakdown due to failure of any component in the system. The master control of frequency adopted is a tuning-fork which is maintained in oscillation by electrical means. The frequency of this fork is 1498.05 cycles per second, which is $\frac{5}{12}$ of the carrier frequency allocated to the transmitters. Constancy of frequency is ensured by enclosing the tuning-fork in an oven, the

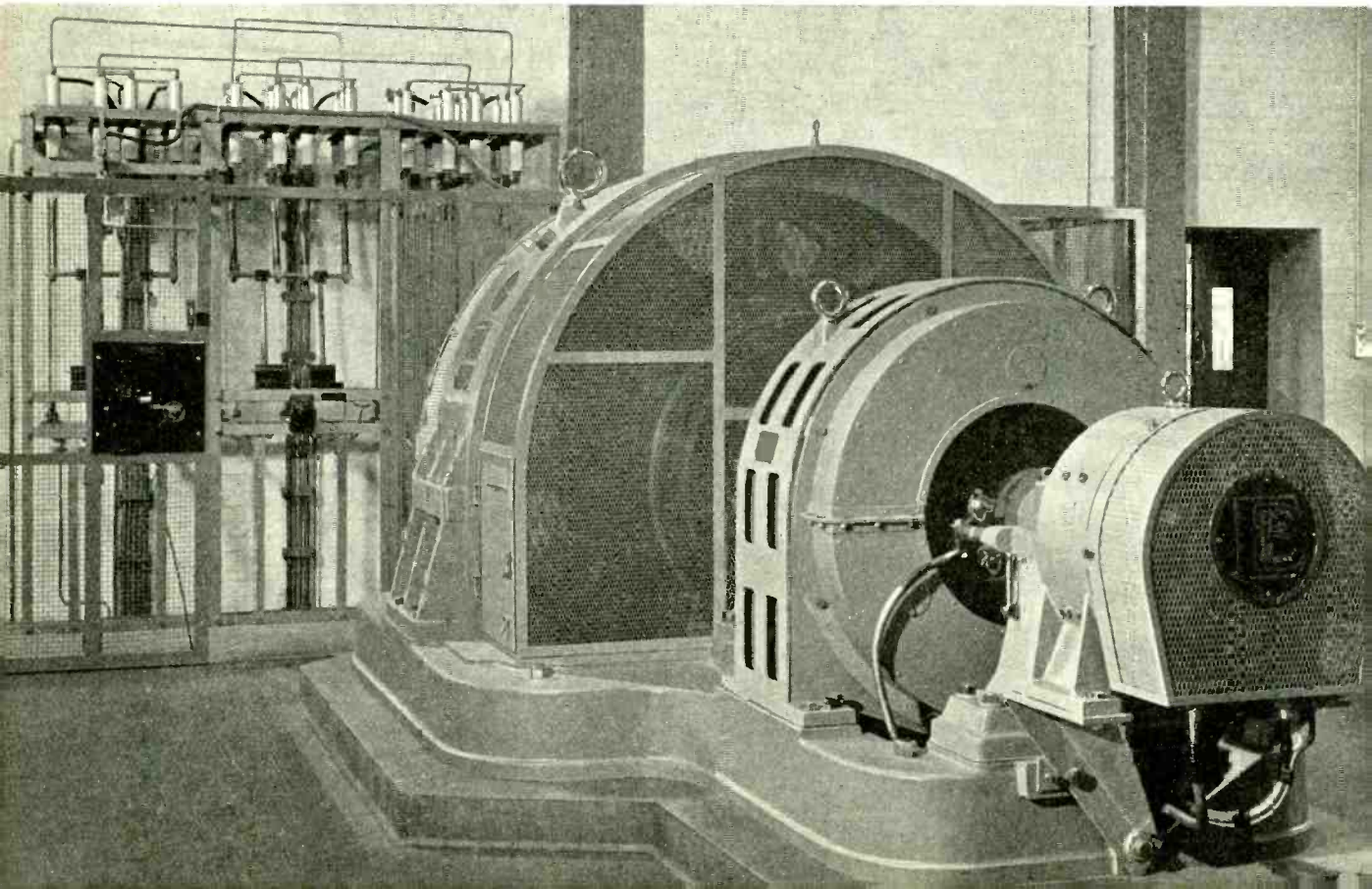


HIGH-FREQUENCY DRIVE AND SYNCHRONIZING APPARATUS

temperature of which is automatically regulated within very close limits by electrical means. The air pressure within the oven is also regulated. By this means it is possible to control the frequency of the fork to approximately 1 part in 1,000,000. At each transmitting station means are provided for multiplying the frequency of the master tuning-fork by 512, the output from the multiplier, which is at the frequency of 767 kilocycles per second, serving to drive the transmitters. The master fork is situated at the Westerglen transmitter, and the tone is transmitted by a cable route from Westerglen via Edinburgh, Dundee, Aberdeen, and Burghead, after which it is delivered to the Burghead multiplier. This tone also passes to the local multiplier at the Westerglen transmitter, and hence the two stations are controlled by the one fork at Westerglen. Spare forks are provided both at Westerglen and Burghead in case of failure of either a fork or the intervening line. In the latter case, automatic means are provided whereby a local fork at Burghead, which is maintained as closely as possible to the frequency of the Westerglen fork, is immediately brought into operation in order that the service from the Burghead transmitter may not be interrupted. In this event, of course, the frequencies of the two stations will not be exactly the same and deterioration of quality, due to interference between the two stations, would be noticeable on the outskirts of either service area, particularly at night. This condition, however, is only met with in emergency, and would not last longer than the comparatively short time required to connect reserve lines into circuit. In certain cases in the past it has been noticed that the effects of slight noise or cross-talk on the lines which are used to convey the synchronizing fork tone from one station to another have given rise to a particular type of noise which is heard on a receiver within a common wave service area. Means have been provided on the Westerglen-Burghead service for removing this defect by the provision of an additional tuning-fork at Burghead which is used as a 'filter'. The adoption of this arrangement, which has the effect of preventing disturbances in the lines from reaching the multiplier and, at the same time, permits the synchronizing tone to pass freely, has proved very successful in practice.



The Machine Room, Burghead
One of the 10,000-volt Motor Generators, Lisnagarvey



Lisnagarvey Transmitting Station

The Lisnagarvey Transmitting Station is situated on the main road between Lisburn and Hillsborough, about 9 miles south-west of Belfast.

The building is constructed of brick, faced with a multi-coloured brick, and in lay-out follows closely the design adopted by the B.B.C. for other Regional transmitting stations.

The building is divided into four main sections. The first section is at the front of the building, and contains offices, studio and low-frequency Control Room. Immediately behind this is the second section, the Transmitter Hall, followed by the third section, the Machine Room, which contains the motor generators necessary to convert the mains energy to the type of supply required by the transmitter. The fourth section of the building forms a power station which contains a Diesel engine and generator which is used as a standby source of power supply, the power supply for the station being obtained normally from the system of the Electricity Board for Northern Ireland.

It is perhaps advisable first to describe the transmitter, since upon this depends the design and lay-out of the remainder of the plant. The transmitter is situated on one side of the Transmitter Hall, the components being arranged behind a straight-fronted enclosure of steel and aluminium. The valves are mounted behind glass-panelled doors which are let into the front of the transmitter. The components associated with the valves, such as condensers, inductances, resistances, etc., are mounted behind the valves, and access to these components is obtained from a passage at the back of the enclosure. This is closed at either end by collapsible gates which, together with the doors on the front panel, are interlocked with the power supply by means of a safety switch which is arranged in such a manner that it is impossible to open the gates when the transmitter is alive.

The Control Table, from which all power supplies to the transmitter are controlled, is placed in front of the transmitter enclosure. The whole of the equipment is finished in the now familiar light grey and polished aluminium which is the standard finish of all B.B.C. engineering equipment.

The transmitter circuit is of the series modulated power amplifier type. This system was used with success in the National transmitter at Droitwich.

The carrier frequency is generated by a master oscillator valve, the circuits of which are contained in a heat-insulated box, the temperature of the latter being automatically controlled by thermostats. The frequency generated by the master-oscillator valve is half the carrier frequency, and the frequency is doubled by doubling and amplifying stages and is taken to the first stage of the main transmitter circuits by a screened cable. The carrier frequency is amplified by the first high frequency stage of the transmitter which consists of a Marconi-ACS.2 screened grid valve. The output of this valve excites the grids of the modulated amplifier which consists of two CAT.6 valves connected in push-pull. These valves are connected in series with the main modulator valves which consist of two Marconi CAM.3 valves. The output of the modulated amplifier excites the main power amplifier which consists of four Marconi CAT.12A water-cooled valves, which in turn feed the main output circuit. The main output circuit is coupled to the aerial tuning circuits situated in a small brick building beneath the mast aerial by means of a concentric feeder, which consists of an inner tubular conductor having a diameter of about 1 in. enclosed in an outer sheath consisting of a copper tube having a diameter of 5 in.

The aerial tuning circuits are contained in the building at the foot of the mast, and are installed in duplicate and arranged in such a manner that either set of equipment may be brought into circuit by means of isolator switches.

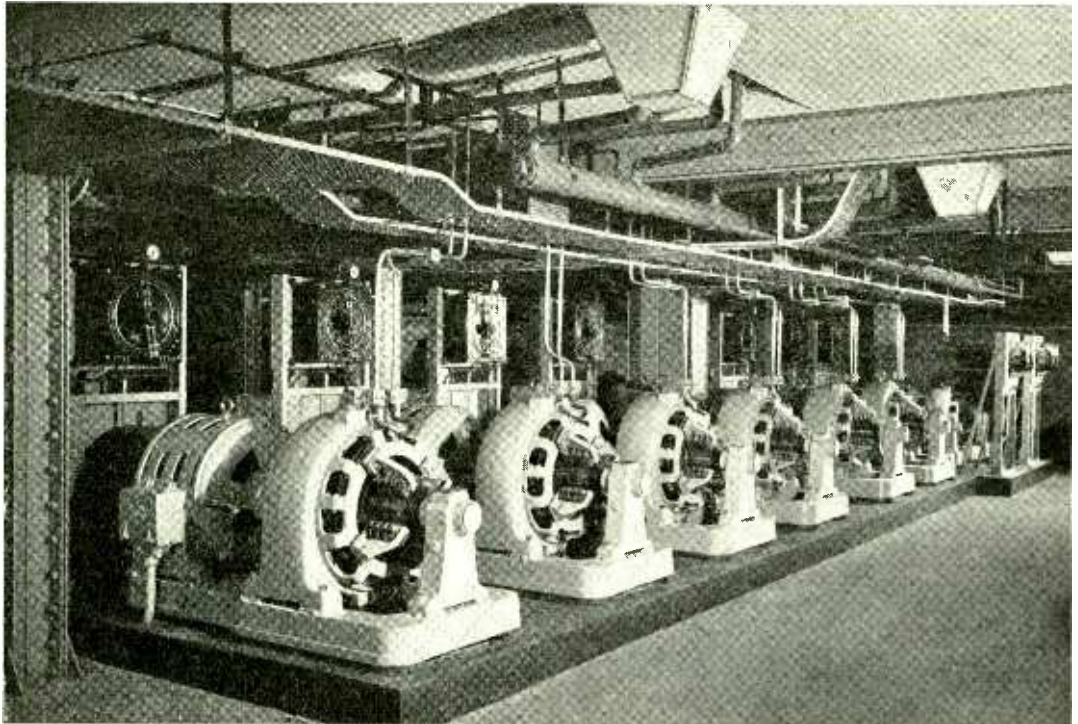
Following the B.B.C.'s usual practice, a spare valve is provided for every valve in the transmitter. Spare valves are brought into circuit by means of isolator switches, similar isolators being provided to disconnect a faulty working valve.

The main anode voltage of the transmitter is supplied from motor generators which are situated in the Machine Room. These generators will be described later, but the smoothing circuits for them are mounted in the Transmitter Hall and occupy a wall opposite to that occupied by the transmitter.

The smoothing circuits are enclosed by a screen of wire mesh, access to the equipment being provided by means of a door at either end of the enclosure. These doors are, of course, interlocked in a manner similar to those on the transmitter.

For the supply of anode H.T. to the main valves of the transmitter three motor generators are provided, each capable of an output of 300 kW. at 12,000 v. Under normal conditions two machines are run simultaneously with the armatures connected in series, the normal load being 360 kW. at 18,500 v. Switchgear is provided in order that any two of the three generators may be connected in series.

The Machine Room contains, in addition to the above, two motor generators, each having an output of 5,000 v., .6 ampere, which are used to supply the screened grid high-frequency amplifier and low-frequency amplifiers. Two motor generators are also installed for the purpose of providing the necessary grid bias voltages required for the various valves in the transmitter. The filament heating current for the



FILAMENT HEATING GENERATORS AND CONTROL GEAR, LISNAGARVEY

valves in the transmitter is obtained from a number of motor generators which are situated in a crypt formed below the Transmitter Hall

The whole of the power plant in the station is supplied from the power control switchboard in the Engine Room by duplicate 415 v. 3-phase 50-cycle mains. In normal circumstances the power of the station is obtained from the system of the Electricity Board for Northern Ireland, who have installed duplicate overhead feeders which are connected to a ring main. These feeders terminate at an outdoor sub-station situated some 300 ft. from the main building. Two low-tension feeders connect the secondary windings of the transformers to the switchgear in the power station. This switchgear is of standard type and mounted on a flat back type switchboard.

The emergency engine, which was previously mentioned, is a 600 h.p. 333 r.p.m. 6-cylinder Diesel engine, of the solid injection type, directly coupled to a 415 v. 3-phase alternator capable of an output of 400 kW. The engine auxiliary equipment, such as pumps, compressors, and air starting reservoir, are also situated in the power station, and the engine cooler and fuel oil tanks are placed at the rear of the building.

The mast, which is situated behind the station building, is of special interest, since the steel structure is used as an aerial. The mast is a cigar-shaped lattice steel structure having a height of 475 ft., supported at two points in its length by stays. The first set of

stays, which consists of three double steel ropes, is joined to the mast at a height of 237 ft., while the second set of stays, of similar construction, is joined to the mast at a height of 355 ft. The base of the mast rests on a ball and socket carried on a heavy plate which is separated from the concrete foundation by porcelain cylinders. The ball and socket joint is used in order to permit movement of the mast. The mast is surmounted by a sliding top mast which has a maximum height of 75 ft. The height of the top mast is used to adjust the electrical length of the mast to suit the operating wavelength of the station. Careful experimental work has been carried out to determine the best position of this top mast in order to extend as far as possible the fading-free area served by the station.

The transmitter is connected to the Belfast studio premises by two lines which are permanently rented from the Post Office. These lines terminate in the Control Room, in which are situated the line amplifiers, check receivers, and other equipment for monitoring the output of the transmitter.



The Transmitter Hall, Lisnagarvey

Progress in Studio Design

At the present time problems in the design of broadcasting studios are mostly concerned with two main lines of progress. These are, first, the discovery of better methods than have been available hitherto of obtaining the desired relation between pitch and reverberation time and, second, the determination of the best shape for a studio and the best way of distributing the sound-absorbing material over its internal surfaces.

Advance along the first line of work is very largely a question of continued laboratory experiment, using a 'reverberation chamber' to determine the sound absorption characteristics of numerous materials devised for acoustical treatment and to find the effect of such modifications as experience may suggest. The object of these experiments is to discover a practical method of wall or ceiling treatment that will give almost the same degree of sound absorption over the whole range of frequency or pitch employed in the broadcast reproduction of speech or music. Methods of studio treatment employed in the past have, either deliberately or otherwise, made use of the principle of absorbing the upper part of the frequency range mainly in one feature of the studio, the wall treatment for example, and the lower frequencies by resonance of some part of the structure, such as the floor or ceiling. Whilst, in practice, good results have been obtained by this method in the past, recent experience has indicated the possibility of improvement by the use of a single treatment providing absorption over the whole frequency range.

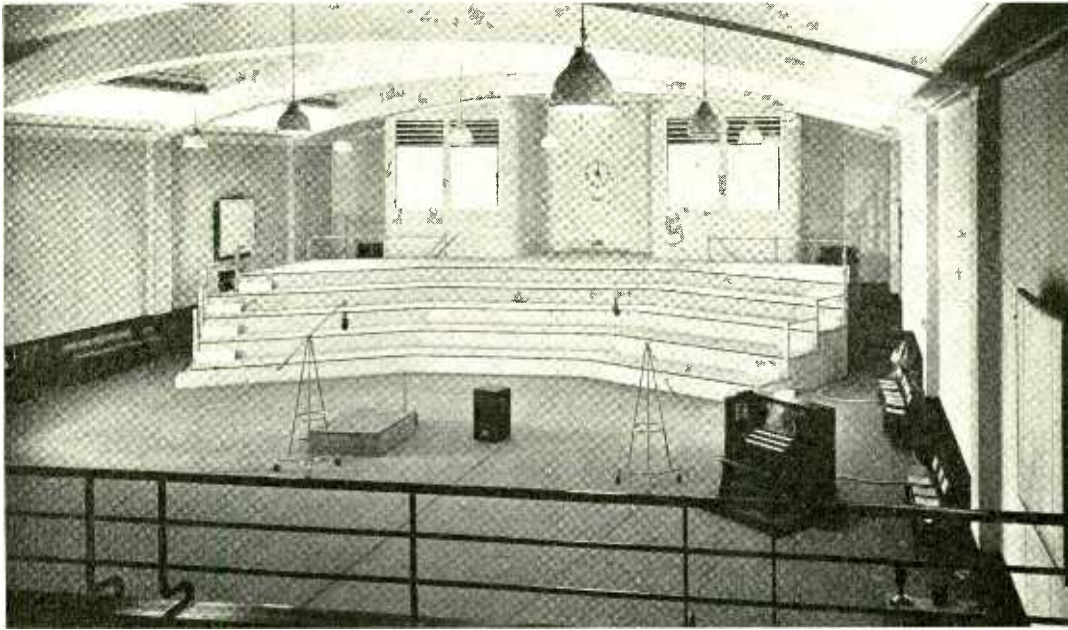
Experiment in connexion with absorbing materials is by no means complete, but results so far indicate that either a very considerable thickness of porous material must be used, in order to obtain sufficient absorption at low frequencies, or else that some kind of light diaphragm must be incorporated with relatively thin compressible porous material so that it may absorb sound by vibrating under the influence of the low-frequency waves. The difficulty is to apply these general principles to practical conditions so as to obtain a relatively inexpensive durable treatment which shall be capable of being suitably decorated. The first method of attack may be illustrated by the fact that

studios have been recently specified incorporating acoustical treatment using no less a thickness than 6 inches of 'mineral wool', one of the most useful types of porous absorbent. A disadvantage with the latter treatment is actually the high average absorption of the material, so that a relatively small percentage of wall surface has to be treated in order to give the desired reverberation time. It is often difficult to adapt this small area of treatment to a suitable decorative scheme whilst fulfilling acoustical requirements as to distribution of absorption at the same time.

With regard to the second line of investigation mentioned above, an experiment was described in the *B.B.C. Annual* for 1936, in which the effect of a studio with flat walls was compared with one with deeply corrugated surfaces. As a result of this experiment and of evidence from other sources, it appears that while, on the one hand, some degree of corrugation or breaking-up of wall surfaces may be desirable, yet, on the other hand, the wall surfaces nearest the orchestra should be flat and sound-reflecting. The object of the latter is two-fold. The flat surfaces, which reflect the complex sound-waves arising in orchestral music without changing their character, are found to add brightness to the result as compared with that which would be obtained if they were replaced by surfaces treated with materials favouring absorption of the higher frequency components of the sound. The other advantage is that in the presence of the reflecting surfaces the players of an orchestra maintain better contact with each other, which improves the performance of the orchestra as a whole.

These considerations lead to the introduction of a type of studio, new, so far as this country is concerned, known as the 'live end—dead end' type, for lack of a more appropriate expression. The general design of such a studio is that roughly half the studio, that which accommodates the orchestra itself, shall be free of acoustical treatment on floor, walls, or ceiling, all the absorption necessary being concentrated in the other half of the studio, in which the microphone is normally placed. Recent experience also suggests the desirability of leaving the floor uncarpeted, and preferably constructed of polished wood.

Another feature which is now introduced



A STUDIO SHOWING THE TIERED PLATFORM FOR THE ORCHESTRA

into orchestral studios is a form of concert platform for the orchestra, consisting of a series of tiers arranged in a curved formation similar to the platforms in many famous concert halls, such as the Queen's Hall, London. Apart from the obvious advantage that the players have a clearer view of their conductor, this tiered arc arrangement has been found greatly to improve the brightness of the reproduction, largely because it prevents the screening effect of performers on others seated immediately behind them. Problems of 'balance' are also simplified, since the use of a tiered platform tends to equalize the distances of the various sections of the orchestra from the microphone.

Such a feature of studio acoustics as 'live end—dead end' design can only be tested in actual practice. It is impossible, for example, to devise any laboratory experiment to examine its effectiveness, since the effect sought is very largely subjective in character. Hence progress and development are necessarily slow. In addition, the effect of studio acoustics is dependent to a very large extent on the properties of the microphones which are employed. Features such as polished wooden floors and reflecting walls in the

studio, which are now considered to be desirable, were found to be undesirable when they were tried five or six years ago, because the microphones then used emphasized certain bands of the higher audible frequencies—actually from 3000 to 5000 cycles per second—and additional absorption of sound waves of those frequencies in the studio was necessary if a hard, glittering and metallic effect, particularly in regard to string tone, were to be avoided.

At the present time, microphones of extremely good performance are available, and it is becoming true to say that the best conditions for broadcasting are practically the same as those which give ideal listening within the studio. Thus the tendency is for an orchestral studio to approximate, as regards acoustical design, to an ideal concert hall. This is exemplified by the use of concert platforms and the concentration of the sound absorbing material to the end of the studio away from the orchestra. In most concert halls a great deal of the sound absorption is due to the audience or to the seating accommodation, the walls around the concert platform being of hard plaster or other sound-reflecting material.

Field-Strength Measurements on Ultra-Short Wavelengths

The institution of a television service by the British Broadcasting Corporation has created, for the Research Department, the necessity of investigating transmission phenomena peculiar to ultra-short waves.

Field-strength measuring apparatus suitable for use on television wavelengths has been designed and used, during the development period, to investigate signals on 7.75 metres radiated by an aerial on the roof of Broadcasting House. These tests showed the necessity of adopting a special technique for ultra-short wave field-strength measurements, and, at the same time, revealed many interesting phenomena regarding the habits of these waves, particularly in built-up areas. Field-strength contours of the Broadcasting House transmitter were charted, and investigations made into the phenomena associated with the propagation of horizontally polarized transmissions. Measurements on the Alexandra Palace transmitters were commenced immediately the experimental transmissions were available, and a field-strength contour chart of this station has now been prepared.

This field-strength measuring apparatus is accommodated in a specially constructed van the bodywork of which is practically free from metal parts. For the reception of signals a dipole is used which is mounted on the roof of the van. By means of a projecting arm inside the van the dipole can be turned to either a vertical or a horizontal position, and, when horizontal, can be rotated from inside the van. The direction in which the aerial is pointing is also indicated to the occupants of the van by means of a pointer moving over a scale mounted on the roof. The dipole is collapsible in order to avoid inconvenience when in traffic, among trees, or when passing under low bridges.

The equipment inside the van consists of the field-strength measuring receiver with associated calibrating equipment, a recording milliammeter and a subsidiary unit embodying a 'Tunograph' tuning indicator which is used to measure the level of interference from motor-car ignition systems. The engine of the van is equipped with ignition interference

suppressors as marketed. It is found practicable, when suppressors are fitted, to record field-strengths of less than $50\mu\text{v}/\text{m}$, with the van in motion without appreciable interference from the ignition system.

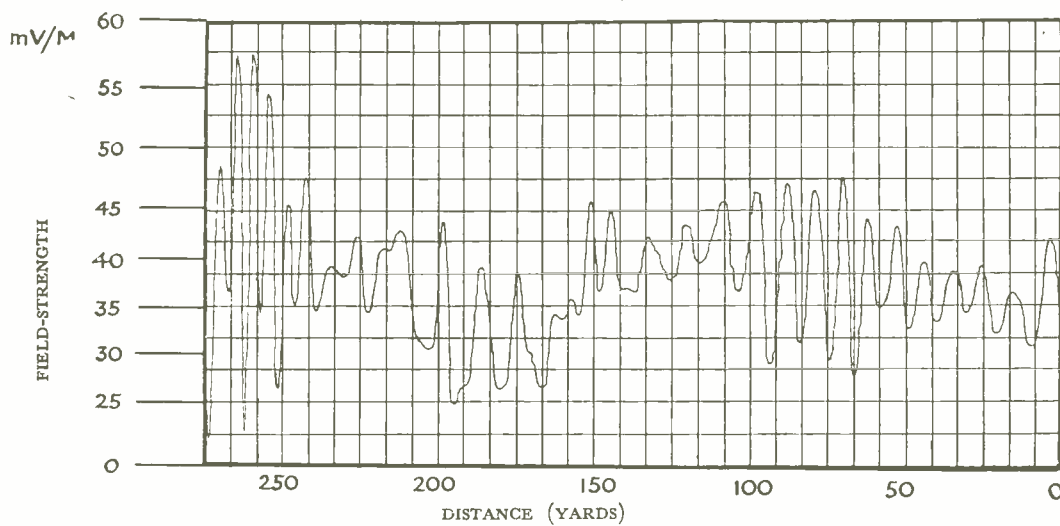
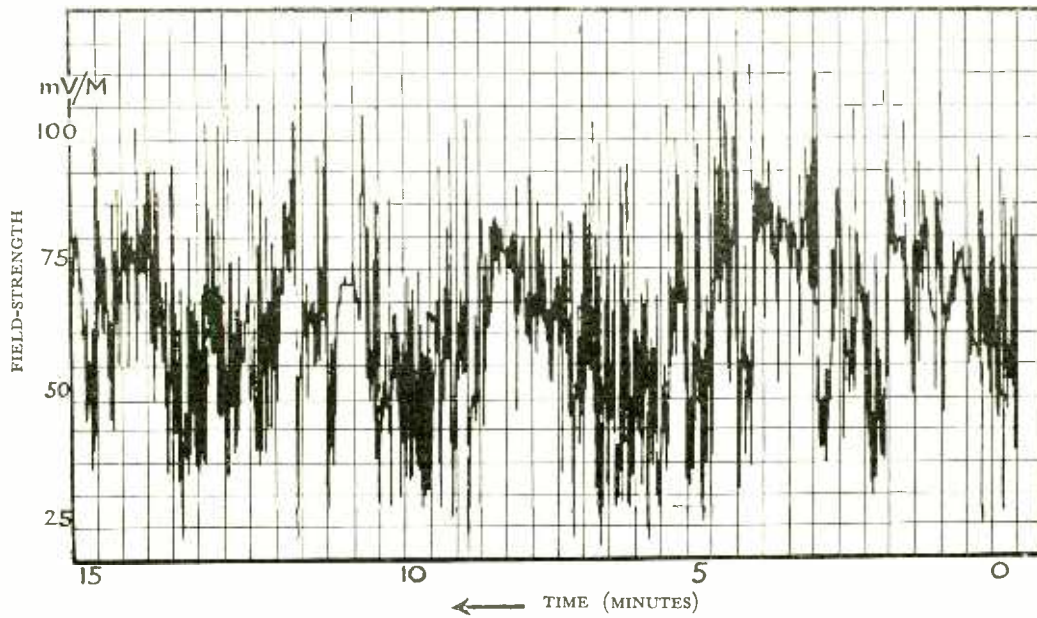
It became apparent very soon after the start of these investigations that established field-strength measuring technique as developed for the medium wave band would have to be abandoned and other methods adopted. It was found that it was impossible to determine a representative figure for the field-strength in a given area by means of spot measurements in a few representative points. Some idea of the impracticability of such a scheme is conveyed by the illustrations of Figs. 1 and 2. The first figure shows the variation in received field-strength from the Broadcasting House transmitter with the measuring van stationary on Balham Hill. The variations are entirely due to reflection and absorption effects of passing traffic. The record of Fig. 2 is typical of the standing wave pattern existing in a relatively un-screened area.

In order to obtain sufficient information to plot field-strength contours it has been found necessary to take continuous field-strength records. Streets carrying much traffic must be avoided and measurements made in quiet by-roads. The normal procedure is to take a continuous record of the field-strength variations throughout a district, and then to determine the average value from the record. A sufficient number of such records having been obtained, a field-strength contour map can be prepared. It must be realized, however, that such a map can only represent the average signal in a region, and that individual measurements may reveal divergences as great as ± 10 dB in certain cases.

Field-strength contour maps of the Alexandra Palace sound transmitter are shown in Figs. 3 and 4, Fig. 3 giving the field at 2.5 m. above the ground, while Fig. 4 gives the field at roof-level, i.e., where a television aerial would normally be placed. The Alexandra Palace vision transmitter gives a field whose average value is about $1\frac{1}{2}$ dB. below that of the sound transmitter. The standing wave systems of the two transmitters are, however, independent, and individual measurements have revealed field-strength ratios up to ± 6 dB.

On the medium wave band it is quite satisfactory to make measurements at street-level, and to use the results to determine the signal received using elevated aerials. On ultra-short wavelengths this is no longer the case. Measurements using elevated aerials indicate that the received field-strength increases by about 0.3 dB for every foot increase in height above the ground up to a height of about 40 to 50 ft. For greater

heights the relative increase in signal strength is reduced. In order, therefore, to determine the probable received signal strength in any position from the Alexandra Palace transmissions, the ground field-strengths as indicated by the contours of Fig. 3 should be increased by a quantity appropriate to the height of the receiving aerial. This has been done in the preparation of Fig. 4, assuming a roof height of 10 to 15 metres.



FIGS. 1 and 2

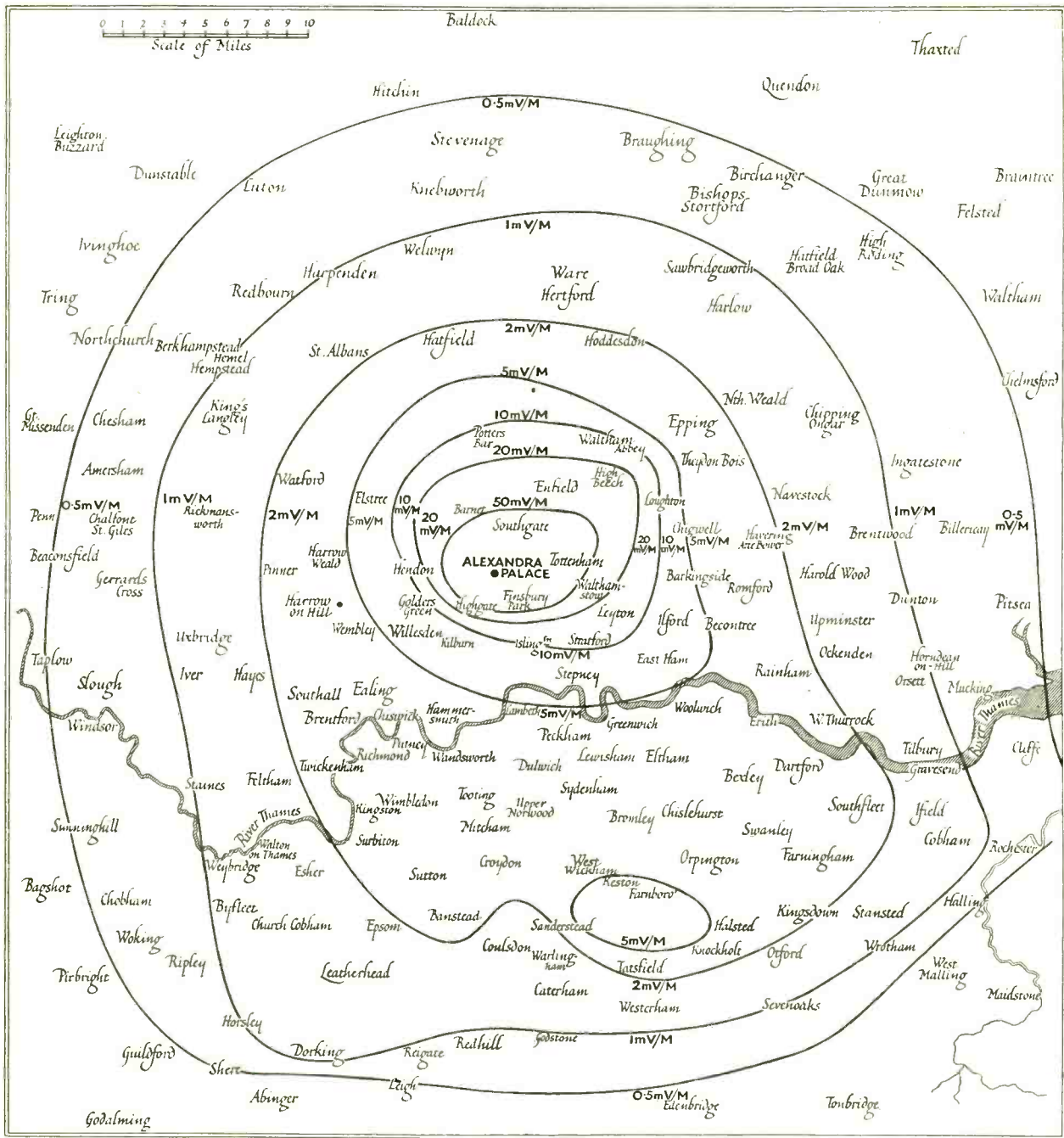


FIG. 4
 ALEXANDRA PALACE TRANSMITTER
 $f. = 41.5 \text{ Mc/s.}$ Power = 3 kW.
 Estimated contours at roof level (i.e., 10 to 15 metres above ground)

PUBLIC RELATIONS

Every public undertaking nowadays recognizes the value of public goodwill. The B.B.C. is one of many large organizations, ranging from Government Departments to commercial concerns, which have equipped themselves with special 'public relations' machinery, designed to promote goodwill and mutual understanding between themselves and their public.

The main instrument of the B.B.C.'s public relations must always be its programmes. But it is not enough simply to produce the 'goods'. The service is complete only when the goods are brought home to the consuming public, and, where necessary, adapted to the public's needs. A 'take it or leave it' attitude on the part of the B.B.C. might well be fatal to the success of its programmes. The B.B.C. wants listeners. It wants new and good listeners, and it is the special function of its public relations system to encourage the development of good and widespread listening by a variety of means. In fulfilling this function, the system bears a two-way traffic. On the one hand, it carries information about forthcoming programmes to the public, and about individual programmes to special sections of the public whom they are likely to interest. On the other hand, by studying the habits, needs, opinions and tastes of the public, it develops a supply of incoming information for the guidance of programme policy.

Public interest is not, however, confined to the programmes alone. It extends to the B.B.C. itself, as a novel form of public service organization. Public undertakings grow increasingly complicated nowadays, and at the same time a healthy public curiosity as to how things work is also growing. It is therefore another part of the public relations function to present to the public a picture of the B.B.C. at work, both in its human and in its technical aspects.

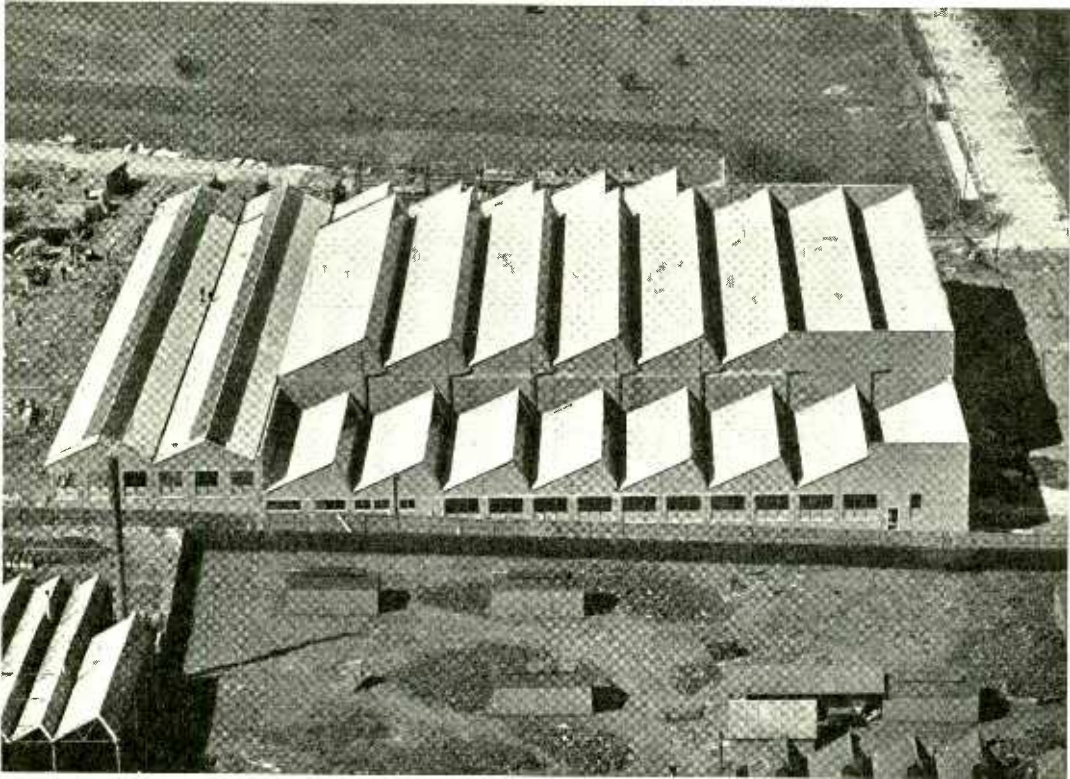
How these tasks are carried out in practice is briefly described in the following paragraphs. The B.B.C.'s journals, the *Radio Times*, *World-Radio*, and *The Listener* are dealt with first.

The *Radio Times* appears each Friday and gives the programmes to be broadcast from

each of the B.B.C.'s transmitters during the week beginning on the following Sunday. It costs twopence and has a circulation of nearly three million. During the year, a special factory was built for printing the *Radio Times*. The first number for 1937 was printed at the new factory. A new type was used throughout, and other changes, the result of months of study, were introduced at the same time, with the object of improving the appearance and arrangement of the paper. The *Radio Times*, as its title page announces, give the 'full B.B.C. programmes for the week—and all about them'. The detail given under each programme item of the week extends, for example, to the titles of the works to be included in a concert and the names of the artists; the full casts of dramatic productions, and the order of prayers and ceremonies in a religious service. The listener is helped to make a selection by explanatory notes, pictures and special articles, and by advance information about programmes to be included in future weeks. Letters from listeners, with critical comments, appear regularly. A freely illustrated Television Supplement is now included with the London edition, and a Television Number was among the nine special numbers of the *Radio Times* published during the year.

World-Radio, also published on Fridays at 2d., gives the programmes of foreign stations all over the world. These are so numerous that they cannot be given in such great detail as the home programmes in the *Radio Times*; but they are classified both by stations and by time, hour by hour and day by day, so that the listener can see immediately what choice lies open to him at any given moment. A selection of items of special interest or importance is also given week by week. Through *World-Radio*, listeners are kept informed about broadcasting developments abroad, particularly in the short-wave services, to which a special section is devoted. The technical side of television has provided *World-Radio* with a new field about which there is a growing curiosity to be satisfied.

The Listener, which appears every Wednesday, and costs threepence, is designed to preserve the best of the talks broadcast



THE NEW FACTORY BUILT FOR PRINTING THE 'RADIO TIMES'

during the previous week. The talks, with illustrations, make up the bulk of the paper, but various subsidiary material helps to give it its definite and recognizable character. It contains, for example, a weekly selection of news photographs, linked with the broadcast news bulletins, and a special section devoted to the music programmes. In addition to the most important talks, which are reproduced in full, short selections are included from other talks. Matters of controversy, arising out of the talks, are actively canvassed in the correspondence columns, the subjects ranging from alleged political bias to antiquarian *curiosa*. Like the *Radio Times*, *The Listener* appeared at the beginning of 1937 in a new type dress.

In addition to the three weekly journals, the B.B.C. issues a wide range of supplementary publications dealing with programmes of interest to special sections of the public. For example, advance information about forthcoming talks has been given

periodically for many years past in various forms. Last autumn's talks were described in a new form of pamphlet, of which 300,000 copies were distributed, free, through a diversity of channels, such as public libraries and social and educational organizations in all parts of the country. A companion pamphlet for music, the first of its kind, was published at the same time, and the issue of 200,000 free copies was exhausted before all the demands from local musical societies, libraries, and other organizations could be satisfied. A still more specialized audience, consisting of those who follow the series of talks specially adapted for group listening, is catered for by another set of pamphlets, each of which contains a synopsis of each talk in the series and a guide to reading. These pamphlets are sold, the sales ranging from 10,000 to 60,000, according to the subject.

The audience for the daily broadcasts to schools constitutes another special section of the public, and a rapidly growing one, to be



AN INDIAN DELEGATE SPEAKING AT THE WOMEN'S CONFERENCE, BROADCASTING HOUSE

kept supplied with information. This took the form in 1936 of a handbook of general information about the schools broadcasts scheme for the year, issued in the summer, and 44 separate pamphlets, dealing with the various courses of the curriculum. The total number of these pamphlets sold, for twopence each, in 1936 was 1,375,320, as compared with 1,044,234 in 1935, an increase of some 330,000 during the year.

To the B.B.C.'s listeners in all parts of the Empire overseas, a special service of information is devoted. This service has been substantially developed during the past year. The weekly bulletin, issued to more than seven hundred overseas newspapers, was enlarged and improved and pictures were added for purposes of reproduction. At the same time, a separate weekly publication, 'B.B.C. Empire Broadcasting', which contains full details of the Empire programmes, with illustrations, was offered to overseas

listeners for an annual subscription of 10s., and met with encouraging response. By means of this weekly pamphlet, advance information about the programmes from Daventry is carried to subscribers in nearly every country in the world.

The B.B.C. keeps the closest possible touch with the Press, whose interest in broadcasting appears to grow year by year. Time-tables of all programmes are issued to the newspapers every day, with information about artists and speakers. Over a thousand announcements, dealing with programmes, plans for the future, appointments to the staff, and other items of general interest are issued to the Press every year. Radio correspondents are constant visitors to the Press Department at Broadcasting House, and are invited to periodic conferences, at which they interview a selected official of the Corporation. This system of Press conferences has been successfully extended during the past

year to the provinces, where similar Regional conferences have been held.

The B.B.C.'s own medium, the microphone, is used, sparingly, for specific public relations purposes, as when, for example, the Controller of Programmes recently explained to listeners the new arrangements for broadcasting the Promenade Concerts and asked them to send in their views. Heads of Departments, such as, for example, the Director of Music and the Director of Features and Drama, have also recently explained at the microphone their plans for the future, and the Secretary to the Central Council for School Broadcasting has devoted two recent broadcast talks to a similar purpose. Regional Directors periodically come to the microphone to speak of their own Regional programmes.

Lectures on the work of the B.B.C are given throughout the year by members of the staff, and exhibits are arranged, not only at important Radio Exhibitions, but also at some annual shows, such as the Royal, Bath and West, Highland Agricultural, and Royal Welsh Agricultural.

The operations of the B.B.C., unlike those of some other undertakings of similar scope, are carried on in a very few centres. This fact, and the special conditions of the work, prevent the B.B.C. from inviting the general public to visit it and see it at work. Such facilities have, of necessity, to be severely restricted. But the B.B.C., nevertheless, arranges special visits on occasion, as, for example, when Members of Parliament were invited to visit Broadcasting House and the new Maida Vale studios in April and May of last year. Visits to the various studio centres and transmitting stations have also been arranged for parties of students and for engineers from both home and abroad.

The incoming traffic of the B.B.C.'s public relations system, like the outgoing traffic described above, is borne along a number of lines, each of which is designed to carry to the B.B.C. some added bit of knowledge about the habits, needs and tastes of its public. No single method is used, and new methods are always being tried.

Through its General Advisory Council and its system of advisory committees* the B.B.C.

has a country-wide range of contacts with representative people. This system was strengthened during 1936 by the appointment of Music Advisory Committees based on Manchester and Birmingham respectively. All the Committees are kept closely informed about the particular sphere of broadcasting with which they are concerned, and the General Advisory Council is informed about the whole range of the B.B.C.'s activities. All the Committees meet regularly to discuss matters of policy within their respective spheres and their advice is of the utmost value to the B.B.C.

An experiment designed to extend the range of its contacts was made in April 1936, when the B.B.C. held a conference of over four hundred representative women at Broadcasting House, to discuss the morning talks for housewives. The success of this experiment led to proposals for similar Regional conferences, including a conference of youth organizations in Edinburgh and a talks conference in the Northern region.

Letters from listeners are a further source of valuable information. About 160,000 letters about its programmes were received by the B.B.C. in 1936. All suggestions, criticisms and appreciations were recorded and most of the requests for information were met. In a few cases, however, the B.B.C. had to admit defeat. It could not, for example, satisfy the writer who offered it ten guineas for charity if it would find him a wife, nor help the correspondent who asked for hints on the keeping of bulldogs.

Special enquiries are made from time to time in order to discover preferences of listeners to a given type of programme, such as the Children's Hour, broadcasts to schools, or broadcast plays. Press criticism is carefully noted. Valuable contacts with the public in all parts of the country are maintained by the B.B.C.'s Regional Staff, including its Education Officers and its Public Relations Officers in each Region. Finally, the B.B.C. has recently established, at its Head Office, a special unit, with the object of co-ordinating information from all the sources described and studying new methods of 'listener research'.

* See list of advisory bodies, page 164.

FOREIGN RELATIONS

In reviewing any past twelve months in the programme field there are always certain events that are immediately remembered. Such, during 1936, were the death of King George V; the proclamation of King Edward VIII and his first speech to his people; the first sailing and maiden voyage of *Queen Mary*; the Olympic Games in Berlin; and the American Presidential Election. These happenings, each of historic importance in its own way, have had their effect on broadcasting, and it becomes increasingly clear that, as broadcasting plays a larger and larger part in the life of a nation, and in all aspects of its life, so does it play a correspondingly large part in the relations of one country with another, and organization with organization.

The death of King George V, coming so soon after the Jubilee year, and after his voice had been heard in a world-wide broadcast on Christmas Day 1935, evoked much sympathy abroad; and a description of the reaction of foreign broadcasters, and the response the B.B.C. was able to make to their applications both for special broadcasts to their own countries and for relaying the British programmes, may show more clearly than any exposition of theories and conjectures, without concrete illustrations, the state of foreign relations in broadcasting and its promise for the future.

Negotiations, conducted of necessity in haste, and with the handicap of unavoidable delay in acquiring official information, began at once for creating and allotting all available facilities for the numerous organizations that had expressed their wish to join in the funeral ceremonies. In some cases, B.B.C. studios were borrowed for talks to certain countries only. Many re-broadcast Mr. Baldwin's address, and very many arranged special broadcasts in their own programmes, cancelling their normal arrangements at the last minute to do so. Descriptions of the processions were given by native commentators to France, Belgium, Germany, Holland, Italy and Japan. The stations of the two main chains and many others in the United States, many in South America, and the Egyptian service relayed the Windsor ceremony and the commentaries in English from the B.B.C. Empire station; and the service and commentaries (in whole or in part) were also heard in Denmark, Norway, Sweden, Austria, Hungary, Czechoslovakia, Poland, Yugoslavia, Roumania, Finland, Latvia and Lithuania. The French commentary was heard in France, Belgium, Switzerland, Spain, Morocco and Algeria, and was radiated on the French short-wave station; the

Flemish in Belgium and Holland; the Dutch in Holland and in the territories served by the Dutch short-wave station; the German also was radiated by short-wave as well as home stations. This was almost certainly the most widespread broadcast that had up to that moment ever been known.

The next outstanding event, after the widely relayed accession broadcast of King Edward VIII on March 1, was the group of broadcasts connected with the *Queen Mary*. The circumstances surrounding the building of this ship, and her size and reputed capabilities, had aroused enormous interest; and, apart from relays of the B.B.C. commentary on her departure for her maiden voyage, programme after programme was sent out from aboard for broadcasting by 'National', 'Columbia' and 'Mutual' in the United States, the French State Service, Denmark, and the General Broadcasting Society (A.V.R.O.) of Holland, as well as, of course, by the B.B.C. in the home and Empire programmes.

Intervening in time between the *Queen Mary* broadcasts and the Olympic Games, symbols both of peaceful co-operation, came Vimy, memorial to the tragic differences of the past, an occasion so domestic to Canada, Britain and France as hardly to be regarded as a 'foreign' event.

Next, almost at the year's close, when the first preparations for the world-wide broadcasting of the Coronation were already in hand, came the Constitutional crisis.

Fortunately, a clear policy in regard to lending studios to colleagues of other countries was already in existence, and no modification of this proved to be either necessary or advisable. The extent of the American demand on B.B.C. resources in this connexion may, however, be judged by the fact that during the crisis approximately fifty talks from this country were arranged by American broadcasters. There is no doubt that their entire freedom to broadcast from London contributed to the better informing of the American public and was a valuable counterweight to much sensational statement or speculation from other sources. At last the King's Abdication statement was read in Parliament and broadcast to the world: and his farewell address followed—an address that was listened to by what was probably the largest broadcast audience on record. The information available is not complete, but it is certain that uncountable millions listened to, and that broadcasting services of all continents cleared their stations for, the fateful message.



The Arrival of the 'Queen Mary' at New York
[89]

Finally, the year closed with a plea for peace and charity by His Holiness the Pope, on Christmas Eve.

As regards relaying in general, there was an increase in the number of programmes taken from abroad by land line, by radio channel, and by direct pick-up from foreign short-wave transmitters, and a list of outstanding relays of the year will be found on page 127. A great number of interesting and varied items were relayed from America. Those of a topical nature covered events ranging from the Presidential Election to the 'Mile of the Century', the matches for the Walker Cup, and the United States Amateur Lawn Tennis Championships: and in another sphere of collaboration it may be mentioned that the Corporation sent its good wishes to the National Broadcasting Corporation of America on the occasion of the latter's tenth birthday in the form of an 'Old Time Music Hall' programme.

Among European events of unusual interest may be mentioned the B.B.C.'s part in a British Radio Day in Finland (under the auspices of the British Council), a special concert contributed to a Week of Propaganda for Broadcasting in Switzerland, and a programme about Lord Mayor's Day for Norway. A series of unassuming short relays from European countries during the summer and autumn, while not individually outstanding, disclosed interest in what may be called the exotic relay; i.e., that which, in the course of a musical programme, conveys some picture of a truly foreign scene. While it is hardly to be expected that many such will bear comparison with the remarkable Spirituals from a Negro church, it is intended to exploit this field as soon as possible in all practicable ways. The Corporation is not alone in seeking to make the best use of material from abroad, whether broadcast locally or not. The reciprocal grant of facilities, such as studios and outside broadcasting equipment and staff, has now become a normal part of international intercourse,

and it is satisfactory to record the interest taken by colleagues abroad both in B.B.C. programmes and in events of British life and products of British art that for one reason or another are not included in Home programmes at appropriate dates or times.

The arrangement of relays, of course, brings with it the legal and administrative problems to which broadcasters are accustomed, but which tend to develop and to require constant consideration, particularly because development takes place at a different speed in each different country. Here the international co-operation and opportunity for discussion afforded by the International Broadcasting Union becomes very valuable. Apart from the constant interchange of necessary information, discussion takes place with a view to concerted action and to the working out of equitable positions that can be valid in all countries even when they are in advance of actual legislation. Broadcasters have had notably to consider, for example, the position of performers in regard to one particular aspect of relaying (i.e., the technical possibility of recording the relay in the country of reception); the amendments, if any, to previously drafted representations relating to the forthcoming revision of the Berne Convention; and various problems of a non-technical nature that might be considered within the framework of the International Telegraph Regulations which fall to be reviewed at a universal governmental conference in 1938.

Britain re-entered the Bureau of the Union, after the statutory year's absence, in the summer of 1936, Vice-Admiral Sir C. D. Carpendale becoming one of the Vice-Presidents.

Lastly, it should be mentioned here that the British Government signed the Convention for the Use of Broadcasting in the Cause of Peace, as the result of a diplomatic conference convened by the League of Nations (to which non-member States were also invited). In the presence of so much evidence of the unfortunate and, in the British view at any rate, perverted uses to which broadcasting may be applied, it is to be hoped that much good will come of a Convention which—whatever signatories it may lack—at least and undoubtedly clearly sets forth the minimum desiderata for the prevention of international ill-will caused by broadcasting.

PROGRAMMES OF THE YEAR

MUSIC

- 1935
 Dec. 30- Winter Series of B.B.C. Promenade Concerts conducted by Sir Henry J. Wood in Queen's Hall.
- Jan. 10, 1936 London Philharmonic Orchestra conducted by Weingartner in Queen's Hall.
- Jan. 16 B.B.C. Concert of Contemporary Music, including the first performance of Bridge's Oration (Concerto elegiaco) for Violoncello and Orchestra conducted by the Composer.
- 17 B.B.C. Symphony Concert in Queen's Hall. First performance of Constant Lambert's 'Summer's Last Will and Testament' conducted by the Composer.
- 29 Stravinsky's 'Oedipus Rex' by the B.B.C. Symphony Orchestra conducted by Ernest Ansermet in Queen's Hall.
- Feb. 12 B.B.C. Symphony Orchestra conducted by Nicolai Malko. First performance in England of Shostakovich's Symphony No. 3.
- 23 Concert of Contemporary Music in the Concert Hall, Broadcasting House. Works of G. Francesco Malipiero conducted by Edward Clark.
- 21 Berlioz Concert by the B.B.C. Symphony Orchestra, Military Band, and Choral Society conducted by Sir Hamilton Harty in Queen's Hall.
- Mar. 4 Chamber Music by the Busch Quartet.
- 8 Personal Visit of the B.B.C. Symphony Orchestra conducted by Adrian Boult to de Montfort Hall, Leicester.
- 11 'Venus and Adonis' (Blow), a Masque for the Entertainment of the King.
- 16 B.B.C. Symphony Concert in Queen's Hall. First Concert performance in England of Shostakovich's 'Lady Macbeth of Mtsensk' conducted by Albert Coates.
- 18 Last of the Winter Season's B.B.C. Symphony Concerts in Queen's Hall. First Concert performance in England of Bartók's Cantata Profana for Chorus and Orchestra conducted by Adrian Boult.
- 25 Personal visit of the B.B.C. Symphony Orchestra conducted by Adrian Boult to St. Andrew's Hall, Glasgow.
- April 1 Good Friday Concert in Queen's Hall. Extracts from Wagner's 'Parsifal' conducted by Sir Henry J. Wood.
- 10 Concerts of the Continental Tour by the B.B.C. Symphony Orchestra conducted by Adrian Boult at Paris, Zurich, Vienna, and Budapest respectively.
- 20, 21, 23, 24 Opening Night of the Covent Garden Grand Opera Season conducted by Sir Thomas Beecham.
- 27 B.B.C. Concert of Contemporary Music. Alban Berg Memorial Concert by the B.B.C. Orchestra conducted by Anton Webern. Louis Krasner in the first performance in England of Berg's Violin Concerto.
- May 1 'Wagadu', an Oratorio by Vladimir Vogel, conducted by Albert Coates in the Concert Hall, Broadcasting House.
- 16 Kirsten Flagstad in Wagner's 'Tristan und Isolde' at Covent Garden.
- 18 'Don Giovanni' (Mozart) conducted by Fritz Busch at the Glyndebourne Festival Opera House.
- 29 'At the small Coal Man's Music Club', a Concert as given in Thomas Britten's room at Clerkenwell between 1678 and 1714.
- June 4 Programme of Swedish and British music conducted by Adolf Wiklund, Director of the Stockholm Symphony Orchestra.
- 7



Shostakovich's 'Lady Macbeth of Mtsensk'

(18 March 1936)

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- June 19 B.B.C. Concert of Contemporary Music. First performance of 'Jonah', an Oratorio by Lennox Berkeley, conducted by Clarence Raybould. Festival of English Church Music conducted by Sydney H. Nicholson, at the Crystal Palace.
- 24 & 25 B.B.C. Orchestra conducted by Adrian Boult at the Festival of Music and Drama, Canterbury Cathedral.
- 28 First broadcast in England of Eugene Ormandy, Hungarian Conductor.
- July 19 Wagner's 'Lohengrin' (Acts I & II) conducted by Wilhelm Furtwangler, at Bayreuth Festival.
- 21 Bruckner Festival Concert by the Vienna Philharmonic Orchestra conducted by Volkmar Andreae, at Linz.
- Aug. 1 Glück's 'Orpheus und Eurydice' by the Vienna Philharmonic Orchestra conducted by Bruno Walter at the Salzburg Festival.
- 8 Opening Night of the Forty-second Series of Promenade Concerts conducted by Sir Henry J. Wood at Queen's Hall.
- 11 William Walton Programme at the Promenade Concert at Queen's Hall.
- 22 Wagner's 'Die Meistersinger' conducted by Toscanini, at Salzburg.
- Sept. 10 Sibelius Programme at the Promenade Concert.
- Oct. 3 Last night of Summer Promenade Season conducted by Sir Henry J. Wood.
- 4-9 First week of new series of Special Recitals. Music by Rameau.
- 14 Personal visit of B.B.C. Symphony Orchestra conducted by Adrian Boult to Victoria Hall, Hanley.
- 18 Sunday Orchestral Concert (First of the Seventh Season), conducted by Adrian Boult, including Elgar's Second Symphony.
- 21 B.B.C. Symphony Concert (First of the Winter Season), in Queen's Hall. Vaughan Williams's Sea Symphony conducted by Adrian Boult. Soloist: José Iturbi.
- Nov. 1 Sunday Orchestral Concert. Liszt Commemoration Programme conducted by Sir Henry J. Wood. Soloist: Egon Petri.
- 2 Vienna Symphony Orchestra conducted by Oswald Kabasta, in the studio.
- 4 B.B.C. Symphony Concert conducted by Willem Mengelberg in the Queen's Hall. Soloist: Myra Hess.
- 6 'Ariadne auf Naxos' by the Dresden State Opera Company conducted by Richard Strauss, from Covent Garden.
- 10 Programme of Czech music by the B.B.C. Orchestra conducted by Georg Szell in the studio.
- 13 B.B.C. Concerts of Contemporary Music—I. First performance of Kodaly's 'Te Deum' conducted by Adrian Boult; first broadcast performance of Vaughan Williams's 'Dona Nobis Pacem' conducted by the Composer.
- 15-22 Five Special Recitals of French Choral Music, directed by Nadia Boulanger.
- 18 B.B.C. Symphony Concert conducted by Adrian Boult in the Queen's Hall. Soloist: Pau Casals.
- 27 Debussy's 'L'Enfant Prodigue' by the B.B.C. Midland Orchestra conducted by Leslie Heward.
- 30 'Pickwick' (Act I), a new Opera by Albert Coates, performed by the British Music Drama Opera Company conducted by the Composer, from Covent Garden.
- 30-Dec. 4 Five Special Recitals of Busoni's Pianoforte music by Egon Petri.
- Dec. 9 B.B.C. Symphony Concert conducted by Sir Henry J. Wood, including the first concert performance of Berg's Violin Concerto played by Louis Krasner.
- 13 B.B.C. Concerts of Contemporary Music—II. Scenes from Hindemith's Opera 'Cardillac' conducted by Clarence Raybould.
- 20 Sunday Orchestral Concert conducted by Sir Henry J. Wood, including the first performance of Prokofiev's Second Violin Concerto.



LOUIS KRASNER

(1 May and 9 December 1936)

Midland

- Jan. 7 Mozart's 'Bastien und Bastienne' and W. H. Bell's 'Hatsuyuki' by the B.B.C. Midland Orchestra conducted by Leslie Heward.
 17 Concert by the B.B.C. Midland Orchestra. Soloist: Béla Bartók.
 Mar. 7 Brass Band Festival from Leicester.
 June 18 Coventry Festival. City of Birmingham Orchestra and a Warwickshire Choir conducted by Adrian Boult.
 27 Handel Programme by the B.B.C. Midland Orchestra and Stoke-on-Trent Choral Society conducted by Leslie Heward.
 Dec. 15 Handel's 'Messiah' by the Nottingham Harmonic Society and the City of Birmingham Orchestra conducted by Leslie Heward, from Nottingham.
 23 & 27 Rutland Boughton's 'Beethoven' by the B.B.C. Midland Orchestra conducted by the Composer.

North

- Mar. 23 Liverpool Philharmonic Concert conducted by Constant Lambert.
 27 Concert by the Revue Orchestra conducted by Thomas Matthews.
 Oct. 11 'Homage to Byrd', by the Cathedral Choir and the strings of the B.B.C. Northern Orchestra. Organist: Gordon Slater, from Lincoln Cathedral.
 22 Hallé Concert conducted by Pierre Monteaux.
 25 'An Honest Yorkshireman', a ballad-farce by Henry Carey.
 Nov. 13 'Everybody Swing', first concert by Henry Reed and his Orchestra.
 22 'St. Cecilia's Day', a concert by the Middlesbrough Cecilian Glee and Madrigal Society, the Preston Cecilian Choir and the Bradford Bach Choir.

- Nov. 22 Northern Philharmonic Concert conducted by Dr. Heinz Unger, from Leeds.
 Dec. 22 Handel's 'Messiah' performed by the Huddersfield Choral Society.
 30 Concert of the Works of Max Bruch by the B.B.C. Northern Orchestra
 conducted by T. H. Morrison.

West of England

- Jan. 13 Plymouth Madrigal Society. Soloist: Frederick Harvey.
 Feb. 5 Plymouth Orpheus Society. Soloist: Bratza.
 25 Taunton Madrigal Society. Soloists: Mary Hamlin and Zara Nelson.
 Mar. 14 Sigurd Rascher and Ferdinand Ranter, from Dartington Hall, Totnes.
 July 11 The Griller Quartet, from Dartington Hall, Totnes.
 Oct. 7 Opening Orchestral Concert of the Torquay Musical Festival conducted
 by Adrian Boult. Soloist: Harriet Cohen.
 23 The Grinke Trio, from Marston Court, Somerset.
 31 Carl Rosa Opera Company in 'Cavalleria Rusticana', from the Princes
 Theatre, Bristol.
 Dec. 12 Re-opening of the Colston Hall, Bristol. The London Philharmonic
 Orchestra conducted by Sir Thomas Beecham. The Combined Choirs of
 The Bristol Choral Society, The Bristol Philharmonic Society, and The
 Bristol Royal Orpheus Glee Society. Soloist: Dennis Noble.



JOSÉ ITURBI
 (21 October 1936)

Welsh

- Feb. 29 St. David's Day Programme by the B.B.C. Welsh Orchestra and the Swansea & District Male Choir. Soloist: Idris Daniels.
14 The Montgomery County Music Festival.
16 Three Valleys Festival, 'Elijah'.
Aug. 15 A Recital of Folk Songs and Harp Music by Dora Herbert-Jones and Gwendolen Mason, from the Wern Hall, Anglesey.
Sept. 25 'Alun Mabon—A Welsh Song Cycle' (Idris Lewis), Megan Thomas, Margaret Tann-Williams, Francis Russell, Watcyn Watcyns, and the B.B.C. Welsh Orchestra.
Oct. 10 'Cantata'r Adar' (Joseph Parry) by the Nantyyffyllon Children's Choir and the B.B.C. Welsh Orchestra.
27 Swansea Festival Orchestra conducted by Joseph Lewis.
30 Excerpts from British Light Operas performed by Ina Souez, Doris Edwards, David Lloyd, Redvers Llewellyn, the B.B.C. Welsh Orchestra, and the B.B.C. Welsh Chorus.
Nov. 15 Verdi's 'Requiem' by the Cardiff Musical Society and the Cardiff Symphony Orchestra conducted by Morgan Lloyd.

Scottish

- June 7 B.B.C. Scottish Orchestra and Scottish Singers from Melrose Abbey in commemoration of the octocentenary of its foundation.
July 12 B.B.C. Scottish Orchestra and Scottish Singers from Dunkeld Cathedral.
Sept. 24 & 25 Concerts from the National Mod, Inverness.
Oct. 4 B.B.C. Scottish Orchestra and Scottish Singers from Dunblane Cathedral. 'Benvenuto Cellini' (Act I) by the Glasgow Grand Opera Society.
Dec. 11 Public performance of 'Music from the Scottish Past' under the auspices of the Inverness Choral and Orchestral Society.
Various dates Concerts by the Reid Symphony Orchestra conducted by Sir Donald F. Tovey, the Glasgow Choral and Orchestral Union, and the Glasgow Orpheus Choir, from Edinburgh, Glasgow, and Dundee.
'Scottish Music of To-day' Series, including compositions by Erik Chisholm, Francis G. Scott, W. B. Moonie, Cedric Thorpe Davie, Robin Orr, David Stephen, and Guy Warrack.
'Music from the Scottish Past' Series, recovered by Harry M. Willsher, Dr. Henry Farmer, and Father Long.

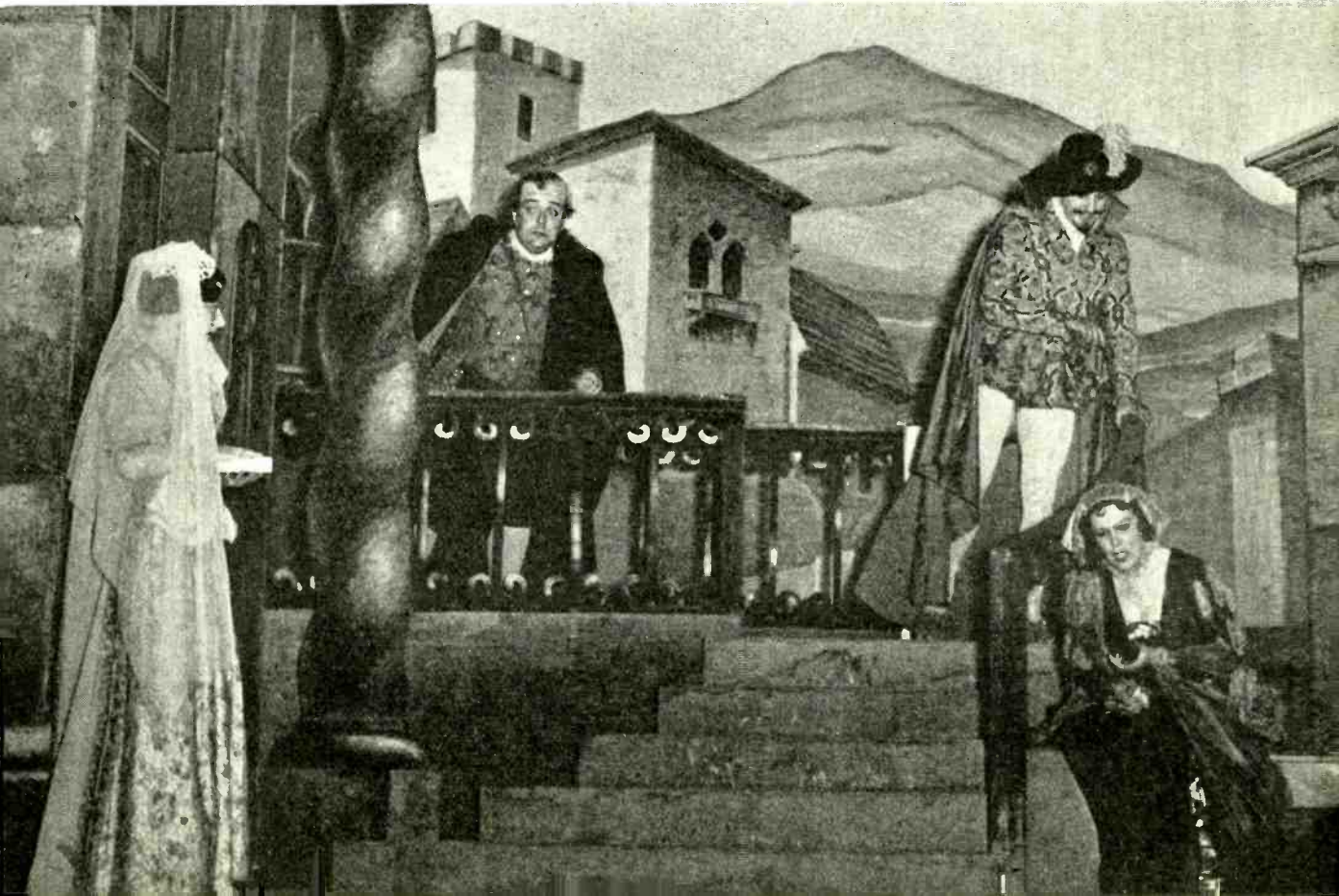
Northern Ireland

- Feb. 20 Public Concert by the B.B.C. Northern Ireland Orchestra, at Londonderry.
29 Orchestral Concert conducted by Sir Henry J. Wood, at Wellington Hall. Solomon playing Rachmaninov's Pianoforte Concerto No. 2.
Oct. 24 B.B.C. Northern Ireland Orchestra conducted by E. Godfrey Brown, at Wellington Hall. Soloist: Rubinstein.
Nov. 4 Chamber Music by the Prague String Quartet, at Queen's University.
7 B.B.C. Northern Ireland Orchestra conducted by Sir Henry J. Wood, at Ulster Hall. Soloist: Jo Vincent.
14 Elisabeth Schumann and the B.B.C. Northern Ireland Orchestra, at Wellington Hall.
Dec. 5 B.B.C. Northern Ireland Orchestra conducted by E. Godfrey Brown, at Ulster Hall. Soloists: Marie Hall and Walter Widdop.
Various Sundays Metrical Psalms by the B.B.C. Northern Ireland Chorus conducted by Frederick Stone, in the studio.

Kirsten Flagstad in Wagner's
'Tristan und Isolde', Covent
Garden
(18 May 1936)

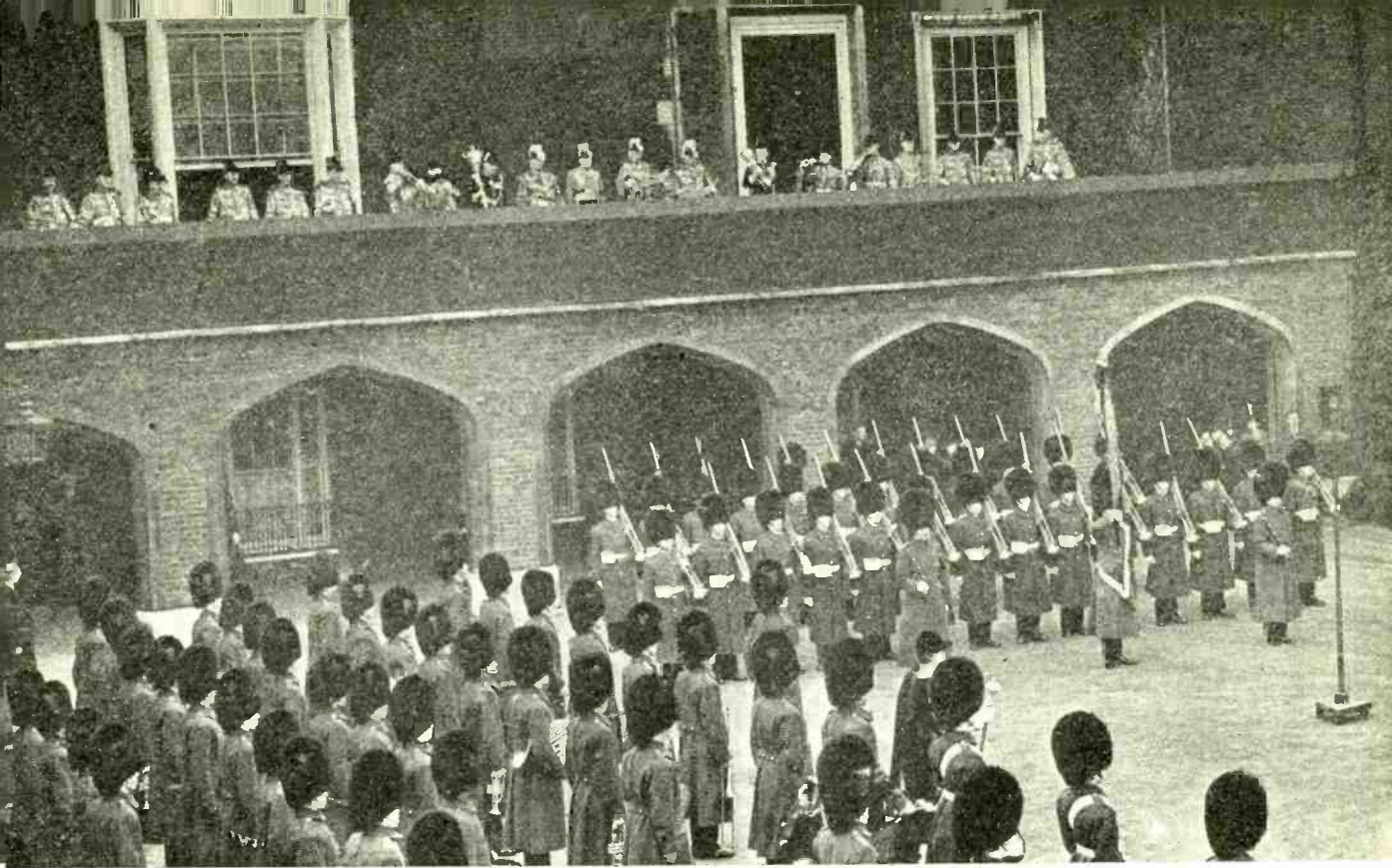


A Scene from Mozart's 'Don
Giovanni', Glyndebourne
(29 May 1936)



SPEECHES AND CEREMONIES

- Jan. 21 Message by the Prime Minister, Mr. Stanley Baldwin, on the Occasion of the Death of King George V; from No. 10 Downing Street.
- 22-27 The Proclamation of the Accession of H.M. King Edward VIII at St. James's Palace and Temple Bar; Mercat Cross, Edinburgh; City Hall, Cardiff; and Tynwald Hill, Isle of Man.
- 28 Funeral of King George V.
- Mar. 1 H.M. King Edward VIII: 'A Message to the Empire', from the studio.
- 16 Funeral of Admiral of the Fleet Earl Beatty, St. Paul's Cathedral.
- 20 Opening by the Duke of Abercorn, Governor of Northern Ireland, of the B.B.C. Northern Ireland Transmitting Station, Lisnagarvey.
- 25 Speech by Lord Monsell, First Lord of the Admiralty, at the final Plenary Session of the London Naval Conference, St. James's Palace.
- Apr. 18 Message by the Marquess of Linlithgow, new Viceroy of India, from New Delhi.
- 23 Speeches at Shakespeare Birthday Celebration Luncheon, Stratford-on-Avon.
- May 19 Funeral of Field-Marshal Viscount Allenby, Westminster Abbey.
- 27 to Maiden voyage of the *Queen Mary* from Southampton to New York.
- June 1 Proclamations of the Coronation of H.M. King Edward VIII at St. James's Palace, and Mercat Cross, Edinburgh.
- May 29 & June 3 'Trooping the Colour' on the Horse Guards' Parade in Celebration of H.M. King Edward VIII's Birthday.
- 23 The Tynwald Ceremony, Isle of Man.
- July 6 Joseph Chamberlain Centenary Celebrations at Birmingham.
- 8 Presentation of Colours by H.M. King Edward VIII to the 1st and 3rd Btns. Grenadier Guards; 1st, 2nd and 3rd Btns. Coldstream Guards; and 2nd Btn. Scots Guards, in Hyde Park.
- 23 Launch by H.R.H. the Duchess of Kent of H.M.S. *Sheffield* at Newcastle.
- 26 Unveiling of the Canadian War Memorial by H.M. King Edward VIII at Vimy Ridge, in the presence of the President of the French Republic.
- 31 Speeches by President Roosevelt, Lord Tweedsmuir, Governor-General of Canada, and Mr. W. L. Mackenzie-King, Prime Minister of Canada, on the former's official visit to the Dominion of Canada.
- Aug. 1 Opening Ceremony of the Olympic Games at the Olympic Stadium, Berlin.
- 6 Chairing of the Bard at the Royal National Eisteddfod of Wales, Fishguard.
- Sept. 15 Speeches by the Earl of Clarendon, General J. B. M. Hertzog, and Mr. G. M. Huggins at the Opening of the Empire Exhibition at Johannesburg, South Africa, followed by messages of greeting from the Prime Ministers of Great Britain, Canada, and New Zealand.
- Oct. 3 Speech by Lady Baden-Powell at the Girl Guide Rally at the Albert Hall.
- 29 Speeches by the Earl of Elgin, the Earl of Mar and Kellie, and Mr. C. E. Horsbrugh at the Opening of the New Forth Bridge, Kincardine.
- Nov. 9 Speech by the Prime Minister, Mr. Stanley Baldwin, at the Lord Mayor's Banquet, at the Guildhall.
- 11 Armistice Day Service at the Cenotaph.
- 11 Festival of Remembrance at the Royal Albert Hall.
- Dec. 1 Conferment of the Freedom of the City of Edinburgh on H.R.H. the Duchess of York.
- 11 Abdication Message by H.R.H. Prince Edward, from Windsor Castle.
- 12-19 Proclamations of the Coronation of H.M. King George VI at St. James's Palace; Mercat Cross, Edinburgh; Houses of Parliament, Belfast; and Tynwald Hill, Isle of Man.



Proclamation of the Coronation of H.M. King Edward VIII at St. James's Palace
(29 May 1936)

Conferment of the Freedom of the City of Edinburgh on H.R.H. the Duchess of York
(1 December 1936)



COMMENTARIES ON SPORT

Rugby Union Football

England *v.* New Zealand, Twickenham, Jan. 4; England *v.* Wales, Swansea, Jan. 18;
England *v.* Ireland, Dublin, Feb. 8; England *v.* Scotland, Twickenham, Mar. 21.
Scotland *v.* Wales, Edinburgh, Feb. 1; Scotland *v.* Ireland, Edinburgh, Feb. 22.
Wales *v.* Ireland, Cardiff, Mar. 14th.
Royal Navy *v.* The Army, Twickenham, Mar. 7.
Oxford *v.* Cambridge, Twickenham, Dec. 8.

Rugby League Football

Cup Final, Warrington *v.* Leeds, Wembley Stadium, April 18.

Association Football

England *v.* Wales, Wolverhampton, Feb. 5; England *v.* Scotland, Wembley Stadium,
April 4; England *v.* Ireland, Stoke-on-Trent, Nov. 18.
England *v.* Hungary, Highbury, Dec. 2.
Cup Final, Arsenal *v.* Sheffield United, Wembley Stadium, April 25.

Olympic Games

Garmisch-Partenkirchen, Feb. 15.
Berlin, Aug. 3 to 14.

Boxing

Len Harvey *v.* Jack Petersen, Empire Pool, Wembley, Jan. 29.
Jack Petersen *v.* Jock McAvoy, Empress Stadium, Earl's Court, April 23.
John Henry Lewis *v.* Len Harvey, Empire Pool, Wembley, Nov. 9.
Ben Foord *v.* Walter Neusel, Harringay Stadium, Nov. 18.

Cricket

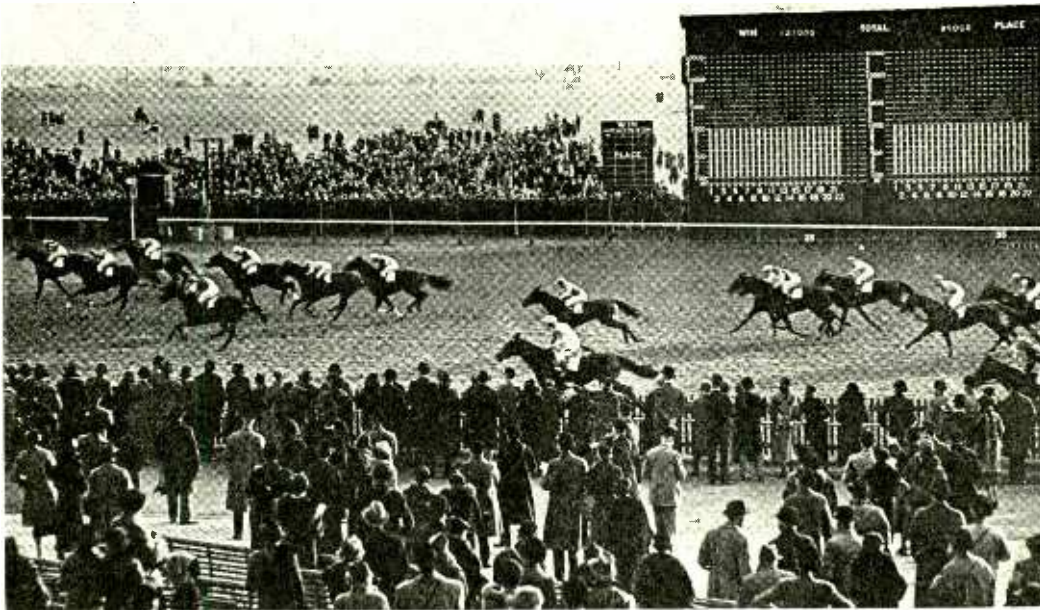
Test Matches: England *v.* All India, Lord's, June 27, 29, 30; Manchester, Old Trafford,
July 25, 27, 28; Oval, Aug. 15, 17, 18, 19.
M.C.C. *v.* All India, Lord's, May 16, 18, 19.
Lancashire *v.* Yorkshire, Leeds, June 1; Middlesex *v.* Sussex, Lord's, June 1.
North *v.* South, Lord's, June 13.
Surrey *v.* All India, Oval, June 22.
Gentlemen *v.* Players, Lord's, July 15, 16, 17.
Village Cricket, Tilford *v.* The Bourne, Tilford, July 25.
Isle of Oxney *v.* W. Ashdown (of Kent) and A. F. Wensley (of Sussex), Wittersham, Sept. 5.

Lawn Tennis

The Wightman Cup, Wimbledon, June 12, 13.
All-England Tennis Championships, Wimbledon, June 22 to July 4.
The Davis Cup Challenge Round, Wimbledon, July 25, 27, 28.

Athletics

A.A.A. Championships, White City Stadium, July 11.
British Empire *v.* U.S.A., White City Stadium, Aug. 15.



FIRST BROADCAST OF THE CAMBRIDGESHIRE, AT NEWMARKET
(28 October 1936)

Racing and Riding

- National Hunt Steeplechase, Cheltenham, Mar. 11.
- Grand National, Aintree, Mar. 27.
- The Derby, Epsom, May 27.
- Edward Prince of Wales Cup (International Horse Show), Olympia, June 4.
- The Northumberland Plate, Newcastle, June 24.
- The Eclipse Stakes, Sandown Park, July 17.
- The Ulster Derby, Lisburn, July 18.
- St. Leger, Doncaster, Sept. 9.
- The Cambridgeshire, Newmarket, Oct. 28.
- Manchester November Handicap, Manchester, Nov. 28.

Motors, Motor-Cycle Racing, Cycling

- British Empire Trophy Race for Motor-cars, Donington Park, April 4.
- Red Marley Hill Climb for Motor-cycles, April 13.
- The Star* Gold Trophy Race, Brooklands, June 1.
- Senior T.T. Race, Isle of Man, June 19.
- Cycling Championships, Herne Hill, June 27.
- Locke King Trophy Race, Brooklands, Aug. 3.
- Fifteenth International Ulster Grand Prix Motor-cycle Race, Clady Circuit, Aug. 22.
- R.A.C. T.T. Motor Race, Ards Circuit, Belfast, Sept. 5.
- World's Speedway Championships, Wembley Stadium, Sept. 10.
- International Open Hill Climb, Shelsley Walsh, Sept. 12.
- Six-Day Cycle Race, Empire Pool, Wembley, Sept. 21 & 26.



BOBSLEIGH RACE, OLYMPIC GAMES, GARMISCH-PARTENKIRCHEN
 (15 February 1936)

Various Sports

- Ice Hockey: British Olympic Team *v.* U.S.A. Olympic Team, Wembley, Mar. 9.
 Hockey: England *v.* Germany, Warwickshire County Cricket Ground, Mar. 28.
 Oxford *v.* Cambridge Boat Race, April 4.
 Final of the British Snooker Championship, Thurston's Hall, April 30.
 Sabre Championship of Great Britain, Salle Bertrand, May 9.
 Clay Pigeon Shooting (The Skeet Championships), Greenford, May 9.
 Baseball: White City *v.* West Ham, White City Stadium, May 23.
 Darts: Team Championship of London Finals, 'The Horns', Kennington, May 28.
 Polo: Westchester Cup, Hurlingham, June 10 & 20.
 Open Golf Championship, Hoylake, June 26 & 27.
 Single-handed Annual Bowling Match, Thurso Bowling Club, June 22.
 Henley Royal Regatta, July 4.
 King's Cup Air Race, Hatfield Aerodrome, July 11.
 Shooting: King's Prize, Bisley, July 18.
 Water Polo: Scotland *v.* England, Portobello, July 25.
 National Championship (Temple Bowling Club), Denmark Hill, Aug. 15.
 Llandrindod Wells Bowls Tournament, Sept. 5.
 Ladies' International Fencing Championship, Salle Bertrand, Nov. 6.
 London Gliding Club, Dunstable Downs, Nov. 14.
 Table Tennis: England *v.* Hungary, Memorial Hall, Farringdon Street, Nov. 19.

TALKS

National Lectures

April 8 *Law and the Citizen* (Lord Macmillan)
Oct. 11 *Modern Poetry* (W. B. Yeats)

Talks given in the National and London Programmes

SOCIAL, POLITICAL AND ECONOMIC PROBLEMS

(a) *British*

- Jan. to April *If Plato Lived Again* (*weekly*) (R. H. S. Crossman, Charles Morris)
 Ways and Means, Part II, A Survey of the Public Social Services (*weekly*) (A. D. K. Owen, Ivor Thomas, Paul Wilson, R. C. Davison, and others)
- April to Nov. *Down to the Sea in Ships* (*weekly and one feature programme*)
 (1) *Sea Communications* (Major R. H. Thornton, Sir Richard Holt, Maurice Denny, Basil Sanderson, Capt. James Griffiths, Lord Essendon, Leslie Runciman, Capt. J. F. Webster, Sir Alan Anderson)
 (2) *Sea Harvests* (Wynn Thomas, W. Keir, T. S. Leach, H. G. Maurice, Dr. W. C. Hodgson, R. H. Mares, F. M. Davis, Capt. D. K. Wolfe-Murray, A. Cargill)
 (3) *Sea Power* (Admiral Sir Herbert Richmond, Admiral Sir Richard Webb, Sir Arthur Salter, Paymaster-Rear-Admiral Sir Eldon Manisty, Admiral Sir George Chetwode, Sir Samuel Hoare)
- April to May *Three Nations* (*weekly*) (Arthur Bryant, Prof. Dewar Gibb, Saunders Lewis, Joseph Duncan, Clement Davies, Lord Howard de Walden, Prof. Ernest Barker)
- April to June *The British Commonwealth and Colonial Empire* (*weekly*) (Prof. R. Coupland, H. V. Hodson)
- Oct. to Dec. *Living Together* (*weekly*) (Dr. H. A. Mess)
 The Village (*weekly*) (Prof. H. H. Swinnerton, J. L. Hammond, J. A. Gulland)
 This Freedom of Ours (*weekly*) (Frank Birch)

(b) *Foreign*

- Oct. to Dec. *Vexed Questions Abroad* (*fortnightly*) Spain, Germany, Belgium, Italy, etc.
Nov. to Dec. *International Co-operation* (*weekly*) (Sir Alfred Zimmern, Sir Henry Bunbury, Dr. Ludwik Rajchman, Major R. H. Thornton)

RELIGION

- Jan. and Feb. *The Hope of Immortality* (Dean of St. Paul's)
Feb. 17 *Report of the Archbishops' Commission on Relations between Church and State* (Viscount Cecil)
- Feb. and Mar. *Christian Morals* (Father M. C. D'Arcy)
- April and May *Spiritual Healing* (Rev. John Maillard, Father J. P. Arendzen, a practising medical psychologist).
 Church and State (Canon A. C. Deane, Bishop of Durham, Sir Thomas Inskip)
 The Problem of Evil (Rev. J. S. Whale)
- May and June *Religion and Social Realities* (Maurice Reckitt)
June 21 *The World Congress of Faiths* (Sir Francis Younghusband)



W. B. Yeats (National Lecture, 'Modern Poetry')
(11 October 1936)

- Oct. 4 *William Tyndale* (Archdeacon of Westminster)
 11 *John Clifford* (David Lloyd George)
 Oct. and Nov. *Religion: Fact or Fancy?* (Canon L. W. Grensted)
 What is the Church for? (Howard Marshall)
 Nov. and Dec. *The Spiritual Life* (Evelyn Underhill)
 Christianity and its Critics (Rev. D. O. Soper)
Various dates *Review of New Books on Religion* (R. Ellis Roberts)

SCIENCE AND ENGINEERING

- Jan. to April *Many Inventions* (weekly) (Dr. H. Stafford Hatfield)
 Feb. to March *Conquest of the Air* (weekly, and two feature programmes) (Major R. H. Thornton, J. Laurence Pritchard, Ivor McClure, Frederick Montague, Group-Capt. W. H. Primrose, Air-Commodore J. A. Chamier, Henri Bouché)
 April to June *Behind the Scenes in Nature* (weekly) (Prof. J. Ritchie)
 Oct. to Dec. *Scientists at Work* (weekly) (Prof. D. M. S. Watson, Prof. J. W. Munro, Dr. Kenneth Smith, C. H. Waddington, Dr. Rose Scott-Moncrieff, Dr. A. F. Rawdon-Smith, Dr. Maurice Black, Prof. David Brunt, Prof. P. M. S. Blackett, Dr. L. S. B. Leakey, Sir Joseph Barcroft, Prof. A. V. Hill)

LITERATURE, MUSIC, THE THEATRE, AND THE CINEMA

- Jan. to June *Keyboard Talks* (weekly) (Harold Samuel, John Coates, Scott Goddard, Leslie Heward, Prof. Victor Hely-Hutchinson)
 Oct. to Dec. *Music and the Ordinary Listener* (weekly) (Sir Walford Davies, Ernest Newman)
 Jan. to March *Galsworthy's Plays* (weekly) (Eric Gillett)
 Feb. to June *Drama of To-day* (monthly) (Dennis Stoll, Alistair Cooke, Sir Cedric Hardwicke, Geoffrey Whitworth, Val Gielgud)
 Jan. to Dec. *Cinema* (fortnightly) (Alistair Cooke)
 Book Talks (fortnightly) (Miss Helen Simpson, Sir Ian Hamilton, Bernard Darwin, Lord Ernest Hamilton, J. M. Keynes, Maurice Healy, and others)

AGRICULTURE, THE COUNTRYSIDE, AND GARDENING

- Jan. to Dec. *For Farmers Only* (weekly) (Prof. J. A. Scott Watson and Anthony Hurd)
 Jan. to Dec. *In Your Garden* (weekly) (C. H. Middleton)

ADVENTURE

- Oct. to Dec. *I Was There* (Various speakers)
 May to July *Down River* (Geoffrey Bournemouth)

DEBATES AND DISCUSSIONS

- May 14 *The Means Test* (Prof. John Hilton, and two anonymous speakers)
 July 14 *The Coroner's Court* (Anonymous speakers)
 Aug. 13 *Breach of Promise* (Anonymous speakers)
 Sept. 17 *Equal Pay for Equal Work* (Miss D. Evans and Miss G. Burlton)
 Sept. 26 *That Women and Children Should Not Be Saved First* (Miss E. Arnot Robertson and Sir Arnold Wilson)
 Dec. 5 *Limited or Unlimited Obligations* (Wickham Steed, Sir Edward Grigg, Sir Norman Angell, Harold Nicolson)

COMPOSITE AND FEATURE PROGRAMMES

Jan. to April	<i>Young Ideas (weekly)</i>
Oct. to Dec.	<i>The World Goes By (weekly)</i>
Jan. 2 & Oct. 11	<i>Pickwick</i>
Feb. 11	<i>Conquest of the Air</i>
March 18	<i>Dr. Johnson</i>
April 7	<i>Experts Calling</i> (in 'Conquest of the Air' series)
Sept. 25	<i>North of 70°</i> (in 'Sea Harvests' series)
Oct. 24	<i>Housman Memorial Programme</i>

FOREIGN LANGUAGES

Jan. to July	<i>French (Second Year Course) (weekly)</i> (E. M. Stéphan)
	<i>Spanish (First Year Course) (weekly)</i> (Señorita María de Laguna)
Sept. to Dec.	<i>Talks in French (weekly)</i> (edited by E. M. Stéphan)

MISCELLANEOUS

April 19	<i>Speed</i> (Max Beerbohm)
July 26	<i>A Small Boy Seeing Giants</i> (Max Beerbohm)
Jan. to Dec.	<i>Is That the Law?</i> (intermittently)

MORNING TALKS

Primarily intended for housewives and covering health, cookery, and household matters generally, beside including series on living arrangements under different conditions in various part of the world. When Parliament was sitting, a talk on 'The Week in Westminster' was given regularly.

AFTERNOON TALKS

Sept. to Dec.	<i>This Way Out (fortnightly)</i> (Prof. John Hilton)
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Midland

	<i>Midland Parliament</i>
Feb. 12	<i>Women in Industry</i> (Sir Charles Mander, W. M. W. Thomas, G. H. Jones, Miss Margaret Bondfield, and Miss Doris Downes)
Oct. 6	<i>Paid Holidays</i> (Sir Charles Mander, W. M. W. Thomas, G. H. Jones, Andrew MacLaren and Austin Hopkinson)
Feb. 21	<i>Land Settlement and Unemployment</i> (Lord Phillimore and C. S. Orwin)
Mar. 6	<i>Men and the Land</i> (S. L. Bensusan, C. S. Orwin, R. E. Stapledon, A. P. McDougall, and R. H. Dorman-Smith)
Oct. to Dec.	<i>The Midland Shopkeeper</i> (Colin Clark, Ronald Cartland and others)
	<i>Midland Football Clubs</i> (E. A. Eden and others)
<i>Various dates</i>	<i>Clubroom Conversations</i> (interviews with Sydney Barnes, F. R. Foster, R. E. S. Wyatt, Harry Hibbs, Billy Bassett, Larry Gains, Jack Hood, and Mercedes Gleitze)

North

July 8	<i>Anglers Arms (No. 1)</i> , a Discussion on 'Coarse Fishing' near Sheffield
10	<i>British Rock Climbs</i> (described by two German visitors, Dr. W. R. Rickmers and Dr. Walter Hartmann)
Sept. 9-17	<i>The British Association Meeting at Blackpool</i> (six reports by experts)
Oct. 26	<i>Northern Cockpit</i> , a Discussion on 'The Servant Problem'
Nov. to Dec.	<i>Work in Progress</i> (series on scientific subjects)



MAX BEERBOHM
(19 April and 26 July 1936)

West of England

- Jan. to Dec. *For Western Farmers in Particular* (A. W. Ling and others)
 Feb. to July *Village Opinion* (F. G. Thomas and others)
 Mar. to June *Out of Doors* (Henry Williamson)
 Oct. to Dec. *In Search of Music* (Ronald Biggs)
 Oct. to Dec. *Running the County* (F. G. Thomas)

Welsh

- Feb. 10 *Galsworthy's Plays* (R. G. Berry)
 April 9 *The Drift of Employment* (Lady Rhys Williams, Arthur Jenkins, W. M. W. Thomas)
 May 20 *Discovering Wales—Pembrokeshire* (W. F. Grimes)
 Oct. 17 *Conflict or Conciliation in the Coalfield* (Discussion between Arthur Horner, Iestyn Williams and others)
 Dec. 18 *Are We Overgoverned?* (Discussion between Sir W. R. Williams, S. Parris, Mrs. Idris Jones)

Scottish

- Regularly* 'The Week in Scotland'; Scottish News Bulletin; Talks on Sport, Horticulture, etc., 'For Young Scots'
 Jan. to Mar. *Our Children's Scotland* (Sir Godfrey Collins, Sir Alexander McEwan, Thomas Henderson, Sir John Orr, George Blake, and others)



'CONQUEST OF THE AIR'

(*'Science and Engineering' Series, February to March*)

- May to June *A Scot Abroad* (Eric Linklater)
 Oct. 27 *The Father of Ossian, James Macpherson* (a bicentenary documentary programme, by James Fergusson)
 Oct. to Dec. *The Everlasting Heritage* (Sir John Orr, Sir Robert Greig, Sir John Sutherland, Miss Elizabeth Haldane, Joseph Duncan, and others)
Letters from a Scottish Village (Miss Elizabeth and Ian Macpherson)
Scotland's Living Past (Dr. George S. Pryde, Thomas Johnston, J. Henderson Stewart, W. D. Ritchie, and others)
 Various dates *Talks for Scottish Unemployed*
In Journeyings Oft (by missionaries)

Northern Ireland

- Feb. to April *Six Men Went Forth* (on Ulstermen famous in history)
 Mar. 24 *Is Belfast Ulster?* (Discussion between Denis Johnston and Wilson Guy)
 April 27 *That Material Progress has been detrimental to Cultural Development* (Debate between Belfast and Dublin University students under chairmanship of the Hon. Mr. Justice Meredith. The first programme broadcast in co-operation with the Irish Free State Broadcasting Service)
 Oct. to Dec. *Town Planning in Northern Ireland* (E. Maxwell Fry, introduced by Sir Richard Dawson Bates)
Home Again (Distinguished Ulstermen described changes in their birth-places since their childhood)
 Nov. 20 *That Farmers' Wives should be Farmers' Daughters* (Discussion between four young farmers under the chairmanship of Peter Fitzpatrick before an audience of members of Young Farmers' Clubs)

News Talks

HOME AFFAIRS

Jan.	2	} L. Hore-Belisha, <i>Road Accidents</i>
April	8	
May	28	
July	29	
Aug.	11	
Jan.	30 &	Malcolm Stewart, <i>Special Areas</i>
Nov.	10	
Feb.	6	Ivor Thomas, <i>Coal Industry Reorganization</i>
	14 & 17	Capt. E. Wallace and E. D. Croft, <i>British Industries Fair</i>
	24	R. C. Davison, <i>Welsh Land Settlement Scheme</i>
	27 &	Sir W. Beveridge, <i>Insurance Statutory Committee Report and Gardeners and Unemployment Insurance</i>
May	11	<i>The 'Queen Mary'</i>
Mar.	24	H. L. Morrow and E. Halliday
April	16	A. E. W. Mason
May		J. Snagge and Sir Edgar Britten, <i>Queen Mary maiden voyage</i>
April	20	E. Brown, <i>Agricultural Unemployment Insurance</i>
	23	C. V. Godfrey, <i>Road Safety among Schoolchildren</i>
	25	Boyd Cable, <i>The 'Herzogin Cecilie'</i>
May	6	Coxswain Sliney, <i>The Ballycotton Lifeboat's Trip to Daunt's Rock Lightship</i>
June	5	E. Brown, <i>National Savings Movement</i>
July	9	R. C. Davison, <i>Unemployment Assistance Regulations</i>
Sept.	16	Major G. C. Tryon, <i>P.O. Savings Bank Anniversary</i>
Oct.	8	Capt. Stuart, <i>The 'Stirling Castle'</i>
	31	Sir Spencer Portal, <i>World Thrift Day</i>

EMPIRE

Jan.	6	Sir J. Hope-Simpson, <i>Newfoundland</i>
Feb.	19	Lord Riverdale, <i>Johannesburg Empire Exhibition</i>
May	18 &	H. V. Hodson, <i>The Dominions and the League Crisis</i>
Sept.	21	

FOREIGN AFFAIRS

		Talks by B.B.C. observers intermittently
Jan. to Sept.		Geneva
March		Locarno Meetings
July		Dardanelles Conference
Nov.		Vienna Three-power Conference
Jan. to July (at regular intervals)		Percy Phillip, <i>French Politics</i>
Feb.	26	} O. M. Green, <i>The Tokyo Mutiny and the Situation in South China</i>
June	5	
Sept.	25	
April	13	Sir Frederick Whyte, <i>Japan and the Far East</i>
	27	Sir A. Willert, <i>America and Europe</i>
May	4	F. A. Voigt, <i>The Western Powers and Germany</i>
	11	Capt. Wedgwood Benn, <i>Czechoslovakia</i>
	25	Lord Snell, <i>Palestine</i>
June	1	F. A. Voigt, <i>The Mediterranean</i>
	15	Raymond Gram Swing, <i>The U.S. Republican Convention</i>



C. H. MIDDLETON

- June 22 Capt. Wedgwood Benn, *The Dardanelles*
 29 Frazier Hunt, *The U.S. Democratic Convention*
 July 8 F. A. Voigt, *Danzig*
 13 F. A. Voigt, *The Austro-German Agreement*
 Aug. 7 & 8 Felix Greene, *Fighting in Spain*
 Nov. 4 Raymond Gram Swing, *The U.S. Presidential Election*

ART

- Feb. 21 *R.I.B.A. Exhibition of Everyday Things*
 May 1 E. Halliday, *Royal Academy Private View*

AERONAUTICS

- Feb. 10 Lt. T. Rose, *Cape to England Record Flight*
 May 23 *Empire Air Day*
 June 27 Squadron-Leader H. J. Saker, *R.A.F. Hendon Display*

SCIENCE AND MEDICINE

- Mar. 4 Sir William Bragg, *Exhibition of Very Low Temperatures*
 11 Sir John Boyd Orr, *Nutrition Report*
 June 22 Brig.-Gen. Sir H. Hartley, *Chemical Engineering Congress*
 July 23 Lord Astor, *League of Nations Mixed Commission on Nutrition Interim Report*
 30 Sir Kingsley Wood, *Midwives Bill*

MOUNTAINEERING

- June 15 Dr. Raymond Green, *Fifth Mount Everest Expedition*

SPORT

- Cricket*: H. de Selincourt (Test Matches, etc.)
Lawn Tennis: N. Dabbs (Wimbledon and the Davis Cup)
Rowing: C. Venables (Henley), Uffa Fox (Coves)
Olympic Games: H. M. Abrahams, E. A. Montague, W. J. Howcroft, C. Venables
Football, Rugby: Dennis Morris.
Football, Association: Roy Horrobin, N. J. N. Dixon, Norman Ackland
Boxing: Lionel Seccombe and Barrington Dalby

OBITUARY

- Jan. 18 Rudyard Kipling by Lord Rennell of Rodd
 21 King George V by Mr. Stanley Baldwin.
 23 Dame Clara Butt
 Mar. 11 Earl Beatty by Admiral Sir Roger Keyes
 April 30 King Fuad by H. E. Hakki Bey
 May 14 Lord Allenby by General Sir John Shea
 June 14 G. K. Chesterton by E. C. Bentley
 Aug. 15 Sir Henry Lytton by A. E. Godwin
 Oct. 28 Sir Edgar Britten by Captain Hugh Thomas



The Scottish National War Memorial, Edinburgh
(Eve of Armistice Day Service, 10 November 1936)

RELIGIOUS SERVICES

- Jan. 1 Civic Service from Wood Street Congregational Church, Cardiff: Address by the Rev. M. E. Aubrey.
- 19 Bi-Centenary of the Birth of James Watt. Service from Greenock Town Hall: Address by the Very Rev. C. L. Warr.
Sunday Evening Service (Roman Catholic), from the Pro-Cathedral, Clifton: Address by the Right Rev. Mgr. Canon P. Long.
- 26 Service to the Memory of King George V, from the Concert Hall, Broadcasting House: Address by the Archbishop of Canterbury.
- 28 Funeral Service of King George V from St. George's Chapel, Windsor.
- Feb. 16 Sunday Morning Service (Church of Scotland), from Glasgow Cathedral: Address by the Rev. A. Nevile Davidson.
World Alliance for International Friendship through the Churches. Service from Oxford Place Methodist Church, Leeds: Address by Dr. Nicholas Zernov.
- Mar. 1 Sunday Evening Service (St. David's Day) in Welsh from Bangor Cathedral: Address by Canon T. J. Rowlands.
- 16 Funeral Service of Admiral of the Fleet Earl Beatty from St. Paul's Cathedral.
- 22 Sunday Evening Service (Church of England) from Portsea Parish Church: Address by Canon H. C. Robins.
Sunday Evening Service (Church of Ireland) from St. Anne's Cathedral, Belfast: Address by the Very Rev. W. S. Kerr.
- 29 Morning Studio Service (Methodist) conducted by the Rev. J. Scott Lidgett.
Sunday Evening Service (Roman Catholic) from St. Barnabas' Cathedral, Nottingham: Address by the Bishop of Nottingham.
- April 5 Sunday Evening Service (Church of England) from Ripon Cathedral: Address by the Bishop of Ripon.
- 10 Good Friday Service from St. Sepulchre's, Holborn: Address by the Archbishop of Canterbury.
- 12 Easter Sunday Morning Service from Liverpool Cathedral: Address by the Dean of Liverpool.
- 26 Sunday Morning Service (Methodist) from Brunswick Church, Leeds: Address by the Rev. L. D. Weatherhead.
- May 3 Military Service from York Minster: Address by the Bishop of St. Albans.
- 17 Evening Studio Service (Congregational) conducted by the Rev. N. Micklem.
- 19 Funeral Service of Field Marshal Viscount Allenby from Westminster Abbey.
- 31 Whit-Sunday Morning Service from Lincoln Cathedral: Address by the Dean of Lincoln.
Whit-Sunday Evening Service (Church of England) from Winchester Cathedral: Address by the Dean of Winchester.
Whit-Sunday Evening Service (Church of Scotland) from St. Mary's, Haddington: Address by the Very Rev. Marshall B. Lang.
- June 7 Gaelic Service from Iona Abbey (first broadcast from the Island of Iona): Address by the Rev. D. MacCuish.
- 20 Aviation Service from Canterbury Cathedral. Presentation of Ensigns by Lord Swinton: Address by the Archbishop of Canterbury.
- 21 Sunday Evening Service from All Saints, Margaret Street: Address by the Rev. Dom Bernard Clements.
- July 1 University of London Centenary Service from St. Paul's Cathedral: Address by the Archbishop of Canterbury.
- 5 Sunday Evening Service (Church of England) from Truro Cathedral: Address by the Bishop of Truro.

- July 8 First Weekly Wednesday Evensong from St. Paul's Cathedral.
- 25 Miners' Service from Durham Cathedral: Address by the Bishop of Jarrow.
- 26 Evening Service (Congregational) from Whitefields Tabernacle: Address by the Rev. A. D. Belden.
- Aug. 16 Sunday Evening Service (Church of Scotland) from Iona Abbey: Address by the Rev. G. F. MacLeod.
- Sept. 6 Sunday Evening Service (Methodist) from Wesley's Chapel: Address by the Rev. C. E. Walters.
- 27 Sunday Evening Service (Baptist) from Folkestone Baptist Church: Address by the Rev. J. C. Carlile.
- Oct. 4 Harvest Thanksgiving Service from St. Mary's, Beverley: Address by the Rev. T. H. Tardrew.
- 18 Sunday Morning Service (Church of England) from St. John's College Chapel, Cambridge: Address by the Rev. Edward E. Raven.
Daniel Owen Centenary Service from Bethesda Chapel, Mold.
- Nov. 1 Evening Service (Church of England) from Bradford Cathedral: Address by the Bishop of Bradford.
- 5 First Mid-Week Service from the Concert Hall, Broadcasting House.
- 10 Eve of Armistice Day Commemoration Service from the Scottish National War Memorial, Edinburgh.
- 22 Morning Studio Service (Baptist) conducted by the Rev. F. Townley Lord.
Evening Studio Service (Methodist) conducted by the Rev. L. F. Church.
- 29 Sunday Evening Service (Church of England) from the Concert Hall, Broadcasting House, conducted by the Archbishop of Canterbury.
Sunday Evening Service (Roman Catholic) from St. Aloysius, Oxford: Address by the Rev. Father R. A. Knox.
- Dec. 13 Accession of H.M. King George VI: Sunday Evening Service from the Concert Hall, Broadcasting House. Address by the Archbishop of Canterbury.
- 17 Mid-week Service conducted by the Rev. W. H. Elliott, from a Royal Albert Hall meeting held to mark five years of mid-week broadcasting from St. Michael's, Chester Square.
- 25 Christmas Morning Service from St. George's Chapel, Windsor: Address by the Dean of Windsor.
Christmas Evening Service from the Concert Hall, Broadcasting House: Address by the Rev. Leslie D. Weatherhead.



FIFTH ANNIVERSARY OF MID-WEEK SERVICES FROM
ST. MICHAEL'S, CHESTER SQUARE
(17 December 1936)

BROADCAST DRAMA

(1) National and London Regional Programmes

Plays written for Broadcasting

Jan.	10	'Jenny Meade' (Philip Wade).
Aug.	12	'Wings over Westralia' (Gordon Ireland and Lance Sieveking).
	27	'Salubria' (Norman Edwards).
Sept.	2	'The Bounty Mutineers' (Owen Rutter and Cyril Nash).
Oct.	21	'Nelson's Last Journey' (Thomas Woodrooffe).
	25	'The Queen of Baltimore' (Norman Edwards).
	27	'Off Finisterre' (Horton Giddy).
Dec.	7	'Mr. Faithful' (Lord Dunsany).
	21	'Men from the Other Side' (Hector Stewart and Hugh McLoughlin.)

Adaptations of Stage Plays and Films

Mar.	9	'The Voysey Inheritance' (H. Granville Barker, ad. Marianne Helweg).
	20	'The Green Goddess' (William Archer, ad. Howard Rose).
	27	'The Ringer' (Edgar Wallace, ad. Val Gielgud).
April	6	'Youth at the Helm' (Paul Vulpius, trans. Hubert Griffith, ad. Mary H. Allen).
May	25	'Liebelei' (Arthur Schnitzler, trans. P. Morton Shand, ad. Marianne Helweg.)
June	8	'Socrates' (Clifford Bax).
	24	'Cavalcade' (Noel Coward, ad. Felix Felton).
	29	'The Silver Cord' (Sidney Howard, ad. Barbara Burnham).
July	17	'The Ghost Train' (Arnold Ridley, ad. Howard Rose).
Aug.	4	'The Breadwinner' (Somerset Maugham).
Sept.	9	'Episode' (Walter Reisch's film, ad. Marianne Helweg and Felix Felton).
	30	'The Sailors of Cattaro' (Friedrich Wolf, trans. Keene Wallis and Michael Blankfort, ad. Barbara Burnham).
Oct.	19	'The Lady with a Lamp' (Reginald Berkeley, ad. Lance Sieveking)
Nov.	3	'Laburnum Grove' (J. B. Priestley, ad. Lance Sieveking).
Dec.	4	'Autumn Violins' (Ilya Sourgutcheff, ad. Mary H. Allen)

Adaptations of Novels, Short Stories, etc.

Jan.	1	'The Snow Queen' (Hans Andersen, ad. Francis Dillon).
June	6	'The Stolen General' (Francis Beeding).
July	6	'Vice Versa' (F. Anstey, ad. E. M. Delafield).
Aug.	18	'Love and Freindship' (Jane Austen, ad. Mary H. Allen).
Sept.	13	'Four Meectings' (Henry James, ad. Mary.H. Allen).
Nov.	17	'The End of her Honeymoon' (Mrs. Belloc Lowndes, ad. Lance Sieveking)
Dec.	27	'The Shadow' (Hans Andersen, ad. Francis Dillon).

Sunday and Religious Plays, Shakespeare and Other Classics

Jan.	5	'Murder in the Cathedral' (T. S. Eliot).
	12	'Twelfth Night' (Shakespeare).
Feb.	9	'Coriolanus' (Shakespeare).
Mar.	8	'King Henry VIII' (Shakespeare).
April	12	'King Richard II' (Shakespeare).
May	10	'The Tragedy of Edward II' (Marlowe).
June	14	'The Tempest' (Shakespeare).

- July 19 'Wentworth Place' (Keats Programme), (E. V. Davenport and Dorothy Margaret Stuart).
 12 'Much Ado about Nothing' (Shakespeare)—Stratford-on-Avon Players.
 Oct. 18 'Hippolytus' (Euripides, trans. Gilbert Murray).
 31 'Eve of All Saints' (R. Ellis Roberts).
 Nov. 15 'L'Aiglon' (Rostand, ad. Clemence Dane).
 22 'The Importance of Being Earnest' (Wilde, ad. Val Gielgud).
 Dec. 22 'The Stranger at St. Hilary' (Bernard Walke)—from St. Hilary.
 24 'A Child is Born' (R. Ellis Roberts).
 25 'The Christmas Journey' (Mary H. Allen).

Feature Programmes

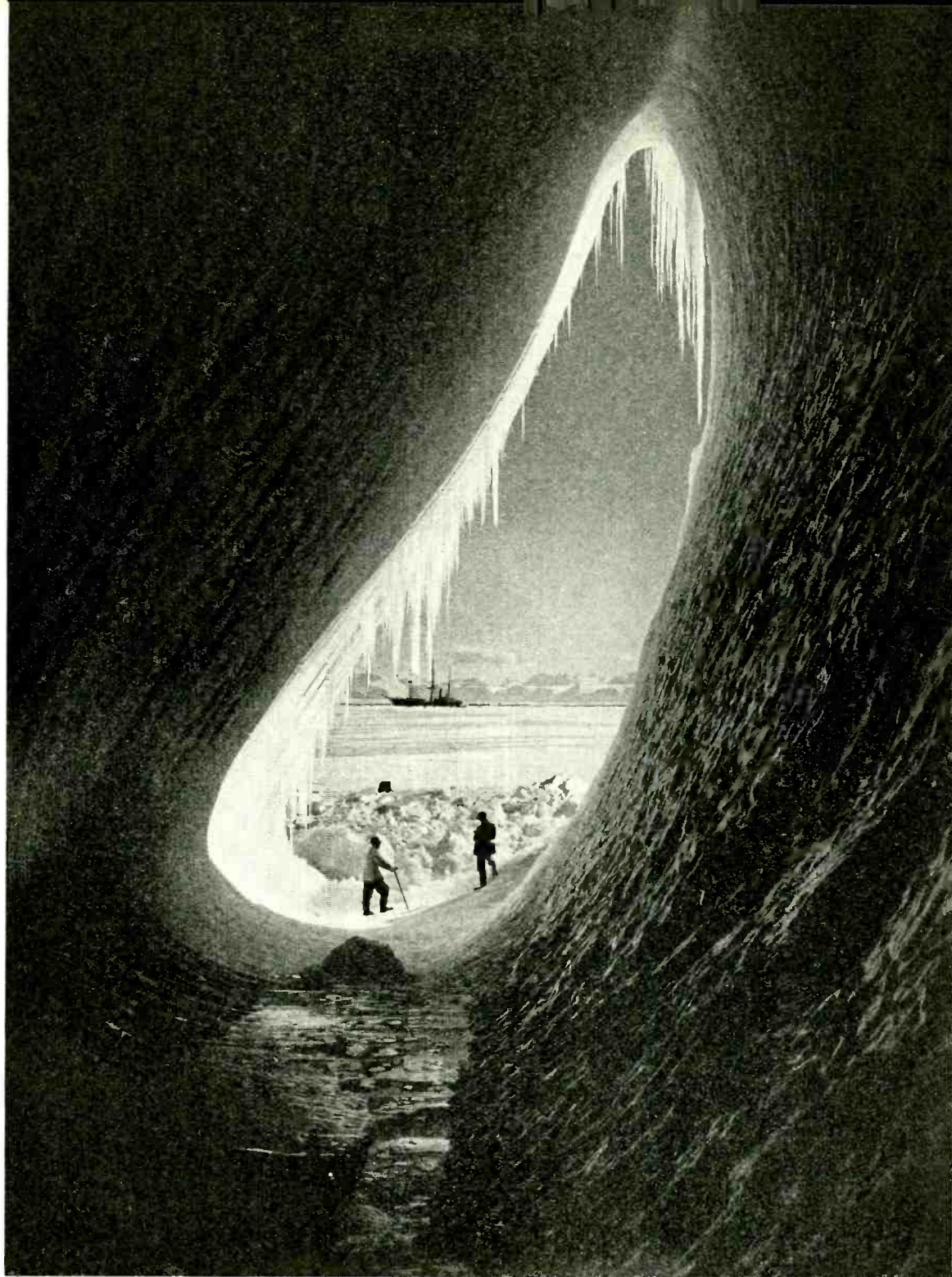
- Jan. 12 'Twelve Months Back' (Laurence Gilliam).
 23 'Scott in the Antarctic' (Peter Creswell and Val Gielgud).
 27 'King George V—In Memory' (R. Ellis Roberts and Robin Whitworth).
 April 15 'London Calling—1600' (Herbert Farjeon and Mary H. Allen).
 26 'Gallipoli' (Val Gielgud).
 May 1 'May Day' (D. G. Bridson).
 8 'Underground', a sound picture of London's Underground Railways (Felix Felton).
 24 'By Rudyard Kipling' the first broadcast of his works, selected by R. Ellis Roberts and Val Gielgud.
 27 'The *Queen Mary* Sails' (Laurence Gilliam).
 June 2 'Kitchener', in memory of Lord Kitchener twenty years after his death (Harold Temperley and Laurence Gilliam).
 21 'The Marseillaise', the 100th Anniversary of the death of Rouget de Lisle (Val Gielgud, from the 'Marie Antoinette' of Hilaire Belloc).
 July 5 'Erasmus' (Felix Felton).
 31 'Naval Operation B.B.C.' (Navy Week Programme), (Laurence Gilliam).
 Aug. 15 'Thucydides' Sicilian Expedition' (Felix Felton).
 Sept. 8 'Louisa Wants a Bicycle' (Women's Rights Programme), (Mary H. Allen).
 Nov. 1 'Coronel and the Falklands' ('Taffrail').
 20 'Post Haste' (G.P.O. Programme), (George Wright and H. L. Morrow).
 29 'Scotland Yard' (Laurence Gilliam).
 Dec. 20 'Tschiffely's Ride from Buenos Aires to New York' (Laurence Gilliam).
 25 'Regional Music' (Felix Felton).
 31 'New Year's Eve Programme' (Felix Felton).

Midland

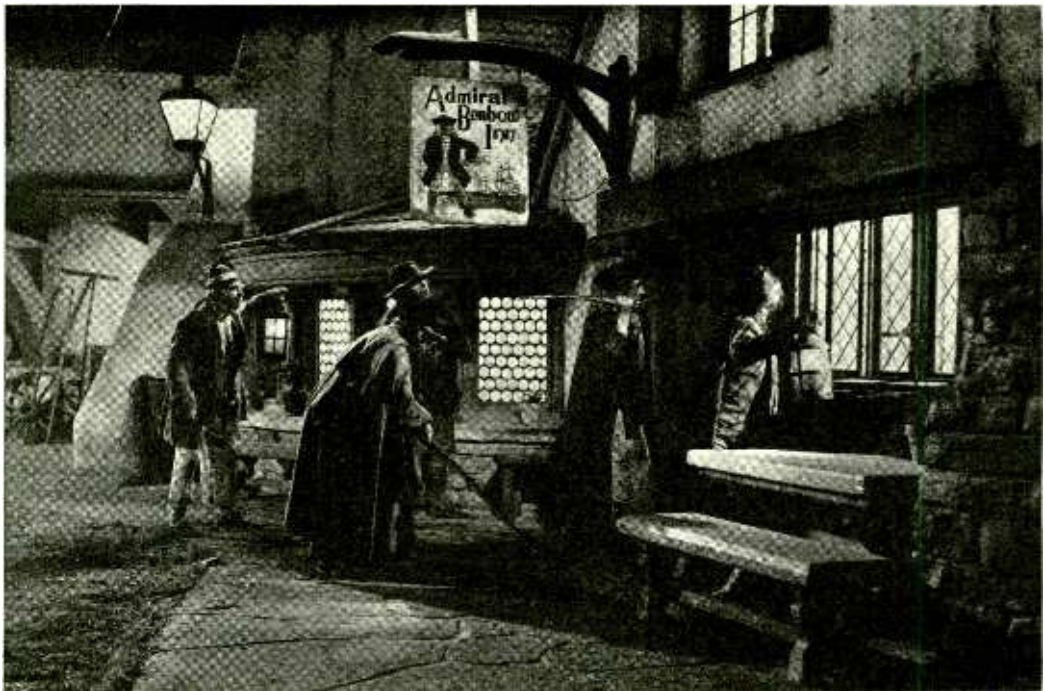
- Jan. 2 'The Pacifist' (Olive Popplewell).
 Mar. 4 'The Furnace' (Francis Brett Young and William Armstrong).
 Dec. 28 'The Nailers' (H. W. Small): Players from the Black Country.
Various dates Plays by Repertory Companies of Birmingham, Coventry, Northampton, Malvern, and Oxford.

FEATURE PROGRAMMES

- Feb. 7 'The Microphone at Large', a programme from Market Drayton.
 Sept. 5 'Hereford' on the eve of the Three Choirs Festival.
 Oct. 10 'Legends of the Peak', a programme from Bakewell (in collaboration with the North Region).
 Nov. 25 The Mass Production of Motor-cars at a Midland motor works.



A Grotto in a Berg in the Antarctic
(*Scott Expedition programme, 23 January 1936*)



A SCENE FROM 'TREASURE ISLAND'
(West of England Region, 6 May 1936)

North

Feb.	11	'The Younger Generation' (Stanley Houghton).
Feb.	28 &	'The March of the '45' (D. G. Bridson) (in collaboration with Scottish
Nov.	10, 12	Region).
Mar.	26	'Tenement' (Edwin Lewis).
May	15	'Gallows Glorious' (Ronald Gow).
June	29	'Two Brass Men' (Francis Dillon).
Sept.	27	'Cornelius' (J. B. Priestley) (Liverpool Repertory Company)
Oct.	19	'Portrait of a Lady' (James R. Gregson).

FEATURE PROGRAMMES

June	11	'Dove Days', featuring Charles Cotton of Beresford Hall.
Aug.	22	'Alston to Barnard Castle', a Harry Hopeful's Day in the Durham Dalcs.
Nov.	27	'Kirn Harvest Supper.'
Dec.	2	'A Ship is Built', from Barrow-in-Furness.

West of England

Jan.	13	'Barnet's Folly' (Jan Stewer).
April	4	'Under the Greenwood Tree' (Thomas Hardy, ad. Louise Drury).
May	6	'Treasure Island' (R. L. Stevenson, ad. E. M. Delafield).
Oct.	1	'Towers and Sheep-bells' (Norah Richardson).
Dec.	16	'Melloney Holtspur' (John Masefield).

FEATURE PROGRAMMES

- May 18 'May Games', a Welcome to Summer in the West.
 July 27 'Gaffer and Gavotte' Series, a fourth Anniversary programme.
 Oct. 7 'In Memory of William Barnes', on the fiftieth Anniversary of his death.
 17 'Sherborne Pack Monday Fair.'
 Nov. 6 'Countryman Afield', celebrating the Birthday of Richard Jefferies.

Welsh

- Feb. 26 'Hywel Tywysog Gwent' (adapted from 'Howell of Gwent' by J. O. Francis)
 29 'Branwen', read by the author, Llywelyn Wyn-Griffith, and Esther Phillips,
 with music selected by the former.
 May 8 'Y Llaw Gudd' (adapted by John Ellis Williams from E. Morgan Humphrey's novel)
 July 10 'Lafan Sands', a fantasy by Marjorie Wyn Williams of an Old Welsh legend, with music by Mansel Thomas.
 Sept. 6 'Ffordd Appia' ('The Appian Way'), a religious play by R. G. Berry.
 Nov. 6 'Flood', a drama of the pit, by W. Evan Williams.

FEATURE PROGRAMMES

- Feb. 22 'Cenffig—y Ddinas Goll' (Cenffig—The Lost City' (Picton Davies)
 May 27 Cardiff Castle (A. C. F. Beales)
 Oct. 13 Daniel Owen Centenary
 Nov. 13 'Westward of Castle Hill' (R. Howell Evans)

Scottish

- Feb. 10 'The Queen at Lochleven' (Horton Giddy).
 28 & 'The March of the '45' (D. G. Bridson) (in collaboration with North
 Nov. 10 Region).
 Sept. 9 'Marmion' (Sir Walter Scott, ad. Christine Orr).
 15 'The Black Eye' (James Bridie).
 Oct. 12 'Old Music' (Neil M. Gunn).
 30 'The Trial of Jessie M'Lachlan' (M. Melville Balfour).

FEATURE PROGRAMMES

- June 5 'Iona' (George Rowntree Harvey).
 13 'The Monks of Melrose', an Octocentenary Celebration of the foundation of the Abbey.
 Nov. 30 'St. Andrew's Day'
 April 9 } 'Castle' programmes, from St. Andrews, Dumbarton, and Dirleton
 July 28 } respectively.
 Sept. 23 }

Northern Ireland

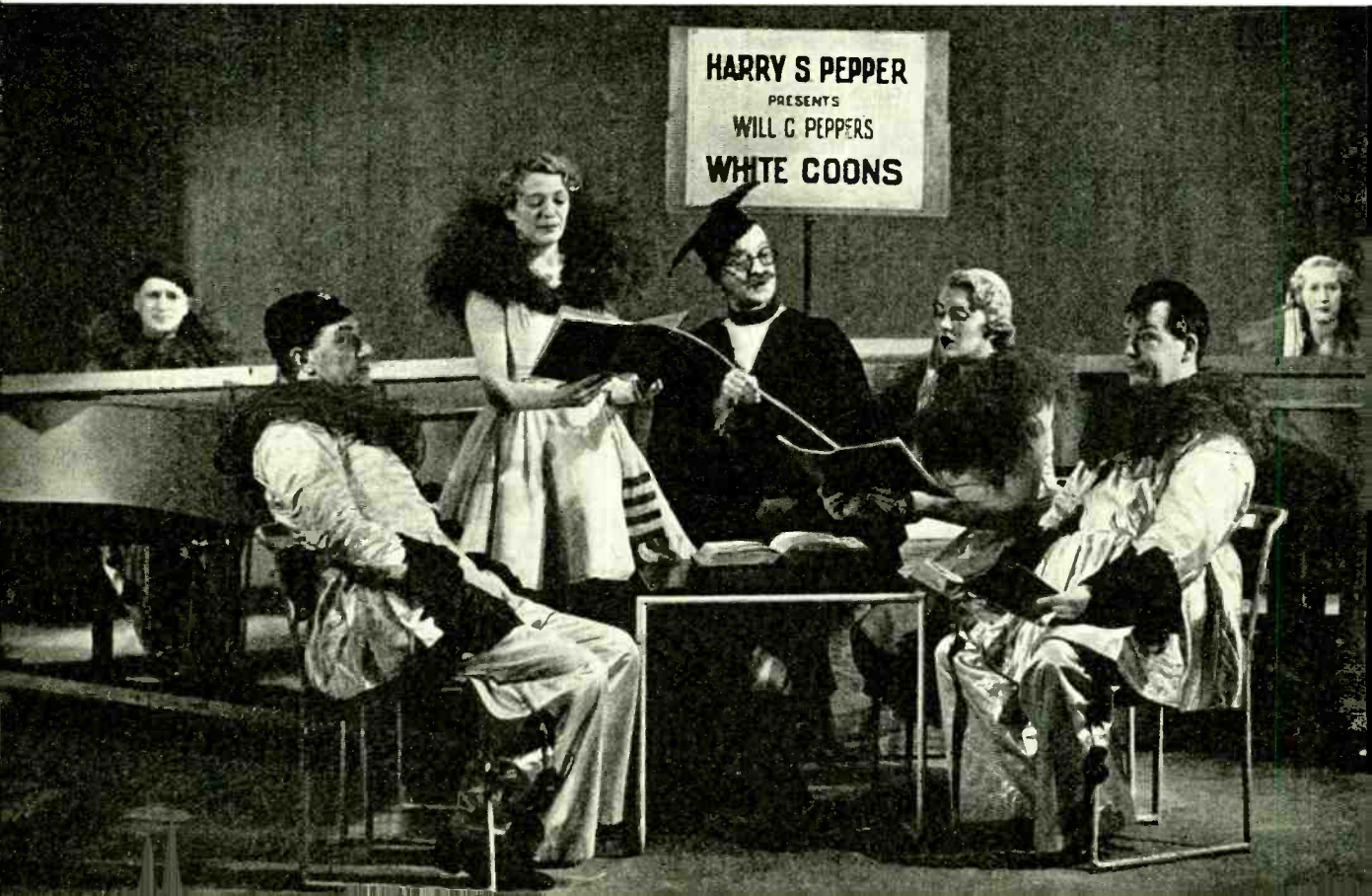
- Jan. 2 & 'His Last Day in Business' (George Shiels).
 Mar. 28
 May 31 'The Little Man' (John Galsworthy, ad. Edward Wilkinson).
 June 23 'A Midsummer Night's Dream' (in Tyrone dialect) (Shakespeare).
 Oct. 3 'Little Flower of the Wood' (Leonard Merrick, ad. Michael Talbot).
 Nov. 16 'Apollo in Mourne' (Richard Rowley).

FEATURE PROGRAMMES

- Mar. 21 '2 BE Calling', a retrospect of programmes from the old 2 BE transmitter on the occasion of the opening of the new transmitter at Lisnagarvey.
 May 5 'Country School', a programme written by children under fourteen.
 July 24 'In the Sperrins', depicting life in the Sperrin Mountains.



W. H. Berry
'The White Coons' Concert Party



VARIETY

- Jan. 30 The Air-do-Wells.
 Feb. 2 'Liebestraum', a Musical Pot-pourri by Julius Buerger.
 7 Jessie Matthews and Sonnie Hale with Louis Levy and his Symphony in
 'Music from the Movies'.
 20 'The Doctor's Day', a Ballad Comedy by Walter Pickford.
 23 Mouth-organ Recital by Larry Adler.
 27 'The Student Prince', including Jan Van der Gucht, Bernard Ansell and
 Miriam Ferris.
 Mar. 2 Edith Day in 'Rio Rita', produced by John Watt.
 5 'Fol-de-Rols' Concert Party.
 11 Dorothy Dickson in 'Twinkle, Twinkle, Little Star'.
 12 Maria Elsnar in 'The Gipsy Princess' by Kálmán, adapted and produced by
 Gordon McConnel.
 13 George Robey in 'Here's George'.
 17 Adèle Dixon in 'Lots of Love', by Holt Marvell and Jack Strachey.
 30 Songs by Gracie Fields.
 Apr. 1 Leonard Henry in 'April Foolishness'.
 13 Binnie Hale in 'No, No, Nanette' produced by John Watt.
 16 'Eight Bells', a Naval Concert Party by Mungo Dewar.
 May 7 Sandy Powell's Road Show Company in 'All at Sea', by Paul Thomson and
 Sandy Powell.
 27 Hermione Baddeley and Adèle Dixon in 'This Month of May', produced by
 Archie Campbell.
 28 'Scrapbook for 1924', compiled by Leslie Baily and Charles Brewer.
 June 1 White Coons Concert Party.
 2 Claude Hulbert and Bobbie Comber in 'Big Business'.
 16 Diana Morrison in 'I Scream too Much' by Spike Hughes, produced by Max
 Kester.
 25 June, Hermione Baddeley, and Adèle Dixon in 'Let's Call it June'.
 July 8 Stanelli's Anniversary Bachelor Party.
 9 Harry Welchman and Tessa Dean in 'The Silver Patrol'.
 20 Betty Huntley-Wright and Claude Dampier in 'Mr. Barley's Abroad' by
 Henrik Ege, Cristopher Hassall and Geoffrey Henman.
 31 'You ought to see us', a Televisionary Revue by Ronald Frankau.
 Aug. 7 'La Vie Parisienne', by A. P. Herbert, A. Davies-Adams and Ernest Benn,
 adapted and produced by Gordon McConnel.
 24 Gertrude Lawrence in 'Never Talk to Strangers' produced by John Watt.
 25 'Evergreens of Jazz', No. 1, with George Scott-Wood and his Six Swingers,
 devised by Leonard J. Feather.
 29 Vera Lennox in 'The Full Story' by John Watt, Henrik Ege, and Harry
 Pepper.
 31 Clapham and Dwyer, Nosmo King and Hubert, Harry Hemsley, the Four
 Aces, Fred Bamberger and others, at Radiolympia.
 Sept. 8 Carroll Levis and His Discoveries.
 14 Ronald Simpson and Fred Duprez in 'Cracked Ice', a Farce by John Dighton,
 produced by Max Kester.
 24 'Patricia Brent, Spinster', adapted by Valentine Dunn from the novel by
 Herbert Jenkins.
 25 Shaw Desmond in 'Scrapbook for 1901'.
 Oct. 5 Entertainment Parade.
 12 Geraldo in 'The Music Shop'.
 14 Van Phillips and his two Orchestras.

- Oct. 16 Billy Merson in Lauri Wylie's 'Wireless Puppets'.
 22 Robert Hale, Binnie Hale, and Sonnie Hale in 'Star-Gazing'.
 26 'Strange to Relate.'
 29 Marie Burke in 'The Three-Cornered Hat'.
 Nov. 12 Countess of Oxford and Asquith in 'Scrapbook for 1908'.
 25 'Flying High', a Variety Programme of Ex-Air Force artists.
 26 Bebe Daniels in 'The Vagabond King' produced by John Watt.
 Dec. 8 American Stage and Screen Tribute to King George V Memorial Fund;
 British Concert to European Broadcasting Stations.
 9 W. H. Berry in 'Lovely Women and Ugly Men'.
 18 José Collins in 'Star-Gazing', by Leslie Baily and Charles Brewer.
 22 Revue with Jean Sablon and Greta Keller.
 25 Christmas Party.
 31 'Gipsy Love', adapted and produced by Gordon McConnel.

Midland

- Feb. 6 'Malice Aforethought' by Peter Lansdale Ruthven and John Morley.
 Mar. 11 'Beaten at the Post', a Burlesque by the Melliush Brothers.
 Oct. 3 'The Boy' (founded on Pineró's play, 'The Magistrate').
 Nov. 4 'Kick Off', a Musical Comedy by C. H. Averill, Allan Fitton, and Jack Hill.
 5 A Working Men's Club's Variety Concert from Derby. (One of a series of six
 broadcasts from Working Men's Clubs in the Midlands.)
 Dec. 15 Pantomime Rehearsals from three Birmingham theatres.
 31 'Only a Shop Girl', a Burlesque by the Melliush Brothers.
Various *Monthly Series*: 'January Cocktail', 'At the Langleys', 'Variety in Miniature',
dates 'The Roving Reporter', broadcasts from Variety Theatres in the Midlands.

North

- Jan. 9 'Club Sandwich', a Revue by James O. Turner.
 Feb. 13 'Sketchbook', a Revue arranged by Jan Bussel.
 Mar. 12 'Cotton People' by Lancashire Cotton workers.
 19 'Northern Nobs', a Revue by Nigel Playfair.
 Apr. 1 George Formby, Hylda Baker, Skeets Martin, Bobbie Farrell, Ivor Keys,
 Hal Swain and his Band, in the studio.
 23 'Leeds on the Aire', a Yorkshire Revue.
 May 28 'Two on a Tram', a Revue by Sidney Andrews and John Bridgman.
 Aug. 13 'Top o' th' Tower', from Blackpool.
 Nov. 13 'Never too Young', a Programme by artists under sixteen.

Note.—A large proportion of the variety in the Northern programmes is broadcast from outside sources. The list of theatres thus drawn upon is as follows:

Argyle Theatre, Birkenhead.	Palace Theatre and Central Pier, Blackpool
Grand Theatre, Bolton.	Her Majesty's Theatre, Carlisle.
Royalty Theatre, Chester.	Grand Theatre, Doncaster.
Palace Theatre, Halifax.	Theatre Royal, Leeds.
Pavilion Theatre, Liverpool.	Theatre Royal, Lincoln.
New Manchester Hippodrome.	Winter Gardens Theatre, Morecambe.
Palace Theatre, Manchester.	Winter Gardens Ballroom, Morecambe.
Leslie's Pavilion, Manchester.	Little Theatre, Saltburn.
Empire Theatre, Newcastle-on-Tyne.	Lyceum Theatre, Sheffield.
Theatre Royal, Newcastle-on-Tyne.	Garrick Theatre, Southport.
Hippodrome, Wigan.	Empire Theatre, York.

Various seaside resorts and spas have been represented in the programmes either by concert party or orchestral broadcasts. Broadcasts have also been given from the Isle of Man.



BETTY HUNTLEY-WRIGHT
(20 July 1936)

West of England

- Jan. 8 Part of the Pantomime 'Robinson Crusoe' at the Palace Theatre, Plymouth.
29 'Tale Twisting.'
Mar. 3 'In the Shade', the Looe Fishermen's Choir.
Apr. 25 'Western Cabaret' from The St. Austell Bay Hotel, St. Austell, Cornwall.
May 22 'Here Comes Summer.'
29 'Miss Wiffin wins', by David Kean.
June 25 The 'Roosters' Concert Party from the Victoria Pavilion, Ilfracombe.
Aug. 12 'The Bunch of Roses', a Musical Play. Book and lyrics by Diana Morgan, music by Michael Sayer.
& 14
Sept. 2 Variety from Bristol's Radio Exhibition at the Coliseum, Bristol.
Nov. 14 Part of '1066 and All That' from the Princes Theatre, Bristol.
Dec. 23 'Pantomime Pre-View.' Behind the Scenes at some West Country Theatres.

Welsh

- Jan. 2 'The Sleeping Beauty', a Pantomime in the studio, with John Rorke, Sidney Evans, Elsie Eaves, Haydn Adams, and others.
Feb. 6 'Eccentric Half-Hour.'
Apr. 28 Afrique and Jean Kennedy, from the New Theatre, Cardiff.
May 5 The Carson Sisters and Louis Almaer, from the Prince of Wales Theatre, Cardiff.
July 4 Norman Griffin, Maudie Edwards, Mai Jones and Orchestra.
July 18 'Porthcawl Night.'
Sept. 22 & Waldini's Variety Hour.
Dec. 4
Oct. 21 Claude Gardner, Harold E. Mees, The 'Tricity Four and Orchestra.
Nov. 26 'Adar Tregaron.'

Scottish

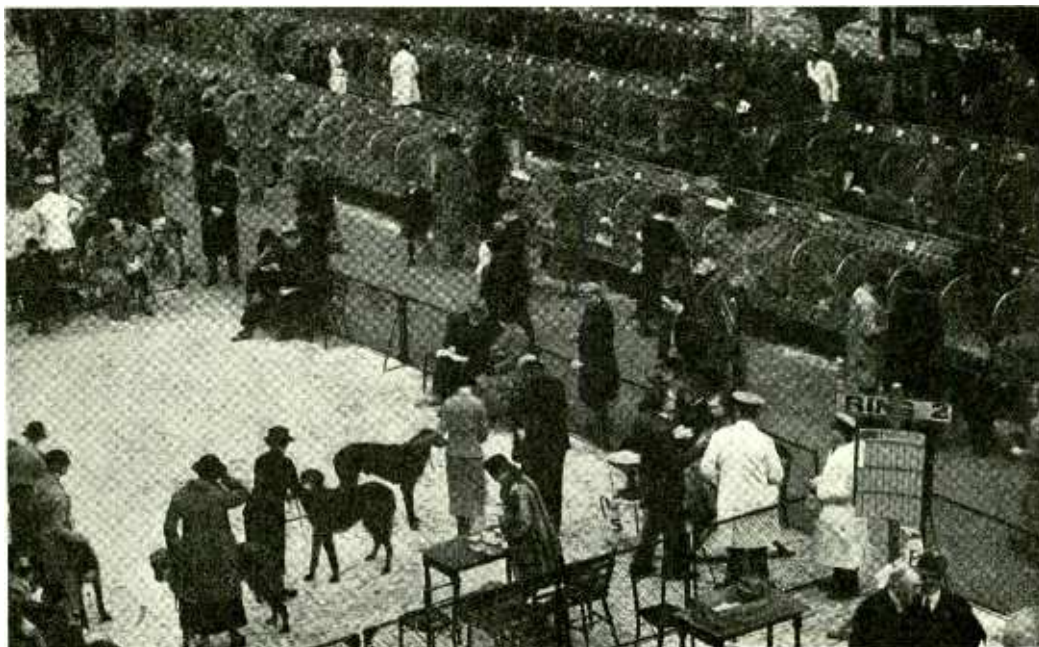
- Jan. 18 'Heidin' Sooth' by Douglas Rait.
Apr. 24 'The Adventures of Bella Houston' by William Jeffrey.
30 'The Trial of Harry Gordon' by John Gough and Harry Gordon.
May 8 'Argument in Arcady' by John R. Allan.

- May 21 'The Boddamer's Monkey' by Moultrie R. Kelsall.
 27 'May Bee.'
 June 27 'Highland Holiday' by John Weir.
 Oct. 17 'Brichter Brocheid.'
 31 'Outposts of Empah' by Jack House and Allan MacKinnon.
 Dec. 10 'Facets of Syncopation.'
 21 'Holly Follies.'
 24 'Dick McWhittington' by John R. Allan.
Various dates *Monthly Series*: 'Bees in the Bonnet' by the Gomeril.

There were in addition a number of variety relays from theatres in Edinburgh, Glasgow and Aberdeen, and from popular seaside resorts, perhaps the most notable of which were those from the Beach Pavilion, Aberdeen.

Northern Ireland

- Jan. 29 & 'The Ballymagraw Gazette'. Music by Dudley Hare, book and lyrics by
 Oct. 19 Ruddick Millar, sketches by Harry S. Gibson.
 Feb. 20 'Jamie, Rabbie—and Pantomimes' by T. B. MacCandless.
 Mar. 23 'Winnie's Hour', devised by Harry Hemsley.
 May 14 'Looking at Life' Book and lyrics by Ruddick Millar, sketches by Harry S.
 Gibson, music by Stendal Todd.
 22 'Rabscallion', an Old-time Smoking Concert.
 July 29 'Mr. Whelk in the Rough', a Sketch based on Mr. Punch's series, 'Letters
 to the Secretary of a Golf Club', by George C. Nash.
 Nov. 27 'Linenhall Blues', a sophisticated and satirical revue.



GRUFT'S DOG SHOW
 (12 February 1936)

CHILDREN'S HOUR

- Various dates* Serial Plays: 'Castles of England' (L. du Garde Peach); 'Prowlers of the Deep' (Franklyn Kelsey); 'Tales of Weston's Hope' (Sybil Clarke).
Jan. 25 Scott in the Antarctic.
Feb. 12 Cruft's Dog Show.
May 2 The Zoo.
July 23 'London Calling 1600.'
Aug. 31 & Broadcasts from Radiolympia.
Sept. 1
Nov. 11 Mosaic of Verse and Music for Armistice Day.
17 Crystal Palace Poultry Show.
Dec. 25 'A Christmas Carol' (Charles Dickens, ad. Philip Wade).

Midland

- Various dates* 'How and Why' series.
Nov. 5 'Conspiracy in the Midlands', a Play by Fred Buckley.

North

- Various dates* 'Your Own Ideas', Programmes written by young people.
'Treasure Island' (R. L. Stevenson, ad. Olive Dehn).
June 8 Talk by Amy Mollison, after her record flight to the Cape.

West of England

- Jan. 14 'The Babes in the Wood' (broadcast from the Princes Theatre, Bristol).
May 14 & 'King Solomon's Mines' (H. Rider Haggard, ad. M. Douglas).
various dates
Nov. 3 & 10 'Captain Blood' (Rafael Sabatini, ad. Froom Tyler).

Welsh

- Various dates* 'The Lost City', 'Forgotten Island', and 'The Mandarin's Coat' (Three Serial Plays by J. D. Strange).
Two Serial Plays in Welsh: 'Y Seren Ddu' (John H. Griffiths), 'Twm Siôn Cati' (Rhys Davies Williams).
Feb. 29 'The Life of Saint David.'
Sept. 3 'Ffwrdd â ni i'r Wlad' (Idwal Jones).

Scottish

- Feb. 8 'At the Back of the North Wind' (George Macdonald, ad. Christine Orr).
Sept. 17 'Canada, the Land of Adventure' (by people who have lived there).
Nov. 24 At Scout Headquarters in Glasgow.

Northern Ireland

- May 28 Broadcast from the Royal Ulster Agricultural Society's Annual Show at Balmoral, Belfast.
Oct. & Nov. 'The Story of Finn MacCoul' (a series of plays by Denis Carey).
Various dates 'Peter Comes in from the Farm' (monthly talks by Peter Fitzpatrick on farming).



LUSS HIGHLAND GATHERING, LUSS, LOCH LOMOND
(22 July 1936)

MISCELLANEOUS

- Feb. 25 Made in Scotland: 'Paper', from a Paper Mills.
 Mar. 4 'City Centre', a Tour of Belfast.
 10 'Haunted House', by Harry Price and F. H. Grisewood, at Meopham, Kent.
 25 Microphone Tour of 'The City and Port of Hull'.
 30 'Night Shift', from a lambing pen on a farm at Fovant, Wilts.
 April 19 'Lavenham', the early history of a Suffolk Village.
 May 28 Annual Show of the Royal Ulster Agricultural Society, at Balmoral, Belfast.
 June 11 Aldershot Tattoo, Rushmoor Arena.
 24 'Last Orders', the closing of the *Turk's Head*, High Street, Wapping.
 27 Royal Air Force Display, Hendon.
 July 3 A Visit to the Royal Show, Ashton Park, Bristol.
 15 Practice Launch of the Walmer Lifeboat.
 17 The 'Cleikum' Ceremony from the Memorial Hall, Innerleithen.
 20 Racing Pigeons: A Training 'Toss' (from Alexandra Palace) and the arrival
 of the birds at Major W. H. Osman's loft in Doughty Street, London.
 22 Luss Highland Gathering, Luss, Loch Lomond.
 Aug. 5 'Night Shift', from Beachy Head Lighthouse.
 7 'The Wheels Go Round', Herring Fishing in Ardglass.
 7 International Boy Scouts' Jamboree at Raby Castle, Durham.
 19 'Going Round and Round', a Visit to Radstock Fair.
 Sept. 5 'Brown Sails', a scene at a fishing port, at Dunure, Ayrshire.
 Oct. 16 'O Romani Rommerin', Gypsy Wedding in a dell, Hertfordshire.
 Nov. 26 'Night Shift', from Tower Bridge.
 30 'The Crystal Palace Fire', by an observer overlooking the scene.
 Dec. 21 'Round London at Night.'

OUTSTANDING FOREIGN RELAYS

(1) *Incoming*

		<i>From</i>
Jan. 17	German European Concert conducted by Hans Weisbach, from Leipzig.	Leipzig.
Feb. 1	First talk in the third series of 'Five Hours Back'.	U.S.A.
8, 13, 14, 15, 16	Accounts of Winter Olympic Games from Garmisch-Partenkirchen.	Germany.
Mar. 3	Czechoslovak European Concert conducted by Otakar Jeremias.	Prague.
Apr. 12	Negro Spirituals from Fisk University, Nashville.	Tennessee.
20, 21, 23, 24	Concerts by B.B.C. Symphony Orchestra on European Tour.	Paris, Zürich, Vienna, Budapest.
July 1	Concert by Choir of St. Rombaut's Cathedral, Malines.	Belgium.
4	Independence Day Programme.	New York.
10	Polish Concert from Wawel Castle, Cracow.	Poland.
19	'Lohengrin' (Acts I and II).	Bayreuth.
21	Bruckner's Eighth Symphony.	Linz.
26	Unveiling of Canadian War Memorial, Vimy Ridge, and speeches by H.M. King Edward VIII and President Lebrun.	Vimy.
	Icelandic Music.	Reykjavik.
Aug. 1	Coney Island Programme.	New York.
1-16	Commentaries from Olympic Games.	Berlin.
12	Brahms's 'Deutsches Requiem' conducted by Toscanini.	Salzburg.
27	Tzigane Music.	Budapest.
Sept. 20	American Intercontinental Concert.	New York.
Oct. 25	'La Chanson Romande.'	Lausanne.
Nov. 17	Massenet's 'Manon' (Act I).	Turin.

During the year the Corporation was often provided by its foreign broadcasting colleagues with studios and the necessary technical facilities to enable it to carry out special programmes from abroad for broadcasting in this country. In particular it was able by this means to arrange for its own speakers to give accounts of political and topical events occurring abroad.

(2) *Outgoing*

Jan. 21	Memorial Service for King George V from St. Paul's Cathedral.	U.S.A., Germany.
	Address by Mr. Stanley Baldwin on the Death of King George V.	France, U.S.A., Argentine, Norway, Denmark
22	Proclamation of H.M. King Edward VIII.	Austria, Germany, France, Denmark, Norway, Belgium, Argentine, U.S.A.
28	Funeral of King George V.	Relayed to all parts of the world.
29	Memorial Service for Lawrence of Arabia, St. Paul's Cathedral.	U.S.A.
Mar. 1	Broadcast by H.M. King Edward VIII.	Relayed to all parts of the world.
Apr. 26	Special Concert for 'British Radio Day in Finland'.	Finland.

May 18	Message by the Children of Wales, from Cardiff.	Denmark.
27	Departure from Southampton of R.M.S. <i>Queen Mary</i> .	U.S.A., Austria, Hungary.
June 2	Kirsten Flagstad in 'Tristan und Isolde' from Covent Garden.	Norway, Sweden.
18	Mozart's 'Figaro' from Glyndebourne.	Denmark, U.S.A.
27	Scottish Dance Music from Edinburgh.	Sweden, Norway.
Oct. 14	Students' Songs and Special Concert by B.B.C. Military Band.	Switzerland.
Dec. 8	British European Concert.	Most countries in Europe.
11	Abdication Broadcast of H.R.H. Prince Edward.	Relayed to all parts of the world.

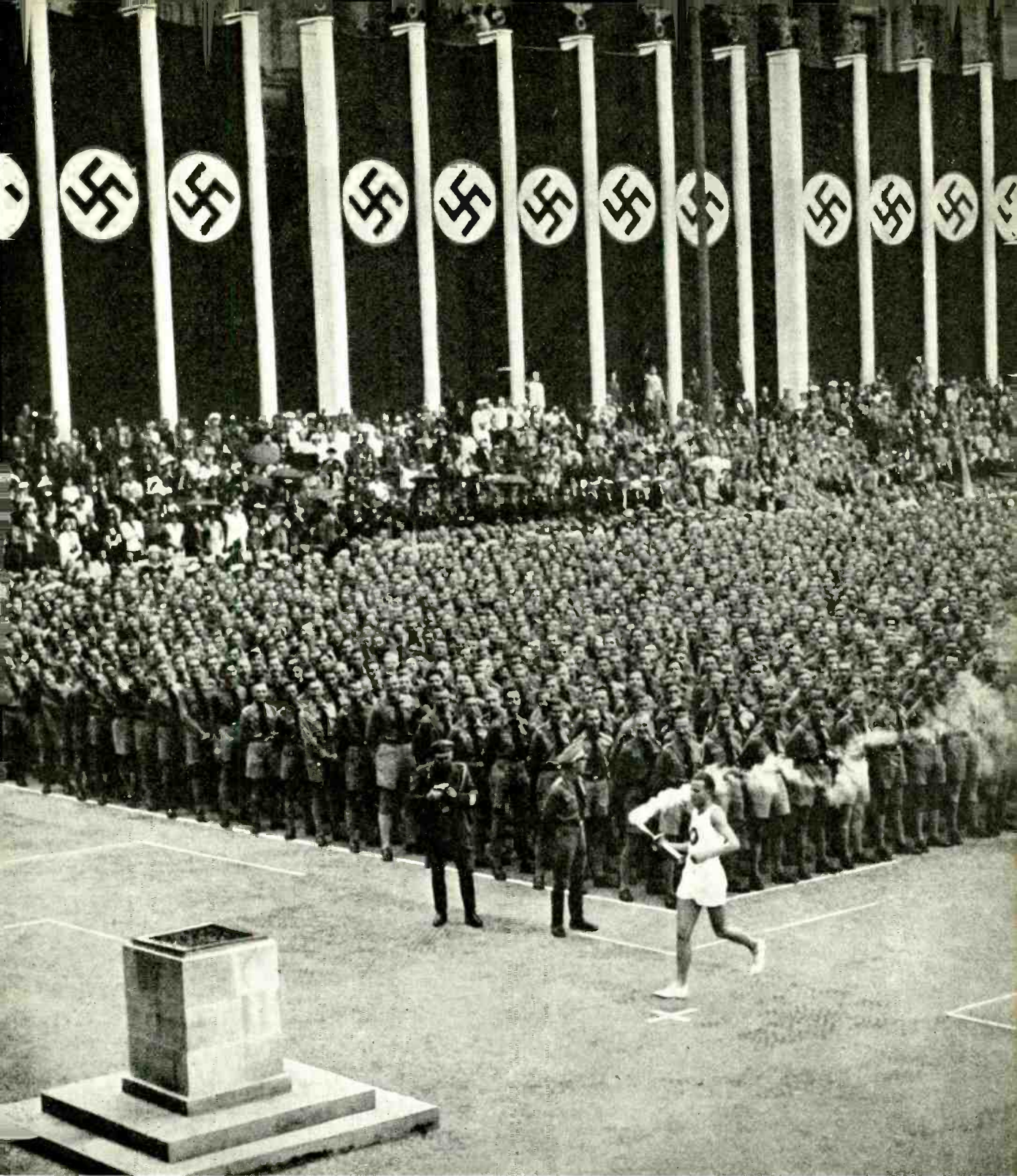
A large number of programmes were relayed abroad, particularly in the U.S.A., and the above is a list of the more important ones only.

(3) Special facilities for foreign broadcasting organizations

The following is a selection from the number of special 'outside broadcasts' for which the Corporation arranged the necessary facilities for foreign broadcasting organizations to broadcast them in their own countries. The programmes were carried to the respective foreign countries by means of General Post Office telephone or radio-telephone services.

Jan. 5	Programme from Dickens's house, Doughty Street.	C.B.S.*
19	George Watt Centenary programme from the Science Museum, South Kensington.	C.B.S.
25	Robert Burns Centenary programme from Dumfries.	N.B.C.†
28	Special commentaries on the Funeral of King George V.	Germany, France, Belgium, Japan, Holland, Italy.
Mar. 28	Commentary on International Cross Country Race at Blackpool.	France.
Apr. 23	Talk by Sir Archibald Flower from the Memorial Theatre, Stratford.	N.B.C.
May 21	High Mass from St. Joseph's Foreign Missionary College, Mill Hill.	Holland.
27 to June 1	Programmes from R.M.S. <i>Queen Mary</i> on her maiden voyage.	N.B.C., C.B.S., M.B.S.‡ France, Denmark, Holland.
18 to July	Commentary on the 'Gold Cup', Ascot Racecourse. Commentaries on the All-England Tennis Championships, Wimbledon (<i>various dates</i>)	N.B.C. C.B.S., N.B.C., Germany.
July 11	Commentary on A.A.A. Championships, White City.	Germany.
29	Presentation of books from Montevideo University to London University.	Uruguay.
Aug. 1	Blackpool programme.	C.B.S.
18-27	Nottingham Chess Congress.	Holland.
Sept. 18	Speech by Mr. Stanley Baldwin on Harvard University Centenary from Blicking Hall, Norfolk.	N.B.C., C.B.S.
Dec. 2	Commentary on England <i>v.</i> Hungary Football Match.	Hungary.

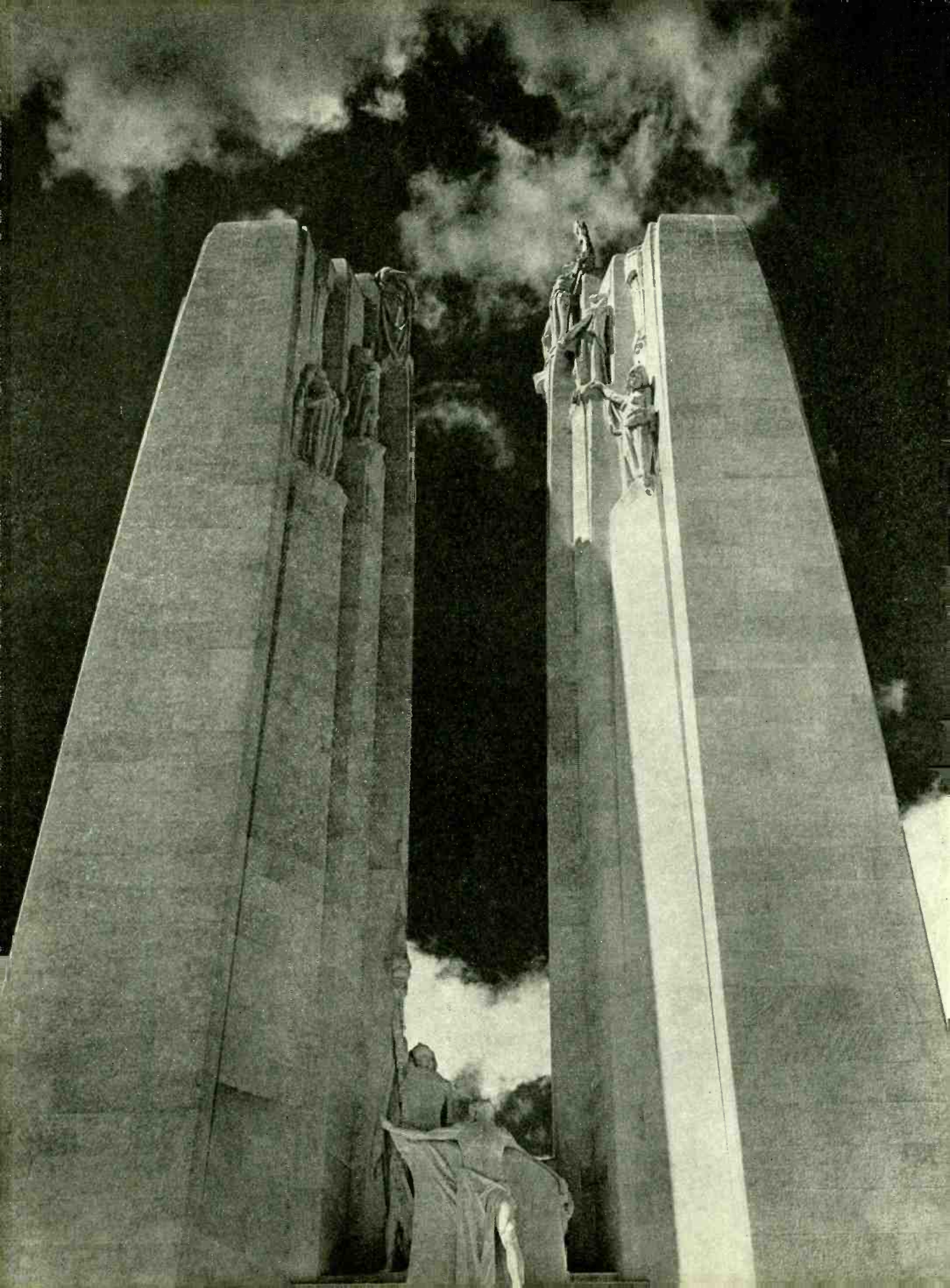
* The letters C.B.S. represent Columbia Broadcasting System, U.S.A.
† The letters N.B.C. represent National Broadcasting Company, U.S.A.
‡ The letters M.B.S. represent Mutual Broadcasting System, U.S.A.



The Opening of the Olympic Games in Berlin

The last bearer arriving to light the Olympic Fire at the Lustgarten with the torch which had been carried from Mount Olympia in Greece to Berlin by a relay of 3000 runners

(1 August 1936)



THE EMPIRE SERVICE

It was recorded in last year's *Annual* that 1935 had been a year of steady progress and consolidation in the Empire Service. In its fourth year of operation (1936) it has been called upon to present to its widely scattered overseas audience many events of supreme imperial importance amidst a general atmosphere of international unrest. Further development of the Service has been achieved, as it should be in these early days; and the great landmarks in world and Empire history have punctuated this development.

The service from Daventry now covers over 17 hours of the 24 as a result of a change made on 19th April, when the sixth period of transmission was extended to 2 hours, from 2.0 to 4.0 a.m. This transmission, inaugurated in 1935 and dealt with in last year's *Annual*, is designed primarily to serve listeners in Western Canada. In common, however, with other transmissions from Daventry, it has been widely heard outside the area of primary service: for example, it is known that during the Italo-Abyssinian conflict the news bulletins in this transmission were eagerly listened to in Addis Ababa. Similarly, it has provided a service in India at breakfast and elsewhere at correspondingly different times.

Much has been said in past issues of the *Annual* as to the role of broadcasting in strengthening the bond of Empire, of which the Crown is so unique a symbol, in these days of 'freely associated nations'. But this year has brought new and solemn evidences of this truth. King George V's last Empire broadcast on Christmas Day, 1935, was fresh in the minds of listeners in all parts of the Empire when reports of his illness were first issued. The regular transmission of bulletins during the entire period of King George V's illness—and, above all, during his last hours—and the broadcasting of the funeral and other ceremonies which followed his death made a profound impression throughout the Empire overseas, and helped to promote a real sense of Imperial unity at a time when it was so greatly needed. In many instances it is known that the Empire Service carried the fateful news to individual listeners and to some of the more isolated Dominion

and Colonial communities many hours, and in some cases days, before it would have reached them by other means. The keynote of expression of appreciation of the service rendered by broadcasting at this time was gratitude for the way in which it enabled distant listeners to be 'present' in London and at Windsor. Similarly, in the Constitutional crisis at the end of the year, Daventry had an eager and anxious audience throughout the whole Empire.

In the programme field News has, as usual, played an important part, especially during the Italo-Abyssinian trouble and the Spanish Civil War. The objective and impartial presentation of authoritative news has been the constant aim of the staff responsible for this section of broadcast activity. The restrictions implied by such a basis of selection—common to all broadcasting of news—may make the bulletins on occasion sound less picturesque than reference to current newspapers would seem to justify. But as a cardinal point of stable policy it has remained unchallenged, and has indeed been fortified by the spontaneous approval of listeners. Significant use was made of news bulletins in Malta in the early days of the Italo-Abyssinian war. The local population were being seriously disturbed by news broadcast from Italian stations. By special arrangement, bulletins from Daventry were picked up and rebroadcast, both direct and in a Maltese translation, from the Naval Station at Rinella. The transmissions so effected were widely diffused through loudspeakers set up in cinemas, public halls and other places of vantage in the Island. It was soon reported that this action had had the result of reassuring the disquieted people.

From the outset, the object of the Empire Service has been not only to bring overseas listeners into daily contact with the Home Country, but also to act as an 'Empire Exchange'. In this field it has the duty of promoting a greater sense of inter-Imperial unity and understanding. That is why the main programmes commemorating Empire Day have, for the past three years, originated in the Dominions: the mere observance of the anniversary has been of less importance

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(130) The Canadian Memorial at Vimy Ridge unveiled by H.M. King Edward VIII
(26 July 1936)

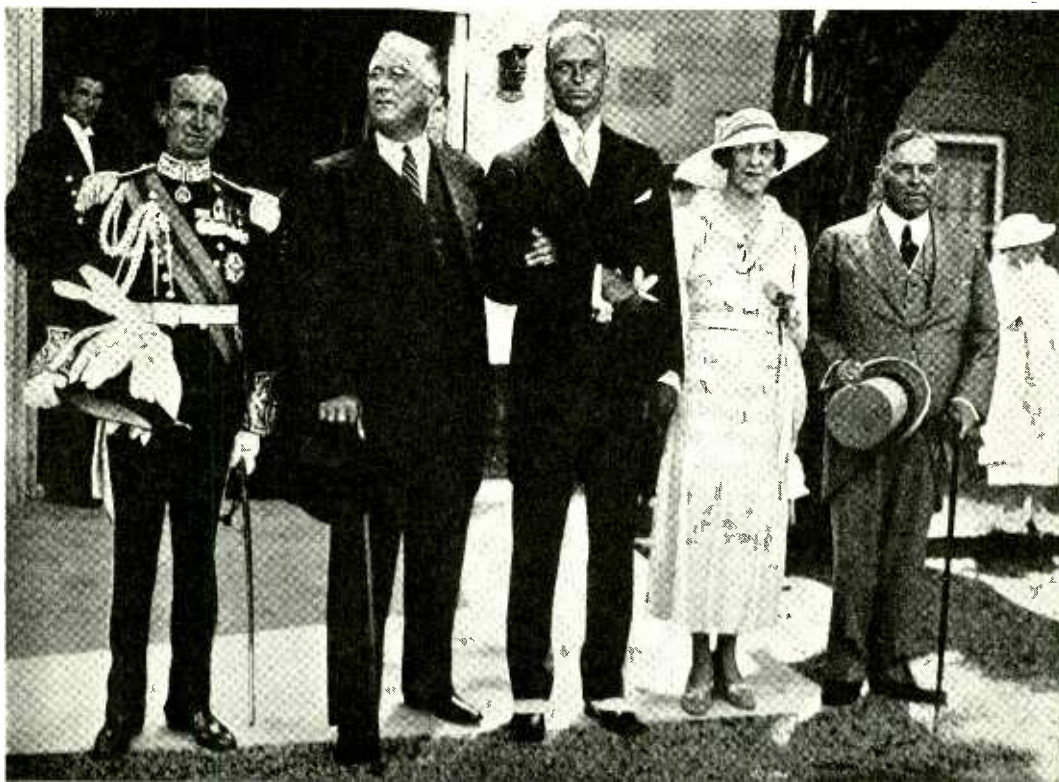
than the object underlying these broadcasts. The 1936 programme came from South Africa and included contributions from all the provinces of the Union, culminating in a relay from the steps of President Kruger's house near Pretoria. Broadcasting still has much to do in making the Empire more aware of itself—its nature, its problems, and its peoples. One of the most notable trends of development in 1936 was the increase in the number of reciprocal broadcasts, i.e., programmes arranged in Dominions and Colonies with the willing and helpful co-operation of the broadcasting organizations in the countries concerned. As in the past, these have been conveyed to listeners at home through the medium of beam telephone channels and radiated to the rest of the Empire through Daventry. The outstanding example of this reciprocity was on the occasion of the Proclamation of the Accession of H.M. King George VI. The Proclamation in the Dominion of Canada was made public exclusively by broadcasting—incidentally, a landmark in broadcast history. The London Proclamation at St. James's Palace and the subsequent salute of guns in Hyde Park were broadcast to the Empire from Daventry, and rebroadcast throughout Canada (as well as elsewhere). The firing of the last gun was the sign for the Canadian Proclamation to begin. The reading of the notice of Accession—in English by the Prime Minister of Canada and in French by the Canadian Minister of Justice—was similarly heard by listeners at home and in other parts of the Empire. A unique occasion was the opening of the War Memorial on the little plot of Canadian ground at Vimy in France by King Edward VIII, as Sovereign of Canada.

Other outstanding broadcasts incoming from overseas were the tribute by the retiring Viceroy of India to King George V, and, in a different sphere, the meeting between President Roosevelt and Lord Tweedsmuir in Quebec, and the opening of the Empire Exhibition in Johannesburg. Broadcasting played an important part in the latter event, which included messages from all the Dominion Premiers, and speeches by the Governor-General of South Africa, and the Prime Ministers of the Union and of Southern Rhodesia, speaking in Johannesburg itself. Cricket was represented, in chronological

order, by Australia *v.* India (the last match of the tour at Madras); the M.C.C. *v.* Ceylon; and early games in the series of Test Matches in Australia in the form of a daily account of play throughout each match. The pilots engaged in Empire flights who broadcast from their points of achievement during the year included Flight-Lieut. T. Rose from Cape Town, Mrs. Amy Mollison from the same city, Mr. C. W. A. Scott and his companion, Mr. G. Guthrie, from Johannesburg, and Miss Jean Batten from New Zealand. Other events for which special broadcasts were arranged included the Jubilee of the City of Vancouver, and the change-over of Viceroys in India. The outgoing Viceroy's departure from Bombay and the new Viceroy's arrival at the Gateway of India and entry into New Delhi, together with his subsequent broadcast to the peoples of India, were all presented to listeners at home and overseas. The Lord Mayor of London's speech from Vancouver at the unveiling of the statue of the man who gave his name to the city was an incoming complement to several outgoing broadcasts from England associated with these celebrations, such as the broadcast of the ceremony at Vancouver's grave in Petersham churchyard, and of a service from King's Lynn, the explorer's birthplace.

New ground was broken in the latter months of the year by talks incoming from the Dominions on 'World Affairs' and radiated in both home and Empire programmes. In October, Dr. H. L. Stewart spoke from Halifax; in November, Dr. G. L. Wood from Melbourne; and in December, Mr. A. N. Wilson from Cape Town. The importance of such talks in stimulating discussion and thereby understanding of overseas points of view, both at home and in the Dominions themselves, cannot be overestimated. Each of the three talks so far heard (in a series which will continue) has, by its frankness, provided a challenge which must have been taken up by all thoughtful listeners.

In the programmes originating at home—and such 'outgoing' programmes form by far the greater part of the 17 hours of daily broadcasts radiated from Daventry—the presentation, from a broad Imperial standpoint, of news and talks designed to meet the



MEETING OF LORD TWEEDSMUIR AND PRESIDENT ROOSEVELT AT QUEBEC

needs of the overseas audience has been further studied and developed during the year. By contrast with the earlier years of experiment, a more systematic schedule of programme material, especially in the fields of music and talks, was evolved as the year advanced. Throughout the year weekly talks on 'World Affairs' were broadcast. These talks, given by speakers competent to handle the subject with full regard to overseas reaction, were much appreciated. 'Empire Exchange', the title of another regular series of talks started in the latter part of the year, provided opportunities of bringing to the microphone in London overseas visitors from many parts of the Empire. The views of statesmen, business men, sportsmen and others, on a variety of subjects, were thus presented to the near and distant audience. Other talks included a series under the title 'Down to the Sea in Ships' (shared with home listeners), covering Sea Power, the Fishing Industry, and other problems; the 'Police-

man's Lot', talks given by serving members of Colonial forces; 'Food for Thought', groups of short talks on events, personalities and a variety of topical subjects; 'Under Big Ben' and the 'Regional Notebooks', chronicling more domestic happenings in various parts of Great Britain; and an authoritative survey of the agricultural industry in the United Kingdom.

Entertainment inevitably ranged over a wide field: music, light and serious, variety, drama, sport, and other interests were again represented in balanced programmes devised and carried out with special regard to the needs of the overseas audience and the technical limitations of short-wave broadcasting. Successful experiments were made in connexion with sporting broadcasts and outside ceremonies, both with a view to eliminating 'background' and 'crowd noises', which tend to mar intelligibility in reception on short waves, and in 'setting the scene' for ceremonies broadcast



WELCOMING THE NEW VICEROY AT THE GATEWAY OF INDIA, BOMBAY

to unseeing listeners. For the fourth year in succession special programmes, including messages from the High Commissioners in London, were broadcast in appropriate transmissions from Daventry on the National Days of the Dominions. Other noteworthy broadcasts were the Accession message of King Edward VIII, a message from H.R.H. the Duke of Kent on the occasion of the South Australia Centenary, programmes associated with the maiden voyage of the *Queen Mary*, the unveiling, already mentioned, of the Canadian National War Memorial at Vimy Ridge and, lastly, the message spoken by his former Majesty from Windsor Castle a few hours after his abdication. Annual events, such as the Boat Race, the Grand National and the Derby, were broadcast as a matter of course.

Contact with its distant listeners, through the medium of correspondence, has continued

to help in the development of the Empire Service. As was expected, the actual volume of correspondence during the past year has been lower than in the previous year, when technical and other experiments prompted requests for listeners' reports. The nature of the correspondence has, however, changed also, as was expected, and recent letters have been related more closely to general policy than to specific technical problems. In all, over 70,000 reception reports have reached Broadcasting House from overseas listeners during the four years of Daventry's operation.

Listeners' interest in the Service has again increased in the year under review. The general growth of short-wave broadcasting all over the world has been most marked, and the factor of world rivalry among the many nations now operating services cannot be lightly disregarded in considering the development of the Empire Service—as the

voice, not of Britain only, but of the British Empire. Happily, there are evidences of a specific interest in the Empire transmissions—for instance, recent authoritative statements from Australia and New Zealand have indicated that Daventry has a widely distributed and steadily increasing audience of short-wave listeners in these Dominions. Similar evidence is available from many other parts of the Empire. As explained in last year's *Annual*, the programmes are not limited to listeners who receive them direct on short waves. The well-established Dominion broadcasting organizations have rebroadcast Daventry transmissions to an increased extent during the past year. In June and July alone nearly 100 separate programmes were picked up and distributed in this way in Australia. In Canada a regular schedule of rebroadcasts has been followed throughout the year, while in other Dominions there has been an extension of rebroadcasting activity.

Great impetus to the development of the use of broadcasting in Colonial territories resulted from energetic action on the part of the Colonial Office. Much has been done during the year, even if more still remains to be done. In the Gold Coast there were, at the end of the year, five Government Wireless Exchanges in operation or under construction and others contemplated. Government Exchanges continue to operate in other Colonies mentioned in the 1936 *Annual*. Colonies provided with Exchanges by private enterprise included Gibraltar, Barbados, Jamaica, Trinidad and Malta. (The special measures taken in this Colony during a period of emergency have already been mentioned.)

During the year there was considerable reorganization of the broadcasting services in three Dominions: New Zealand, South Africa and Canada. In the last two countries, the reorganization aimed at the independent operation of broadcasting on public service lines, as followed by the B.B.C. Substantial progress was also made in the general development of broadcasting in India. In the Colonies, broadcasting services already established continued to operate and to make use of Daventry's transmissions from time to time. The Government Service was inaugurated in Palestine in the Spring; and services were opened or licences applied for in Fiji, Malaya, Trinidad, and the Bahamas.

Technical Progress

The Empire listener, forming his opinion on what he has heard through his receiving set during the fourth year of the British Empire broadcasting station at Daventry, would probably say that there had been some development on the technical side, but that considerably greater improvement is necessary if Daventry is not to be overtaken—indeed, left behind—by other short-wave broadcasting services. The fact is that it is difficult, if not impossible, for a 10 or 15 kW. station to compete with stations of 40 or 50 kW. It is natural that a listener tunes most readily to the station which he receives best. It is also natural that he may think that station *a*, to which he has listened with pleasure for some time, has deteriorated in performance in the presence of a new station *b* of higher power, which gives him better reception, when in fact station *a* has not deteriorated and is giving reception inferior only in relation to a new standard set by *b*.

There is no doubt that the technical standard of transmission set by the Empire Station in the preceding years has been maintained and improved as a result of certain aerial changes made during the year in the course of experimental work on aerial design. Certain aerials have been fitted with reflectors, which have increased the signal strength in the forward direction and, at the same time, have removed 'echo' in areas where it had been objectionable before.

The coverage during a given transmission has been increased by the use of a third transmitter (the old G5SW of Chelmsford), and three transmitters are now used in all transmissions from Daventry.

The total volume of correspondence received at Broadcasting House from overseas listeners was somewhat less during 1936 than in 1935, when a large number of special reports on specific tests were requested. The part of the technical correspondence which is of greatest assistance to those responsible for running the service is the regular supply of log sheets from listeners, selected for geographical situation and technical skill. This correspondence has increased during the year and the standard has improved. Many selected correspondents have carried out this work since the inauguration of the service four

years ago, and their weekly reports continue to arrive at Broadcasting House with unflinching regularity. When correspondents have 'fallen by the wayside' or have moved or had to discontinue their reports, there are others eager to take on this wholly voluntary co-operation. The issue to these selected listeners of the gramophone record of typical reception of short-wave stations at the Corporation's receiving station at Tatsfield has resulted in a uniformity of appreciation as to what is meant by Merit 1, Merit 2, etc.

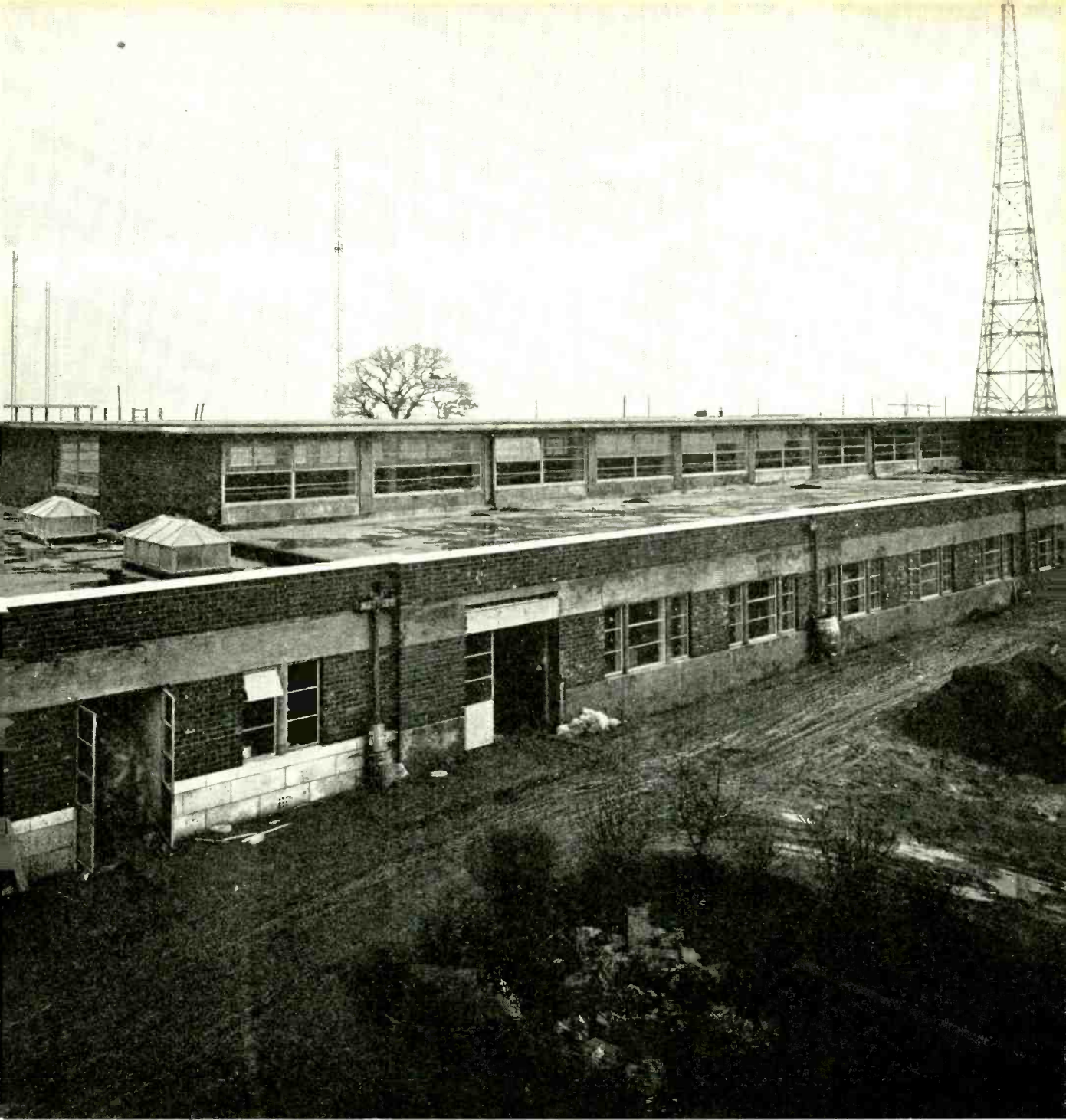
A feature of the 1936 correspondence has been the increasing proportion of letters from listeners living within the Empire. The correspondence of 'official' or 'professional' reporters, though relatively small in volume, is high in importance, and frequently provides actual measurements of performance of the Empire Station in different parts of the world. Dominion and Colonial Postal and Telegraph administrations and the wireless communication companies provide the majority of these reports.

The most noteworthy trend in short-wave propagation conditions during 1936 has been the increasing use made of the shorter waves, namely, those of the order of 14 and 17 metres. This had been anticipated from previous observations. Short waves (see *B.B.C. Annual* 1935, pp. 124 and 125), are propagated round the earth by reflection or refraction in the ionosphere and the amount of bending that takes place depends on the wavelength and on the intensity of ionization in that sphere. The more intense the ionization, the shorter is the wavelength that is reflected. Although the exact mechanism of the action of the sun in producing ionization in the ionosphere is not yet fully understood, it has been observed that there is a fairly close correlation between the degree of ionization and the activity of the sun as evidenced by sunspots. Here the wireless engineer and the astronomer meet on common ground. The one observes the trend of short-wave propagation conditions; the other observes the sun with his telescope or spectroheliograph and records the varying degrees of solar activity. A convenient figure to express solar activity is the mean daily area of sunspots in a given year expressed as millionths of the sun's visible hemisphere. Observations at the Royal Observatory, Greenwich, give the

following figures for this: 1932, 163; 1933, 88; 1934, 119; 1935, 624; and 1936, up to June 30th, 1200; from which the sunspot minimum year is shown clearly as 1933. The great increase in activity in 1936 is also well illustrated, coinciding with the wireless engineer's observation that much shorter waves were needed. For instance, in earlier years, a wavelength of 17 metres had been short enough to give a midday service to South Africa during the autumn. But to provide an equivalent service during the past year, it became necessary to use 14 metres, as it was found that the 17 metre wave was severely attenuated on some days. There is evidence that an even shorter wave—say of 11 or 12 metres—might have been the optimum, for on some days the ultra-short wave transmissions from the London Television Station at Alexandra Palace on 6.67 and on 7.2 metres were received in Cape Town and Johannesburg. Another instance of this trend was the relatively large number of days on which American amateur stations and police stations on 9 and 10 metres, working on very low power, were audible in this country.

The use of the shorter waves is advantageous because atmospheric interference decreases rapidly with decrease in wavelength and relatively weak signals can give noise-free reception if receivers are available to cover these wavelengths efficiently. The need for such receivers has been well demonstrated in the past year in Africa, in India, and in Malaya, and those designed for the reception of Empire broadcasting should cover efficiently at least the lowest waves at present in use at Daventry, i.e., GSH and GSJ, 21.47 and 21.53 Mc/s respectively (approx. 13.9 metres).

The range of wavelengths necessary to cover the Empire in the different conditions of day and night, winter and summer, remains about the same. In 1933, when 17 metres was the lowest wavelength used, it was necessary to use a wavelength of the order of 70 metres to serve Canada at night in mid-winter. A wave of this length was outside the bands allocated to broadcasting by the Madrid Convention of 1932; consequently, Canada could not be served for a number of nights in mid-winter. With the physical trend towards the shorter waves,



The New Empire Station under construction in December 1936



THE UNVEILING BY THE LORD MAYOR OF LONDON OF THE STATUE OF CAPTAIN VANCOUVER

70 metres becomes unnecessary and, in fact, the use of 50 metres has been called for on only a few nights at the end of 1936 and the beginning of 1937. This is fortunate, as interference in the 50 metre broadcasting band is very severe, owing to the use of this band by a large number of low-power local broadcasting stations in Central and South America. While the local service range of these stations is very small, they are capable of producing widespread interference and, indeed, the whole of Canada and the West Indies have had serious interference from this source. The trouble is spreading, as these small stations have followed the trend towards the use of shorter waves and are now using waves in the 31 metre band. Six Central American stations are now causing interference to Daventry on four of its wavelengths, namely, GSA, GSL, GSB and GSC on 6.05 Mc/s, 6.11 Mc/s, 9.51 Mc/s, and 9.58 Mc/s respectively. Strong representations have been made to the authorities by the British Post Office, but so far, unfortunately, with little effect. Daventry is not the

only station to suffer, and the value of short-wave broadcasting is being seriously compromised by this problem of interference. Proposals to deal with it at the next World Communications Conference to be held in Cairo in 1938 are receiving consideration.

There are still some forms of interference for which the receiving set may be responsible (see *B.B.C. Annual*, 1936, page 136), but progress is being made in eliminating them by receiver design, and many receivers on the market to-day show advances in this respect over earlier models. In the earlier years of the Empire Service the majority of complaints of interference could be traced to unsuitable receiver design, whereas to-day the majority are attributable to too small a separation between transmitting stations—in turn due to too many stations working simultaneously in the short-wave bands allotted to broadcasting.

This review of the technical side of the Empire Service during 1936 would be incomplete without some mention of the work that has been going on at Daventry during the year with a view to a greatly improved

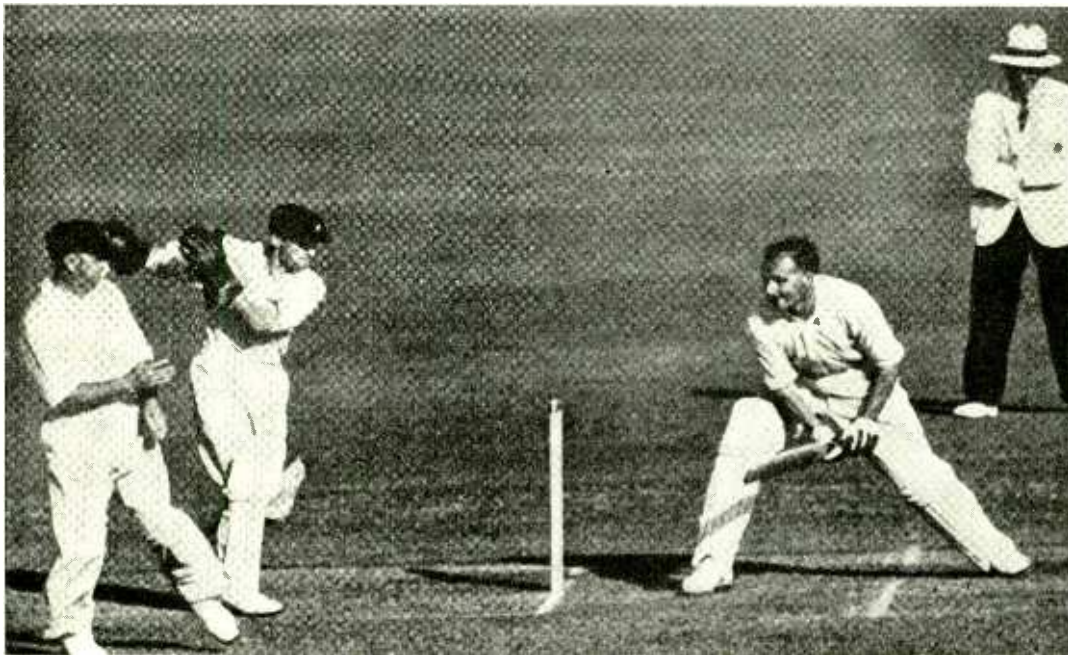
service in the future, though a review of results obtained must be left to next year's *Annual*.

A new transmitter building, considerably larger than the existing Empire Station building, is now almost complete. It provides space for four new 50 kW. short-wave transmitters, three of which have been ordered and are nearing completion. Each of these transmitters will be capable of working on any of the wavelengths allotted to the Empire Station and quick wavechanges between four selected wavelengths will be provided on each transmitter. Suitable feeder switching arrangements will enable any transmitter (including the existing low-power transmitters) to be connected to any aerial. A standby power supply is being provided by two Diesel engines for use in the event of a failure of the public power supply.

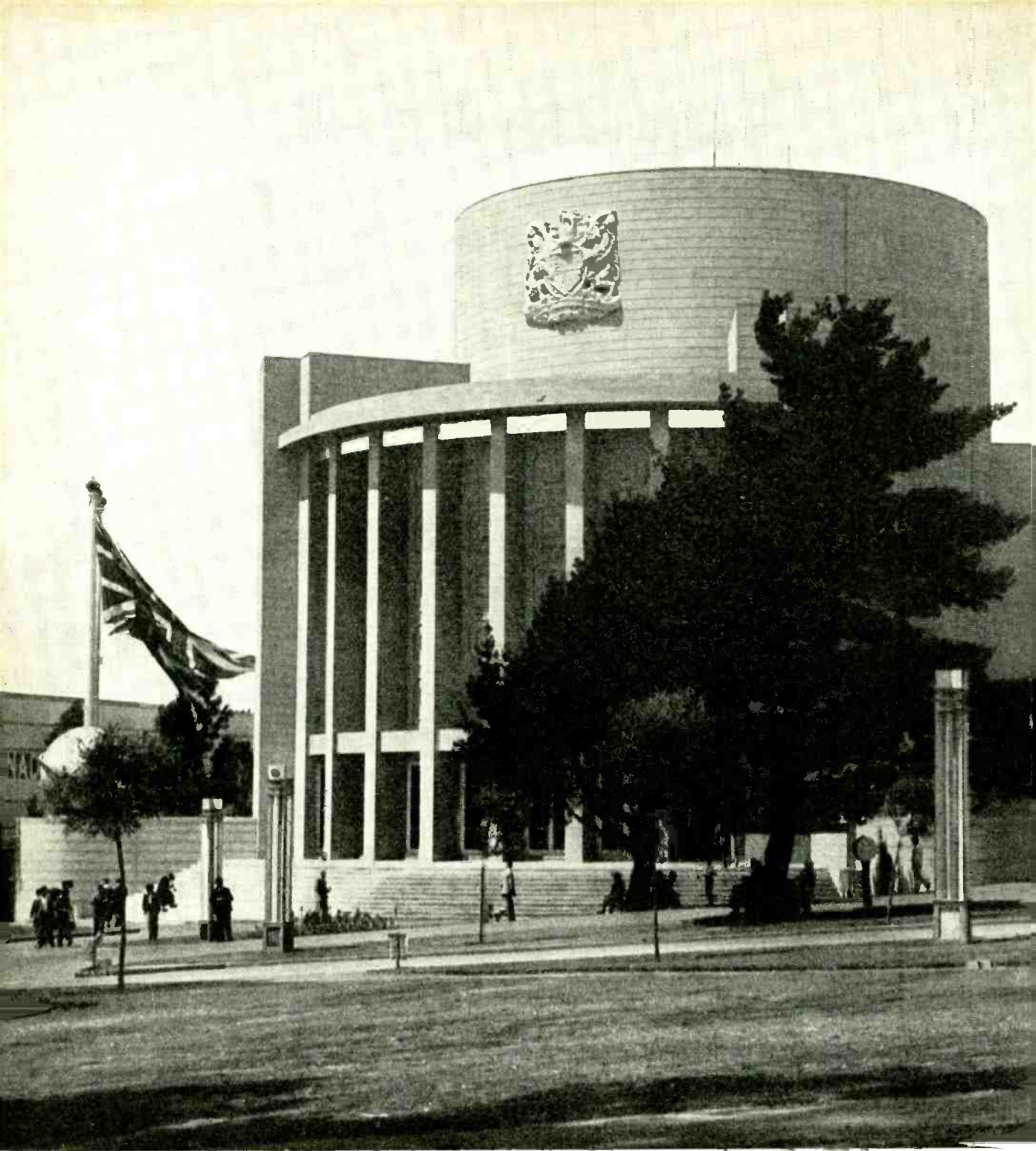
The new aerial system will consist of 23 aerials of the type which the many aerial experiments carried out at Daventry have indicated to be the most suitable, and these will be supported by the two existing 500 ft. masts, by the two existing 350 ft. towers and by eight new masts, the erection of which is practically complete. Of these eight new

masts, five are 325 ft. high, two 250 ft. high, and one 150 ft. high. Some 400 steel poles are being erected to carry the 6 miles of open wire feeder which will connect the transmitters to the aerials, the most distant aerial being nearly half a mile from the transmitter building. The masts are so placed that transmissions on a number of wavelengths can be directed in eleven different directions, and many of the new aerials will be provided with reflectors. The picture on page 137 shows the new transmitter building with one of the existing 350 ft. towers and three of the new 325 ft. masts.

During the early months of 1937 there will inevitably be some dislocation of the normal service from Daventry, since some of the new aerials will be supported by the older masts which at present support the experimental aerials, and the latter have to be lowered before the former can be erected. The new aerials will be taken into service as they become available, which, in some instances, will be before the new transmitters are ready. Most listeners will therefore get stronger signals 'by instalments', the complete change-over taking several months.



TEST MATCH: AUSTRALIA *v.* ENGLAND, AT BRISBANE



The United Kingdom Pavilion at the Empire Exhibition, Johannesburg

PROGRAMME EVENTS IN THE EMPIRE SERVICE

(A) ORIGINATED IN THE UNITED KINGDOM

(INCLUDING CERTAIN ITEMS IN HOME PROGRAMMES WHICH WERE ALSO BROADCAST
TO THE EMPIRE)

Music

- Jan. 11 'Music from the Empire', a programme of music of Empire composers performed by Empire artists.
- Feb. *Various dates* 'The Composer at the Piano' series. Roger Quilter, Cyril Scott, John Ireland, Landon Ronald, Armstrong Gibbs, Michael Head, Granville Bantock, Hamilton Harty, Frank Bridge, Thomas Dunhill, Herbert Hughes, Walford Davies.
- 24 The B.B.C. Empire Orchestra and Arthur Catterall (violin).
- Mar. 22 Violin Recital by Bratza.
- 29 The B.B.C. Empire Orchestra and Pouishnoff (pianoforte).
- May 9 Pianoforte Recital by Solomon.
- June 3 Recital by Harold Williams (Australian baritone).
- 21 The B.B.C. Empire Orchestra conducted by Adrian Boult
- July 8 The Vancouver Boys' Band
- Sept. 20 The B.B.C. Empire Orchestra conducted by Fritz Hart. Lauri Kennedy (Australian 'cellist).
- 30 The Isolde Menges String Quartet.
- Nov. 15 Recital of Indian Music by Dr. Sarayanga Srinivasan.

Opera and Operetta

- Jan. 4 Part of 'Die Fledermaus' (Johann Strauss), (Sadler's Wells Theatre, London).
- 8 Two short Operas: 'Bastien und Bastienne' (Mozart), and 'Hatsuyuki', a Japanese *No* Play (Komparu Zempo Motoyasu), set to music by W. H. Bell.
- April–May 'Die Meistersinger' (Wagner), 'Rigoletto' (Verdi), 'Tosca' (Puccini), 'Tristan and Isolde' (Wagner), and 'Louise' (Charpentier), from the Royal Opera Season at Covent Garden.
- July 8 'The Blue Peter' (Herbert and Armstrong Gibbs).
- Nov. 2 'The Beloved Vagabond' (founded on the novel by W. J. Locke).
- 19 Act I of 'Madame Butterfly' (Puccini), from Sadler's Wells Theatre, London.

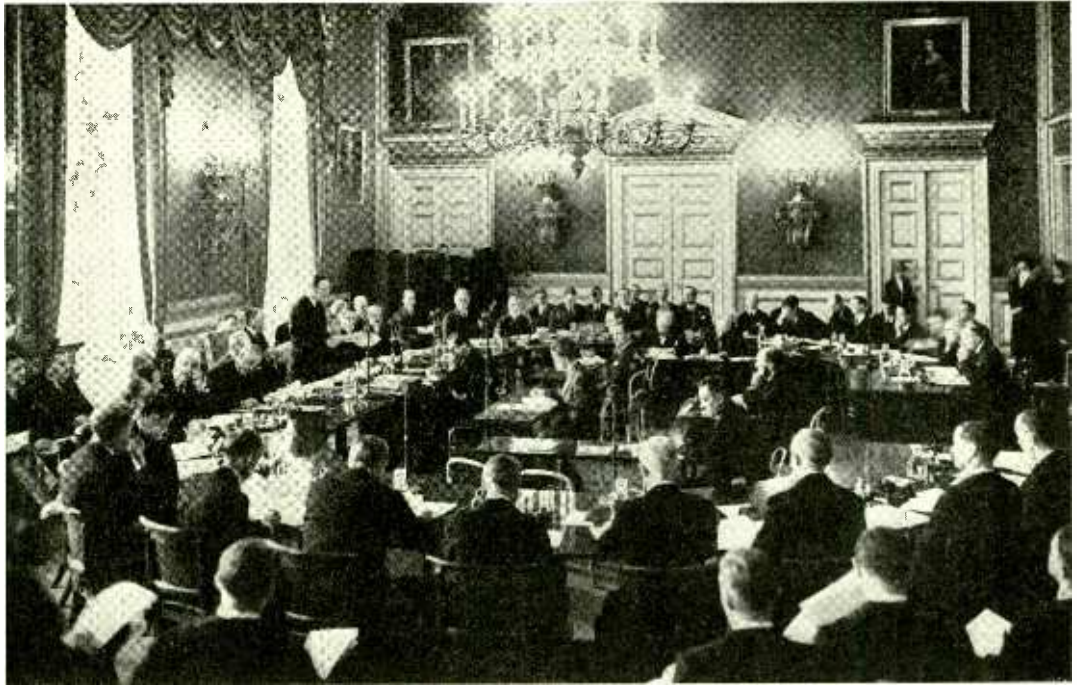
- Nov. *Various dates* The British Music Drama Opera Company in 'Fair of Sorotchinski' (Musorgsky), 'Pickwick' (Albert Coates), and 'Julia' (Roger Quilter), at Covent Garden.

Drama

- Jan. 13 Two Irish Plays: 'The Wooing of Julia Elizabeth' (Stevens) and 'The Land of Heart's Desire' (Yeats).
- Feb. 25 'Rockinghorse Winner' (D. H. Lawrence).
- Mar. 22 'The Carlyles at Cheyne Row' (Filson Young).
- Apr. 7 'Love and Freindship' (Adapted from Jane Austen).
- 12 'The Wakefield Miracle.'
- June 2 'Kitchener', a dramatic chronicle.
- 4 'Monsieur Beaucaire' (adapted by Gordon McConnel).
- 24 'Cavalcade' (Felix Felton).
- July 20 'The Proposal' (Anton Chekhov).
- Oct. 20 'Nelson Expects' (W. Fitzmaurice Hill).
- Nov. 10 'Within the Law' (Bayard Veiller).
- & 17
- 11 'The Trojan Women' ('Euripides', trans. Gilbert Murray).
- Dec. 4 'The House Fairy' (Laurence Housman).

Variety and Musical Plays

- Jan. 8 First of 'Empirates Concert Party' series.
- 28 First of 'Adventures of Jack and Jill' series.
- Feb. 3 'The Roosters' Concert Party.
- April 6 'Eight Bells' (Dewar).
- 28 First of 'Empire Magazine' series.
- June 16 'Chelsea Reach.'
- July 1 'Cupid plus Two.'
- Sept. 16 'Daylight Robbery' (Melhuish).
- Nov. 5 'Fireworks for the Fifth.'
- 16 'Cue for Adventure', No. 1 (Book and Lyrics, Neil Tuson; Music, Jack Clarke)
- Dec. 24 Christmas Party.
- 26 'Sindbad the Sailor', an Empire Christmas Pantomime.



LORD MONSELL SPEAKING AT THE FINAL PLENARY MEETING OF THE NAVAL CONFERENCE AT ST. JAMES'S PALACE

(25 March 1936)

Talks

- Jan. 7 First of the 'Imperial Affairs' series by Mr. H. V. Hodson.
 8 First of a series of technical talks by the Chief Engineer of the B.B.C.
 14 First of the 'Foreign Affairs' series by Sir Frederick Whyte.
 Feb. 11 First of the 'Conquest of the Air' series.
Various dates Talks in connexion with the British Industries Fair.
 17 First of the 'Agriculture in the British Isles' series, including Prof. A. J. Scott-Watson, Prof. W. G. S. Adams, Mr. R. W. Haddon, Mr. Anthony Hurd, Sir William Lobjoit, and Lord Bledisloe.
 21 Continuation of 'Under Big Ben' series, by Howard Marshall.
 April 13 'We Live and Learn', by Lord Ponsonby.
 19 'Speed', by Max Beerbohm.
 June 1 First of the 'London Scenes' series.
 3 'King George V Memorial Fund', by Mr. Stanley Baldwin.
 July 10 'Atmospherics', by Prof. S. M. Mitra.
 15 A recording of a talk by Dr. Earle Page, Deputy Prime Minister of Australia.
 24 First of 'Down to the Sea in Ships' series.

- Sept. 9, & 14 Talks preliminary to the opening of the Empire Exhibition at Johannesburg by John Martin and H. J. Van der Bijl.
 Oct. 5 First of the 'Empire Exchange' series (also included in the National programme).
 12 First of 'The Policeman's Lot' series, by members of the Police Forces.
 15 First of a series of talks from the various Regions of Great Britain.
 24 'South African Literature—English and Afrikaans', by Prof. I. J. Rousseau.
 Nov. 15 First of 'I Was There' series.
 Dec. 13 Talk commemorating the Silver Jubilee of New Delhi as Capital of India.
 16 Dingaan's Day, South Africa: Two short talks in English and Afrikaans.

Speeches and Ceremonies

- Jan. 7 Royal Empire Society Luncheons:
 & 8 Speeches by Sir Humphrey Walwyn (Governor-Designate of Newfoundland) and Sir Geoffrey Whiskard (U.K. High Commissioner-Designate of Australia).
 20 Bulletins of the last hours and Death of King George V.

- Jan. 21 Salute of guns in Hyde Park; Special Service from St. Paul's; Address by the Prime Minister of the United Kingdom.
- 22 Proclamation of H.M. King Edward VIII.
- 28 Funeral of King George V.
- 29 Commemoration service to Lawrence of Arabia from St. Paul's Cathedral; Address by Lord Halifax. A reading of 'The Queen's Message to the Empire.'
- Mar. 1 Message to the Empire by H.M. King Edward VIII.
- 10 Tribute to Admiral of the Fleet Earl Beatty, by Admiral Sir Roger Keyes.
- 24 & other dates Broadcasts from the *Queen Mary* on her maiden voyage to America.
- 25 Speeches at the signing of the London & 26 Naval Treaty by Lord Monsell, Mr. R. A. Butler, Mr. S. M. Bruce, and Mr. Vincent Massey.
- 26 Royal Empire Society Dinner. Speech by the Marquess of Linlithgow, Viceroy-Designate, prior to his departure for India.
- April 22 Royal Empire Society: Speeches to the Indian Touring Team.
- May 25 The Levant Fair, 1936, Tel Aviv, Palestine. Exchange of greetings between Captain D. Euan Wallace (Secretary to the Department of Overseas Trade) and Lieut.-General Sir Arthur Wauchope (High Commissioner in Palestine and Trans-Jordania).
- June 9 Royal Empire Society. Speech by Mr. R. G. Menzies, K.C. (Attorney-General of the Commonwealth of Australia).
- 18 Annual Dinner of the Corona Club. Speech by Mr. W. Ormsby-Gore, Secretary of State for the Colonies.
- 22 'Trooping the Colour' on Horse Guards Parade, Whitehall.
- 28 'Everyman's Club', a programme to celebrate the coming of age of Toc H.
- July 16 Presentation of Colours to the Brigade of Guards by H.M. King Edward VIII.
- 26 The Unveiling of the Canadian Memorial at Vimy, France, by H.M. King Edward VIII.
- Oct. 29 Annual Dinner of the Royal African Society. Speeches by the Earl of Athlone, Mr. Malcolm Macdonald, and Mr. W. Ormsby-Gore.
- Nov. 9 Speech by Mr. Stanley Baldwin, Prime Minister, at the Lord Mayor's Banquet, Guildhall.
- 11 Description of the scene at the Cenotaph by Major J. B. S. Bourne-May.
- 12 Talk by Sir Archibald Weigall, on the occasion of the opening of the new building of the Royal Empire Society.
- Dec. 11 Farewell Message by H.R.H. Prince Edward.
- 12 Proclamation of H.M. King George VI.
- 19 Proclamation of the Coronation of H.M. King George VI.

Sport

- Jan. 4 England *v.* New Zealand Rugby Football Match.
- 29 Heavyweight Boxing Championship: Jack Petersen *v.* Len Harvey.
- Feb. 1 Scotland *v.* Wales Rugby Football Match, and subsequent matches in the series.
- 7 to 14 Olympic Winter Games at Garmisch-Partenkirchen, Germany.
- Mar. 27 'The Grand National.'
- April 4 Oxford *v.* Cambridge Boat Race.
- England *v.* Scotland Association Football Match.
- 18 Rugby League Cup Final: Warrington *v.* Leeds.
- 25 The F.A. Cup Final: Arsenal *v.* Sheffield United.
- May 16 First of a series of commentaries on the All-India Cricket Matches: The M.C.C. *v.* All-India.
- May 27 'The Derby.'
- June 4 The International Horse Show, Olympia.
- Various dates International Polo at Hurlingham: England *v.* America.
- 12 The first of a series of commentaries on 'The Wightman Cup.'
- Various dates Open Golf Championship from Hoylake Golf Course.
- 24 'The Pitman's Derby' from Gosforth Park, Newcastle-upon-Tyne.
- Various dates Commentaries on the Lawn Tennis Championships at Wimbledon.
- 27 Royal Air Force Pageant, Hendon.
- July 11 King's Cup Air Race, from Hatfield.
- 25 'The Davis Cup': Great Britain *v.* Australia.
- Aug. Olympic Games, Berlin.
- Various dates
- Sept. 2 The Walker Cup: U.S.A. *v.* Great Britain, from Pine Valley, New Jersey, U.S.A.
- 9 The 'St. Leger'.
- 10 Final Heats of the World's Speedway Championship, Wembley.
- 29 Start of the England to Johannesburg Air Race from Portsmouth Airport.
- Oct. 17 Brooklands Mountain Championship.
- Nov. 18 Association Football: England *v.* Ireland.
- Nov. 28 Manchester 'November Handicap'.
- Dec. 8 Rugby Football: Oxford *v.* Cambridge.
- 19 Association Football: Arsenal *v.* Chelsea.

Religion

- Jan. 12 Empire Service from St. Paul's Cathedral.
26 Remembrance Service for King George V, from the Concert Hall, Broadcasting House.
April 19 Special Scout Service at St. George's Chapel, Windsor.
25 Anzac Day Service from St. Clement Danes.
May 3 Military Service from York Minster.
June 5 Bishop Broughton Centenary Service from Canterbury Cathedral.
7 Gaelic Service from The Abbey, Iona.
20 Aviation Service at Canterbury Cathedral.
Oct. 21 Annual National Service for Seafarers from St. Paul's Cathedral.
Nov. 8 Jewish Ex-Servicemen's Service of Remembrance.
Dec. 13 Service on the Accession of H.M. King George VI, from the Concert Hall, Broadcasting House.

Commemorative Programmes and National Days

- Jan. 27 Australia Day Programme, including a concert and talk by Mr. S. M. Bruce.
Feb. 6 New Zealand Day Programme. 'Talk by Sir James Parr.
29 St. David's Day Programme, including a Welsh concert, and talk by Mr. D. Lloyd George.
Mar. 17 St. Patrick's Day Programme (*see also* List 'B').
26 Cecil Rhodes Anniversary: Scenes from 'So Much To Do' (Barbor).
April 23 St. George's Day Pageant.
25 Anzac Day Programme.
May 24 Empire Day Programme, including a programme of Kipling's works (*see also* List 'B').
Jubilee of the City of Vancouver: Service from St. Margaret's Church, King's Lynn (*see also* List 'B').
June 1 National Day in the Union of South Africa. Message from Mr. C. T. de Water, and programme, 'Heimwee in London'.
July 1 Dominion Day Programme, inc. Speech by Mr. Vincent Massey, from Geneva.

- Aug. 27 'Salute to Vancouver', incidents from the life of Captain Vancouver.
Nov. 1 'The Battles of Coronel and the Falkland Islands.'
30 St. Andrew's Day Programme.
Dec. 28 Centenary of South Australia: special programme.

Feature Programmes (including Outside Broadcasts)

- Jan. 1 'A Good New Year to One and All': Greetings from the British Isles to those Overseas.
10 'Bound Away': pioneers and explorers.
15 'Face to de Risin' Sun': Spirituals.
Feb. 14 'My Valentine.'
17 'Empire Mail Bag.'
Mar. 16 'Caravanserai.'
25 'The Music Makers', an anthology of music and poetry.
April 14 'Lifeboats', with Lord Mottistone.
21 'Bully Beef Supper', from a Meeting of the British Legion.
May 1 May Day Programme.
6 'Transatlantic Ferry': the North Atlantic.
17 'Nightingales at the Microphone.'
June 11 The Aldershot Searchlight Tattoo.
26 First of the 'Counties' series.
July 6 'Raffles of Singapore.'
10 'Late Extra': the Newspaper.
29 'Andante Doloroso', featuring the works of Robert Schumann.
Aug. 12 'The Undying Swan', a Ballet Programme.
Sept. 8 'Dixie Land whar I was born in', by John Payne and his Jubilee Singers.
29 'The Round Trip.'
Oct. 8 'Bula Matari', 'The Breaker of Rocks, the story of Henry Merton Stanley.
10 Continuation of 'In Town To-night'.
16 'O Romani Rommerin', a Gypsy wedding celebration.
23 'To the West! To the West!' a Memorial to Henry Russell.
29 'Number Please': the Telephone.
30 'D'ye ken John Peel?'
Nov. 24 'Noson Llawen.'
Dec. 16 'Half-an-hour in East Anglia', the first of a series on folk-lore and songs.

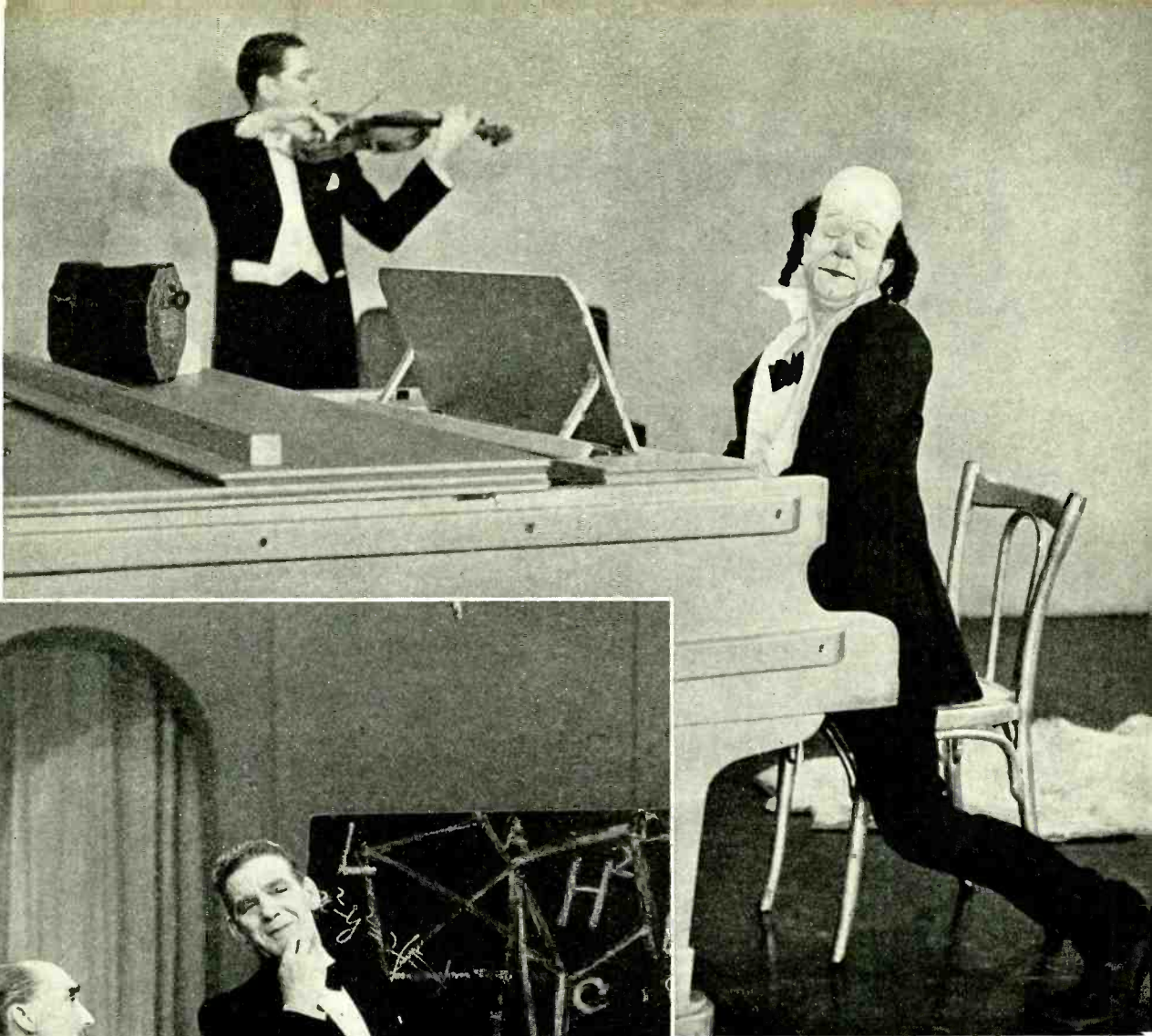
(B) BROADCASTS ORIGINATED IN THE OVERSEAS (EMPIRE)

- Jan. 1 Opening New Delhi Broadcasting Station.
9 Opening of South African Scout Jamboree: Message by Lord Baden Powell from East London, S. Africa.
22 The late King: broadcast by the Viceroy to the People of India, from New Delhi.
Feb. 7 Australia v. India Cricket Match, from Madras, India.
17 Messages by Lincoln Ellsworth and Commander Hill (*Discovery II*) on Antarctic Rescue, from Melbourne.

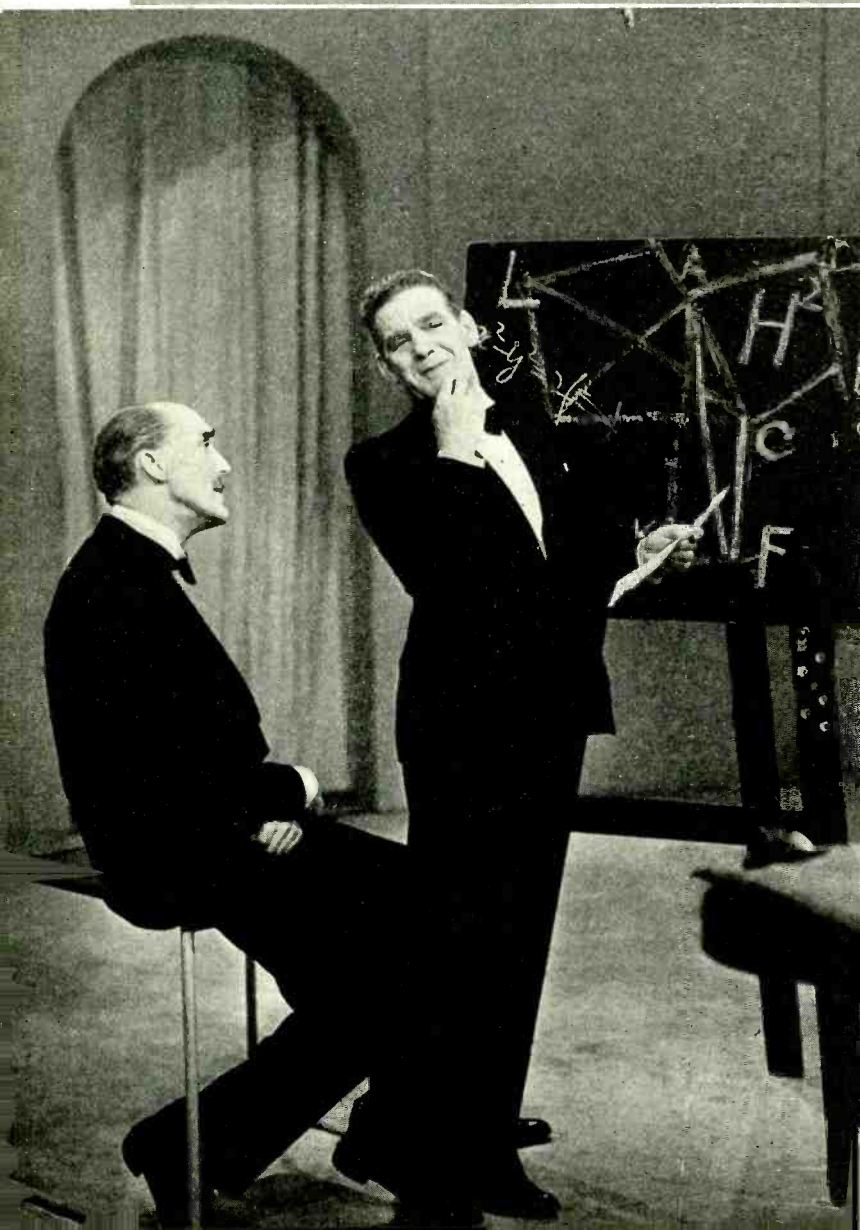


JEAN BATTEN BEING WELCOMED IN NEW ZEALAND AFTER HER RECORD FLIGHT FROM ENGLAND
(16 October 1936)

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| <p>Mar. 6 Opening of England to Kenya Telephone Service: Speeches by Postmaster-General and Governor of Kenya, from Nairobi.</p> <p>Mar. 17 St. Patrick's Day programme, including Speech by the President of the Executive Council, Mr. Eamon de Valera, from Dublin.</p> <p>April 8 The Retiring Viceroy's Farewell Address to the Indian Central Legislature, and an eye-witness account by Major F. Yeats-Brown, from Delhi.</p> <p>17 & 18 Change-over of Viceroys in India: Arrival at Bombay of the Viceroy-Designate (Lord Linlithgow); Departure from Bombay of Lord Willingdon; Arrival at New Delhi of new Viceroy; and his speech to the People of India, from India.</p> <p>May 7 Arrival in Cape Town of Mrs. Amy Mollison on her flight from London to the Cape, from Cape Town.</p> <p>24 Empire Day Programme (inc. internal relays in the Union) from Cape Town.</p> <p>July 31 Meeting of Lord Tweedsmuir (Governor-General of Canada), and President Roosevelt, at Quebec: from Quebec.</p> | <p>Aug. 20 Vancouver Jubilee: Unveiling of statue of Captain George Vancouver by Lord Mayor of London, and subsequent speeches: from Vancouver.</p> <p>Sept. 15 Opening of the Empire Exhibition, Johannesburg: Speeches by Lord Clarendon, General J. B. M. Hertzog, and Mr. G. M. Huggins, followed by recorded messages of greeting from the Prime Ministers of Great Britain, Canada, Australia, and New Zealand.</p> <p>Oct. 1 Arrival of winners in Portsmouth to Johannesburg Air Race, from Johannesburg.</p> <p>16 Relay of broadcast by Jean Batten after her record England to New Zealand flight: from Wellington, New Zealand.</p> <p>19 First of the talks in the 'World Affairs' series from overseas, by Dr. H. L. Stewart: from Ottawa, Canada.</p> <p>29 Talk on the Nairobi to Johannesburg Car Race, from Johannesburg.</p> <p>Nov. 16 Talk on 'World Affairs', by Prof. G. L. Wood, Melbourne University.</p> <p>Dec. Commentaries on Test Matches: Australia v. England.</p> <p><i>Various dates</i></p> |
|---|--|



(above)
Noni in 'Starlight' programme



(left)
Ian Hay and Will Hay, a comedy
dialogue in 'Picture Page' pro-
gramme

TELEVISION

General

When the previous issue of the *Annual* went to Press, the main decisions governing policy and operation during 1936 had already been taken (see p. 143 of that issue), and work was in hand for the reconstruction of part of Alexandra Palace in North London as a centre for both transmission and programmes. Further, the B.B.C. had been placed in charge of the service, a Television Advisory Committee under Lord Selsdon had been appointed by the Postmaster-General to supervise development, and it had been decided to use two systems known as 'Baird' and 'Marconi-E.M.I.' under strictly comparable conditions, before conclusions were reached as to the future.

During 1936, operations were carried out on these bases, and the two systems and their installations at Alexandra Palace are described in detail below.

The programme history of the London Television Station begins with the Radiolympia Exhibition in August 1936. That Exhibition, it was recognized, offered a particularly favourable opportunity of giving large numbers of the public a glimpse of television. The first experimental transmission specifically for Radiolympia took place on 26th August 1936. There were two one-hour transmissions daily for the duration of the Exhibition, finishing on 5th September 1936. The two systems were used alternately by days, choice of the first day being decided by the toss of a coin. The daily programme consisted of short vaudeville entertainments, news-reel films, short documentary films and excerpts from current British and American film productions. It was estimated that more than 100,000 people visited the television booths. On the conclusion of Radiolympia 1936, the station closed down for preparation for service transmission, and during October a series of public test transmissions was radiated.

The official opening took place on 2nd November 1936. The Postmaster-General, Major the Rt. Hon. G. C. Tryon, performed the ceremony, which was transmitted first by the Baird and then by the Marconi-E.M.I.



ANNOUNCING A TELEVISION PROGRAMME

system, and those present included Mr. R. C. Norman, Chairman of the B.B.C., Lord Selsdon, Chairman of the Television Advisory Committee, Lord Inverforth and Sir Harry Greer. From then until February 1937 the Television Service was operated for two hours each day on six days of the week, the two systems being used in alternative weeks.* A wide variety of programme material was produced, both in the studio and outside in the premises of the Alexandra Palace and the surrounding Park.

* Daily reception of the television programmes was arranged in the Grand Committee Room, Westminster Hall, from 30th November to 11th December, for Members of Parliament.



AN UNRETOUCHED PHOTOGRAPH OF THE IMAGE ON THE SCREEN OF A TELEVISION RECEIVER

Studio programmes included extracts from West End productions, revue, variety, ballet and illustrated talks and demonstrations, as well as a weekly magazine programme of topical interest called 'Picture Page'. From outside the studio came demonstrations of golf, riding, boxing and other sports. Owing to limited facilities for rehearsal, it was seldom possible to attempt original productions in the studio, but valuable experience was gained in methods of presentation over a very wide field.

On 5th February 1937, the Postmaster-General made the important announcement that, as a result of the experience gained, the Television Advisory Committee had recommended that the London experimental

period, during which different technical standards of transmission had been used during alternate weeks, should be terminated, and that a single set of technical standards should be adopted for public transmissions from the London Station. This recommendation, which was approved by the Postmaster-General, provided for the adoption of one standard, which would not be substantially altered before the end of 1938.

As a result of this decision television transmissions from Alexandra Palace of 240 lines with 25 frames per second were discontinued, and all transmissions since 8th February have been and will be on the standards set out on page 160, which will be known as the London Television standards.

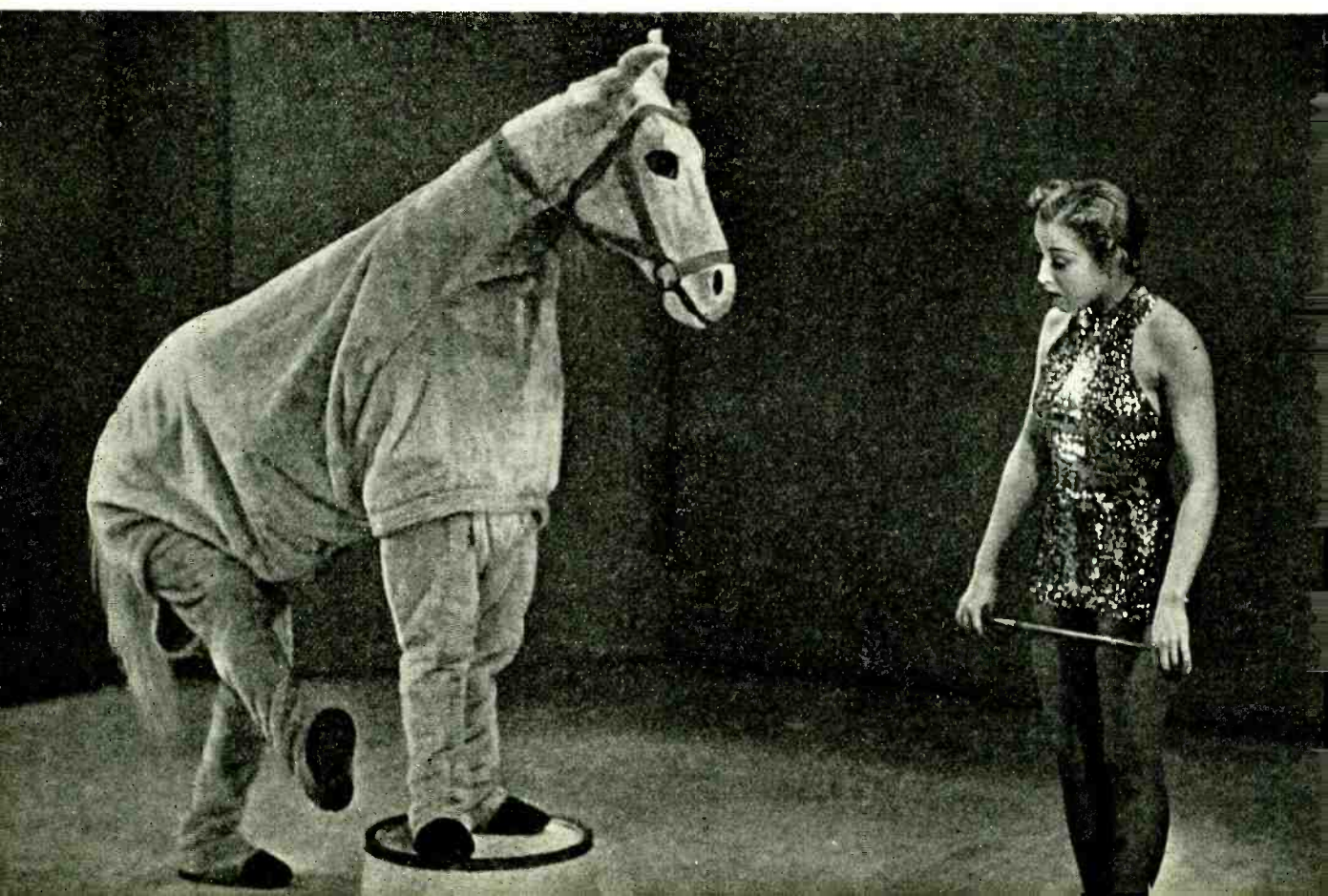


Anti-Aircraft Defence Display
(12 December 1936)



The Vic-Wells Ballet Company in 'Façade'
(8 December 1936)

Florence Mayo and Felix the Horse in 'Animals All' programme
(22 December 1936)



TELEVISION EVENTS

- Aug. 26 The first high-definition Programme arranged for reception at Radiolympia—
'Here's Looking at You!', a Vaudeville production.
- Oct. 5 The first test transmission of an Outside Broadcast—a Golf Demonstration
by Archie Compston.
- Nov. 2 Official Opening of the B.B.C. Television Service at Alexandra Palace by the
Postmaster-General, Major the Rt. Hon. G. C. Tryon.

STUDIO PRODUCTIONS

- Nov. 10 'Citizen Soldiers of London', a Pageant reconstructed from the Lord Mayor's
Show.
- 13 'Mr. Pickwick', extracts from a new Opera by Albert Coates.
- 23 'The Tiger', scenes from the Play by Reginald Berkeley.
- Dec. 7 'Murder in the Cathedral', scenes from the Play by T. S. Eliot.
- 8 'Façade', a Ballet performed by the Vic-Wells Ballet Company, conducted
by the composer, William Walton.
- 30 Traditional Plays and Songs by the Children's Theatre Company.

VARIETY

- Dec. 7 'Cabaret Cartoons', a Vaudeville presentation with simultaneous drawings
by Harry Rutherford.
- 22 'Animals All', a programme by Animal Impersonators from the Pantomimes.
- 24 'Old Time Music Hall', by Veterans of Variety.

TALKS

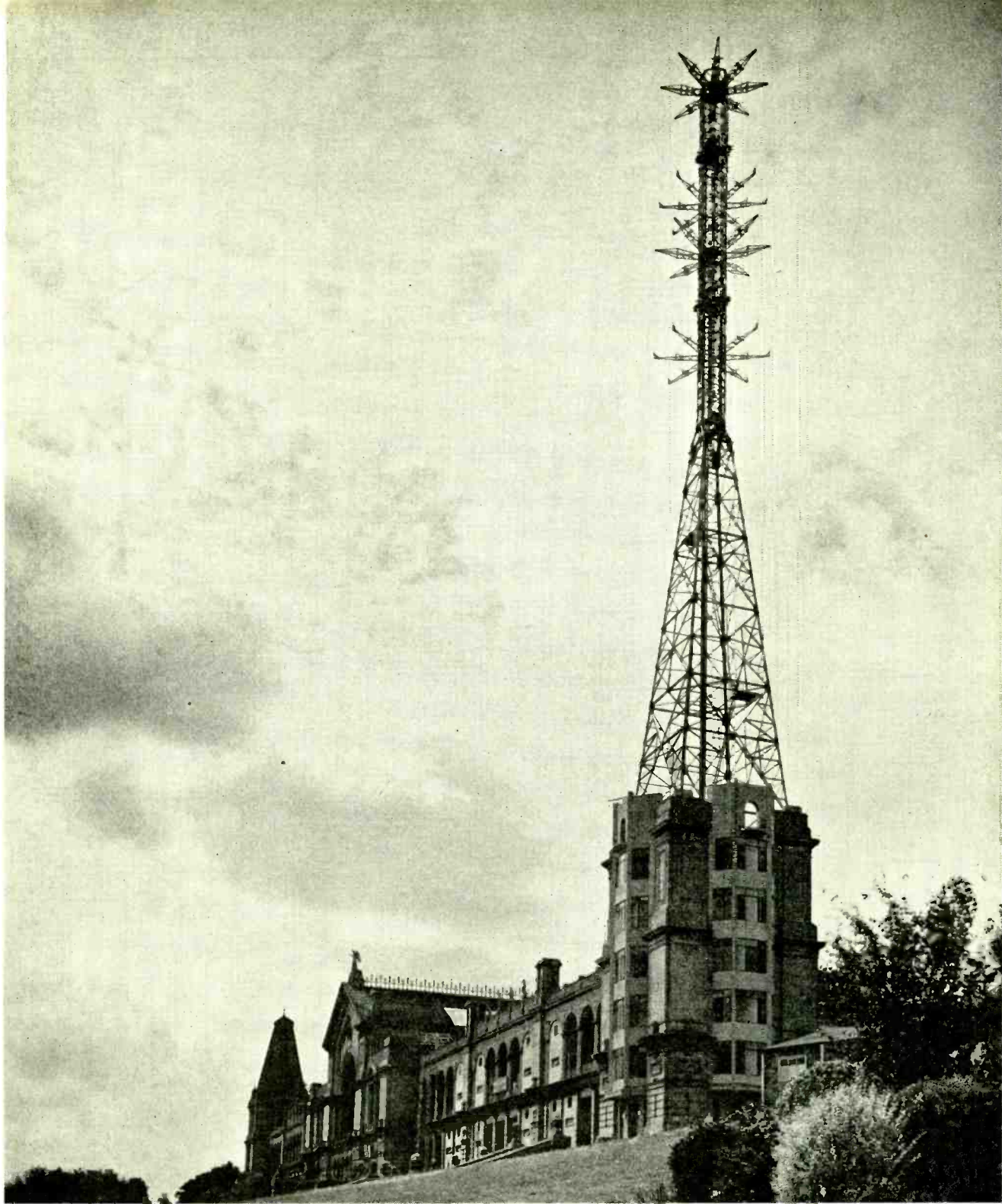
- Nov. 17 'Inn Signs Through the Ages', by Montague Weekley.
- Dec. 12 'The Modern House', a Discussion between John Gloag and Serge Chermayeff.
- 22 'Ships', a Royal Institution Lecture, by Professor G. I. Taylor.
- 30 'The Pattern of 1936', a Review of trade, finance, etc., by Professor John
Hilton.

OUTSIDE BROADCASTS AND TOPICAL PROGRAMMES

- Oct. 9 A Tour of the North London Exhibition at the Alexandra Palace.
- 23 'Model Theatres', from the British Model Theatre and Puppet Club
Exhibition.
- Nov. 11 Armistice Day Programme.
- Dec. 12 Anti-Aircraft Defence Display by the 36th Middlesex Anti-Aircraft Battn.
R.E. (T.A.), and the 61st (11th London) Anti-Aircraft Brigade, R.A. (T.A.).
- 31 'Diary for 1936', a reconstruction of outstanding items in Television
Programmes.

SERIAL FEATURES

- 'Picture Page', a weekly Magazine Programme, to which the contributors
have included Jim Mollison, Squadron-Leader F. R. D. Swain, Kay Stammers,
Algernon Blackwood, Vicki Baum, Paul Schoeffler, Roger Quilter, David Low,
Ian Hay and Will Hay.
- 'Starlight', including Bebe Daniels and Ben Lyon, Manuela del Rio, Lisa
Minghetti, Lou Holtz, Sophie Tucker, Noni, Frances Day, and George
Robey.
- 'London Characters.'
- 'Friends from the Zoo', Animals from the London Zoo, introduced by
Mr. David Seth-Smith.



The London Television Station, Alexandra Palace

The mast carries two separate aerials: (above) vision (below) accompanying sound

LONDON TELEVISION STATION

The London Television Station, the first television station to be erected by the B.B.C. in Great Britain, has been established at the Alexandra Palace. This site was selected as it seemed to offer the best compromise between a number of requirements, notable amongst which was the necessity for the station to be situated as high as possible above sea-level, and yet to be near the centre of London. The Palace stands some 300 ft. above sea-level, between Wood Green and Muswell Hill. It is a very large building, a feature which was an additional recommendation as, the new station being experimental, it was difficult to estimate how much space would be required.

As is now well known, the Postmaster-General's Committee to consider the development of television recommended that the B.B.C. should equip the station with two different systems of television, that of the Marconi-E.M.I. Television Company, Limited, and that of the Baird Television, Limited. The two systems were accordingly tried under strictly comparable conditions, being used alternately for periods of a week.

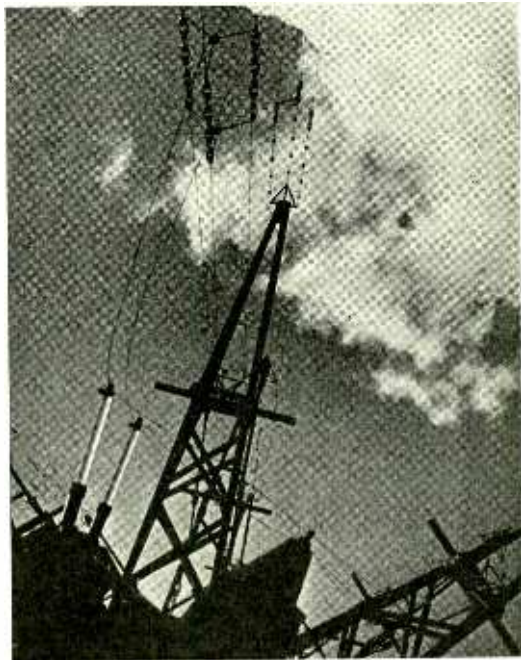
As mentioned earlier, the E.M.I. system alone is in use from 8th February 1937. Below is a description of the Station as installed in 1936. For technical details of standards, see page 160.

The B.B.C. has leased from the Alexandra Palace Trustees an area of some 30,000 sq. ft. in the south-east corner of the Palace in which the station proper is housed, and a further area of some 25,000 sq. ft. in the north-east corner, the latter including a large theatre which is available for rehearsals and general extension. Each of these areas includes a tower.

Although the systems were entirely separate in all other respects, it was early agreed that they should use a common aerial and feeder system to be designed and erected by the Marconi-E.M.I. Television Company, Limited. One of the earliest steps in the installation of this system was to erect on the south-east tower a mast to support these aerials. A cupola roof was first removed, leaving the original brick structure of the Palace 80 ft. high, and upon this was

erected a mast 220 ft. in height. This is a steel structure of square section at the base, gradually tapering for the first 120 ft. of height, when the taper ceases and the section becomes octagonal. The topmost aerials are thus about 600 ft. above sea-level. The latter section supports two systems of aerials placed one above the other and of similar design, the upper aerials for vision, and the lower for sound signals. Both systems consist of triangular dipoles in push-pull, with which are combined a system of reflectors to enhance the outward radiation and prevent currents being induced into the mast. These aerials are connected to the transmitters below by concentric copper tube feeders in which are incorporated certain electrical transformations designed to ensure that the aerial radiates the maximum of picture detail with a minimum of distortion.

The Palace tower, upon which the aerial mast is erected, has been reconstructed to provide an entrance hall on the ground floor



A DETAIL OF THE AERIAL SYSTEM

and five floors of offices above. The area in which the studios and transmitters are established lies along the south front of the Palace adjoining the entrance hall, and was to a certain extent naturally adapted to its purpose as it consisted of two floors, there being available on the ground floor three large halls of suitable size to contain the transmitting apparatus, and on the upper floor a number of rooms which could be easily adapted to form studios, control rooms, dressing rooms, and scenery stores.

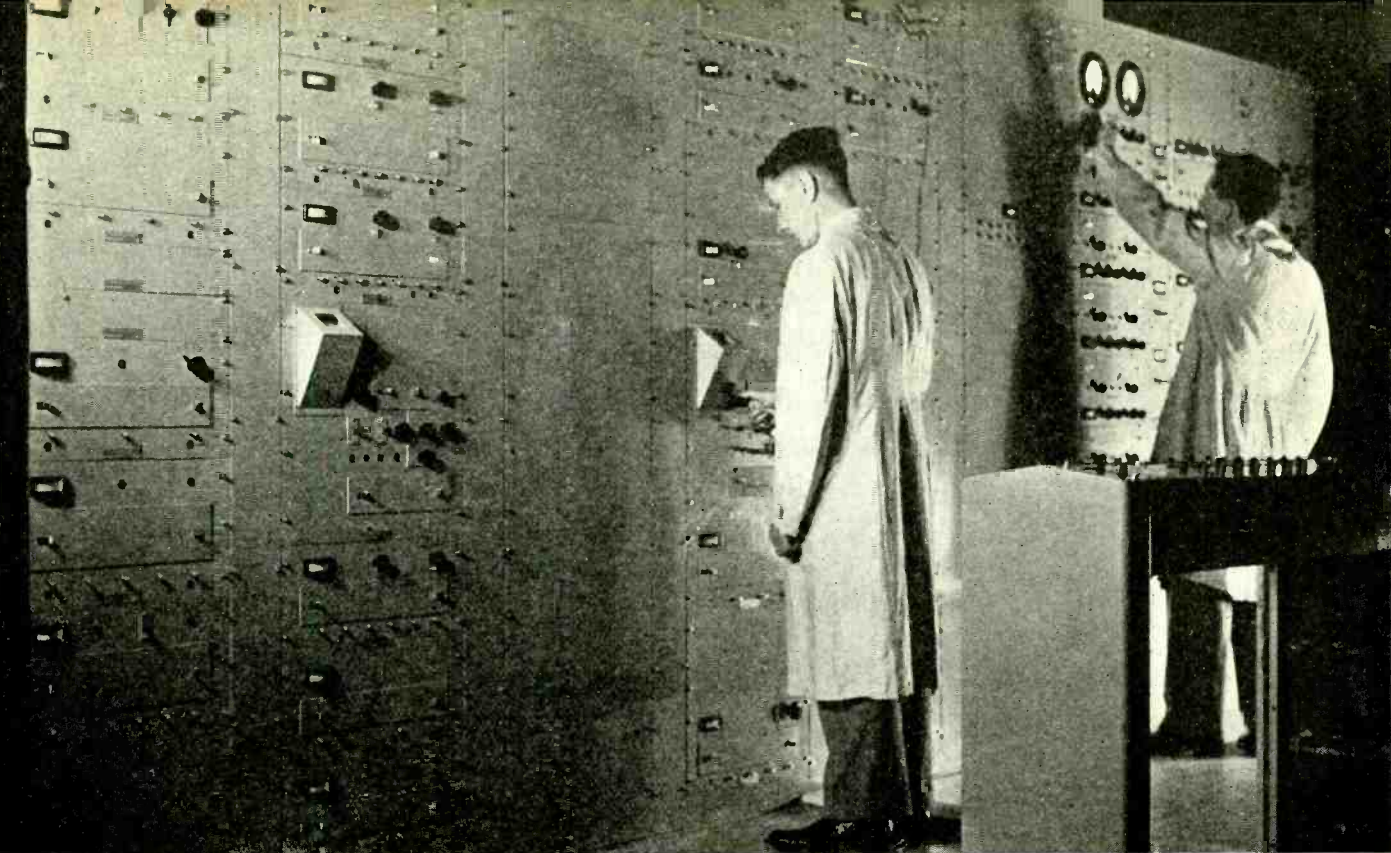
The Marconi-E.M.I. System

For this system one studio 70 ft. long and 30 ft. wide and 23 ft. high was provided. One end of this is designed in the form of a stage and is equipped with curtains at the front, centre, and rear. It has been found that the correct lighting of scenes for television is a matter of considerable importance involving a new technique, which is not entirely that of the theatre, nor of the film studio, but rather a judicious combination of the two, and consequently a stage-lighting system of 50 kW. capacity and of considerable flexibility has been installed. To dispose of the heat generated by this volume of lighting, a silenced ventilation system is provided. The studio is equipped with four of the 'Emitron' cameras developed by the Marconi-E.M.I. Company, one of which is mounted upon a special run-truck which enables what are known as 'dolly shots' (in which the camera moves to and from the scene while in action) to be made. In order to pick up the sound eight microphones are provided, five being of the moving-coil type, the remaining three being ribbon microphones. The transmission of films is effected from two television film projectors also employing 'Emitron' cameras, situated in a special room close to the studios. There are also rooms for film rewinding and general repairs.

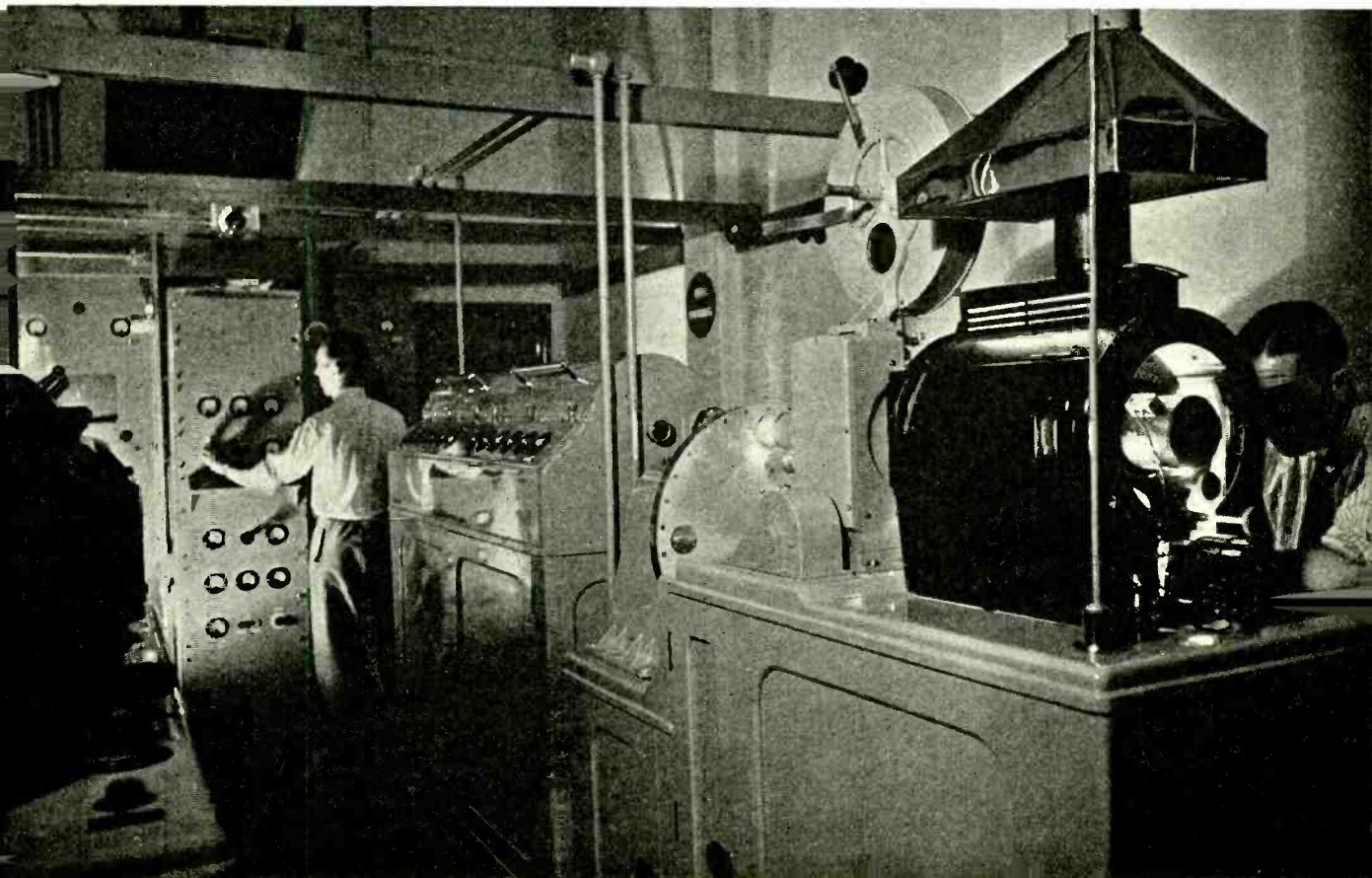
Adjoining the studio is the control room, on one side of which are situated a number of vertical racks of apparatus for the treatment and control of the vision signals received from the studio cameras and from the film apparatus. This control room vision apparatus is complicated. Apparatus is provided for the generation of a number of

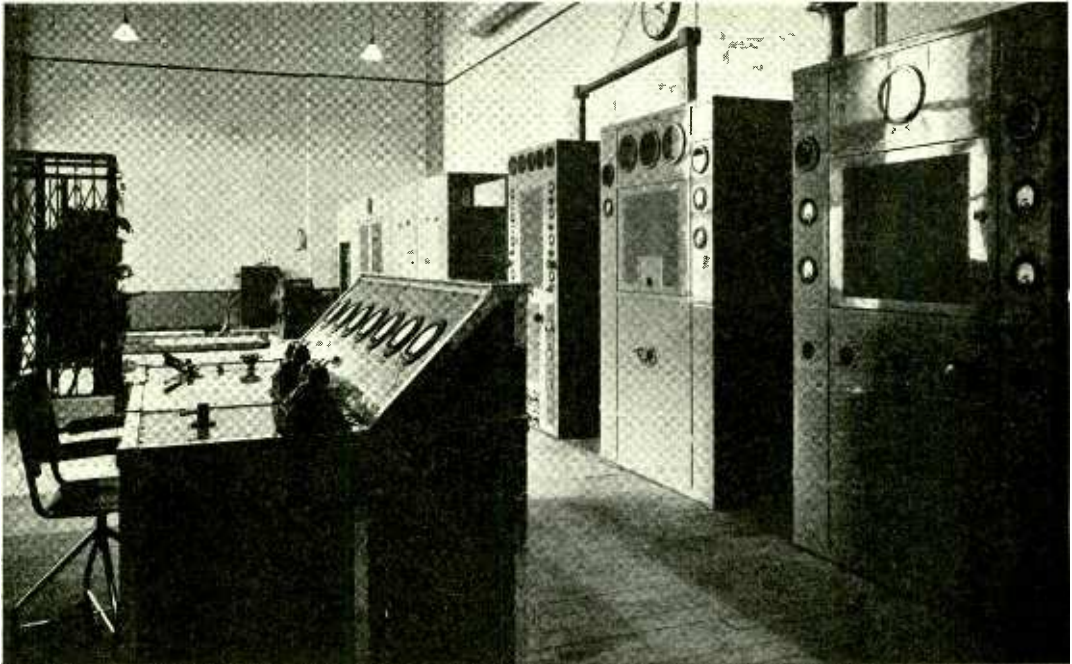
electrical impulses of various shapes and frequencies which are required in conjunction with the 'Emitron' camera, and which effect certain transformations in the nature of the vision currents before they are suitable for transmission. Here also are added the special synchronizing impulses which are necessary to keep the picture at the receiver in step with the transmission. At one side of the vision racks is a monitor upon which the operators may see not only the picture which is being transmitted from any individual camera, but from another camera the next scene to be transmitted, which is of course prepared in advance. On the opposite side of the control room are other racks of apparatus concerned solely with the sound part of the programme. Here the sound signals from the microphones or film apparatus are given the requisite degree of amplification. High up on the side of the control room adjoining the studio is a platform from which the producer and controlling engineers can see into the studio through a window. From this point the programme is directed, the various cameras and microphones and also the film apparatus being switched in as required. On this platform also is a desk containing two turntables for the reproduction of gramophone records.

From the control room the vision signals are passed via a concentric cable to the Marconi-E.M.I. transmitter, which is situated in a large hall on the ground floor immediately beneath the studio. Here the vision signals are applied to the modulator which magnifies them up to an amplitude of some 2000 volts. Alongside the modulator is the radio-transmitter proper. This consists of three units, the first of which contains a master-oscillator, generating a frequency of $22\frac{1}{2}$ megacycles per second, a doubler which converts this to a frequency of 45 megacycles per second, and four stages of amplification. From this unit the 45 megacycle carrier frequency is passed to the second unit, where it receives further amplification and thence to the third unit known as the modulated amplifier to which is also applied the output from the modulator. In this amplifier modulation takes place and the modulated waves are passed to the aerial feeder. The transmitter hall also contains high voltage rectifiers



Marconi-E.M.I. Control Room showing (left) Pulse Generators, and (right) 'Emitron' Camera-Amplifiers
The Baird Teleciné Scanning Apparatus





THE SOUND TRANSMITTER

supplying power to the transmitter at 5000 and 6000 volts, and a further mercury pool rectifier supplying the modulator at 5000 volts. There are also generators for filament and control voltage supplies and a 50 kW. 500-cycle inductor-alternator supplying power to the mercury pool rectifier. The power radiated by this transmitter varies of course with the nature of the picture, rising to a peak value of 17 kW., this value corresponding to the white parts of a scene.

The Baird System

For this system two studios were provided, one, the main studio, of the same dimensions as that provided for the Marconi-E.M.I. system, and the other very much smaller. In the main studio two separate methods of television were used. The first is known as the intermediate film process, in which a 17.5 mm. film is taken in the studio and is continuously passed in turn through a developing tank, a washing tank, a fixing tank, and a second washing tank, the complete process taking 65 seconds. This negative is immediately scanned while

wet by a disk rotating at 6000 r.p.m., illumination being obtained from an arc consuming 30 amperes. The light from the scanning disk passes on to a photo-cell in which is incorporated an electron multiplier. The vision current from this unit passes to a valve amplification chain from which it is sent to the Baird control room. The recorded sound is also taken off the film by a reproducing head and passed to the control room. The intermediate film apparatus is situated in a room built at the side of the studio and separated from it by a glass window through which the camera views the scene.

The second method of television available in this studio consists of the Baird 'Electron' camera. This again has a special sub-control room of its own at the side of the studio and its signals are also passed to the main Baird control room.

This studio, although differently arranged, is similarly equipped with a flexible stage lighting system of 70 kW. capacity, the power for which is derived from D.C. generators, and ventilation equipment of appropriate capacity is installed. The studio is equipped with three microphones, which are controlled

from a small sound room located above the intermediate film room. From here the controlling engineer fades in the microphones as required and they may either be switched to the intermediate film apparatus so that the sound may be recorded or direct to the main control room, when the electron camera is being used. This room also contains turntables for the reproduction of gramophone records.

The small subsidiary studio, which may be used for such purposes as talks or the television of cartoons, is designed to use the spotlight system in which the studio itself is kept largely in darkness and a scanning beam of light is projected on the artist, the light reflected from the scene being picked up by photo-cells. In the projection room adjoining, therefore, a large disk rotating at 6000 r.p.m., and illuminated by a 150 ampere arc, generates the scanning beam which is admitted through a small window. The studio is provided with four photo-cells, again employing multipliers, from which the generated signals are passed through an amplifying chain to the control room. The sound is picked up by one microphone.

In a further room are installed two projectors for the scanning of films, in which the films are scanned by disks rotating at 6000 r.p.m., the illumination being derived from 30 ampere arcs. The light from the scanning disks falls on the photo-cells, incorporating multipliers, the output of which passes through a chain of amplification to the main control room.

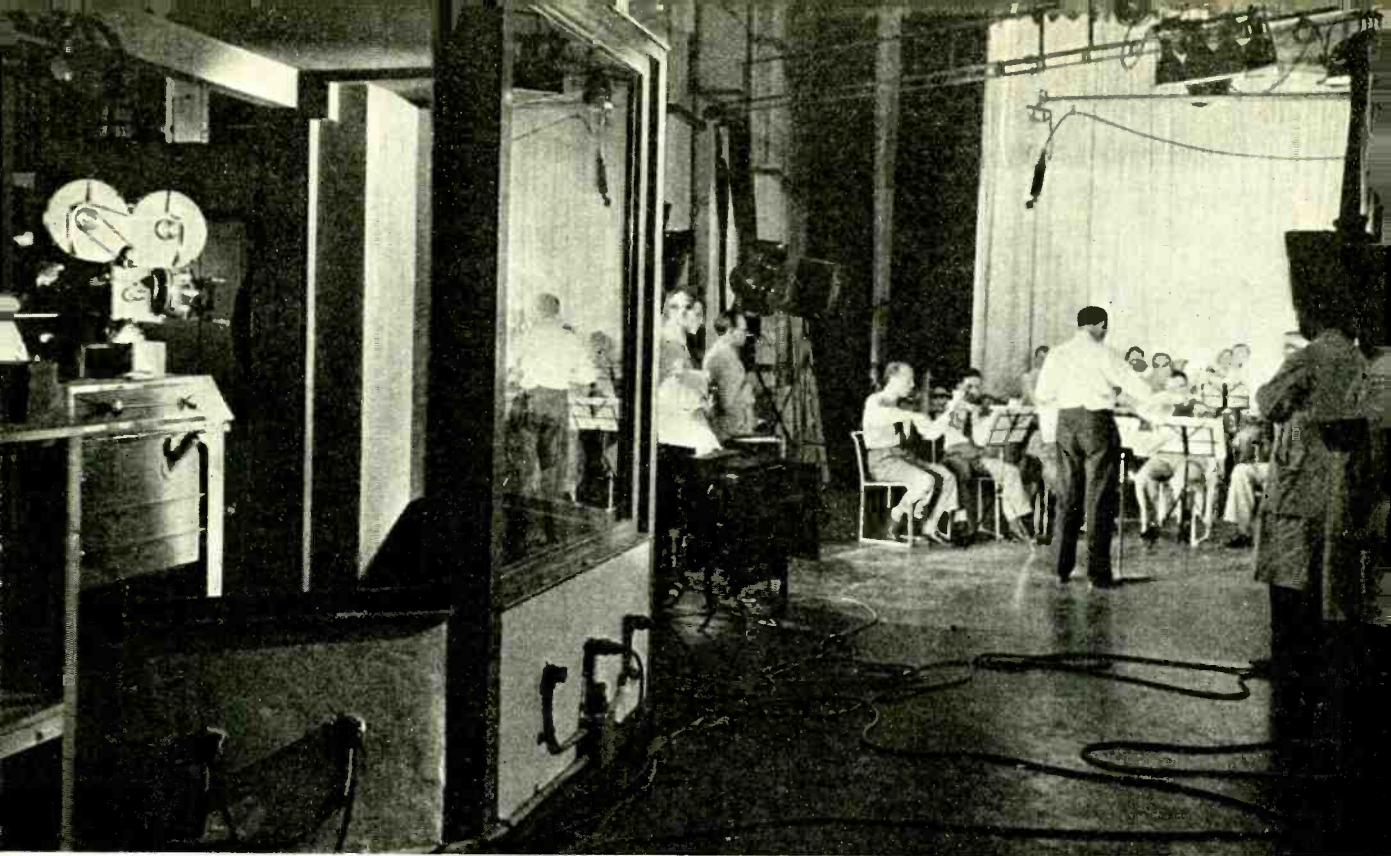
The main control room, situated alongside the main studio, contains the sound and vision controlling desks, from which the programme is controlled, and around the walls are numerous racks containing amplifying apparatus for the sound and vision circuits.

The vision signals from the control room pass to the Baird transmitter which is again situated immediately beneath the main studio. The synchronizing and vision signals are kept entirely separate and are further amplified in the transmitting hall by separate modulators. The transmitter proper consists

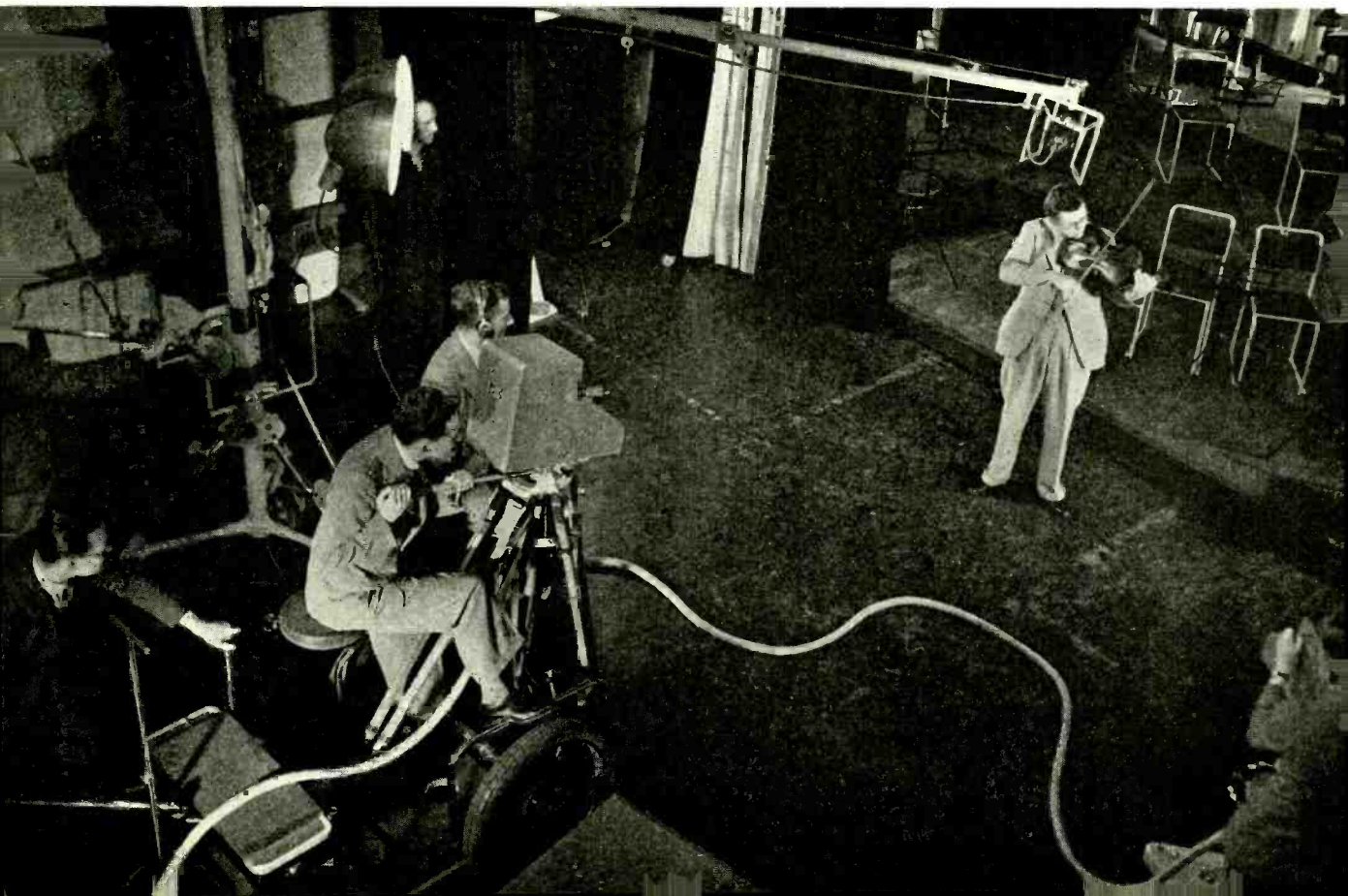
of three units, in the first of which the carrier frequency of 45 megacycles per second is generated at a power of 100 watts by a crystal master-oscillator and doublers. It passes to the second unit, which contains one stage of amplification incorporating a de-mountable valve. Here it is modulated with the synchronizing signals derived from the synchronizing modulator. The partially modulated signal finally passes to the third unit, which also contains a de-mountable valve, and here it is modulated with picture signals from the picture modulator. The signals having now been raised to a peak power of 17 kW., corresponding to the white parts of the scene, they are passed to the aerial. In the transmitter hall are also installed the necessary generators for the filament and high-tension supplies to the transmitter and also for the D.C. supplies to the scanning arcs and studio lighting.

On the ground floor between the two vision transmitters is a single sound transmitter, supplied by Marconi's Wireless Telegraph Company, Limited, which radiates the sound from either system and may accordingly be switched to either. This has a power of 3 kW. on the Copenhagen rating and is designed on well-established lines. It radiates the sound signals on a frequency of 41.5 megacycles per second.

The requirements of television necessitate the provision of various non-technical facilities. There is, for instance, on the ground floor a small film theatre equipped with 35 mm. and 16 mm. projectors, by the use of which the film editor can select films for inclusion in the television programmes. On the opposite side of the studio corridor to that on which the studios are situated are a number of dressing rooms for artists and a band room for the television orchestra. A scenery store is provided at the end of this corridor, and underneath this is a large area, termed the production shop. This fulfils many functions, notably that of an additional studio, provided with simple studio lighting arrangements of a capacity of 24 kW., to which many outside broadcasts can be transferred in the event of wet weather.



The Baird Intermediate Film Scanner
The Marconi-E.M.I. studio showing 'Emitron' Cameras



HOW TELEVISION WORKS

The transmission of television pictures is closely allied to the broadcasting of sound, but there are certain fundamental differences in technique.

In order to appreciate the points of divergence, it is desirable to consider the differences which exist between the two senses to which these arts make their respective appeal.

The sense of hearing, to which sound broadcasting is directed, involves certain considerations which are better appreciated from a brief examination of the properties of the ear. The ear may be said to be essentially a single-channel device, having but one eardrum, and one connexion to the brain through the aural nerve. In consequence, the ear does not convey separately a number of sounds that strike it simultaneously, it conveys them as a mixture.

From this fact, it is clear that any number of simultaneous sounds will resolve themselves into a single pressure wave consisting of a mixture of them all, and this mixture may be picked up and converted into a single electrical waveform by a single microphone. The resulting waveform, however complex it may be, can be passed through a single amplifier, and broadcast from a single transmitter.

Turning to the sense of sight, to which television makes its appeal, a very different state of affairs is disclosed, and in order to appreciate the precise problems involved, it is necessary to consider, briefly, the action of the eye itself.

An image of the scene being observed is cast by the lens, or cornea, on the light-sensitive plate, or retina, at the back of the eye. The retina consists of a multitude of tiny elements, each separate and distinct from its fellows. Each element is separately connected to the brain by an individual fibre in the optic nerve, and there are probably something like one million such elements in the average human eye.

The eye is therefore an exceedingly complex organ, and exercises keen discrimination, picking out minute details of the scene before it, and conveying a perception of each detail separately to the brain. It does not mix the details up, otherwise the viewer would perceive only an unintelligible blur.

To satisfy the demands of the eye for the purposes of television transmission, it is therefore useless to send a mixture of detail. All details of a scene must be transmitted separately and simultaneously, and to present a received picture of good definition something approaching a quarter of a million separate details must be transmitted.

Happily, there exists a device known as the photo-electric cell, which reacts to light in the same manner as the microphone does to sound, and is, in fact, equivalent to one of the elements of the retina. The whole process of television is based upon its use; but to send, in a straightforward manner, a quarter of a million details would necessitate a quarter of a million photo-cells, a quarter of a million radio transmitters, and a like number of receivers at the other end. As this is clearly impossible, an expedient has to be adopted in order to place the transmission within the bounds of possibility.

The expedient, or trick, which is used takes the form of a process known as 'scanning', which consists in dissecting the picture into a large number of minute pieces, like the pieces of a jig-saw puzzle, each piece being sent out separately and the whole reassembled at the receiver with such rapidity that the eye is deceived.

The actual process is more analogous to dictating a book over the telephone. Here the problem is much the same. It might be possible to pronounce all the words on a page simultaneously, but little intelligence would be conveyed, and in consequence it is necessary to dictate word by word, line by line, and page by page, telling the recipient when to start a new line and a new page.

In the process of scanning, the picture to be transmitted is divided up into a great many lines, the detail which occurs along each line being dictated by the scanning apparatus, and faithfully transcribed by the receiver. The scanner also informs the receiver when to start a new line, and a new page or frame, by means of 'synchronizing signals,' which are known as the 'line' and 'frame' synchronizing signals respectively.

Each frame represents a complete picture, and if successive frames are built up rapidly

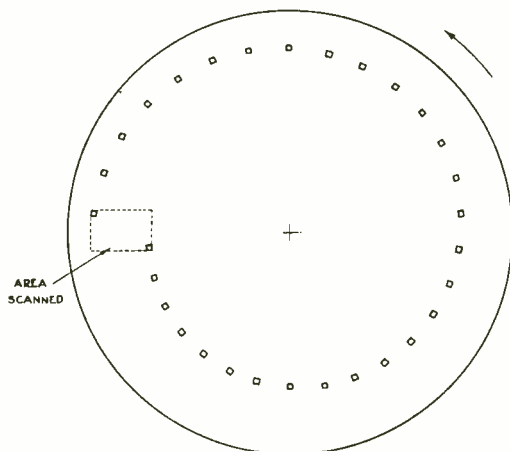


FIG. 1. NIPKOW DISK

enough, the property of 'persistence of vision' deceives the eye into thinking it is seeing a continuous picture. The cinematograph relies upon the latter property in projecting upon the screen a rapid succession of photographic images, the movement in each of which is slightly more advanced than in the preceding one, so that an illusion of continuous motion is produced.

It is clear that sufficient frames must be transmitted each second to produce the desired illusion, and to avoid the impression of flicker. The Television Advisory Committee laid it down that a minimum of 25 frames per second should be employed at the London Television Station. It was further laid down that a minimum of 240 lines per picture should be used.

Those familiar with process blocks used in printing know that the greater number of picture points to the inch, the better the picture. So in television, the greater the number of lines, the better the definition of the picture, provided that full advantage can be taken of the greater number of lines in the reproduction. The technical difficulty of transmission, however, increases very rapidly with the number of lines and frames, so that the actual choice of standards is to a great extent influenced by practical considerations.

The standards* adopted were:

* The 'London Television Standards' announced by the Postmaster-General on 5th February 1937, for single-system transmissions are: 405 lines, interlaced, 50 frames per second; ratio of synchronizing impulse to picture, 30:70.

Baird Television, Ltd.—240 lines, 25 frames per second, sequentially scanned.

Marconi-E.M.I.—405 lines, 50 frames interlaced, giving 25 complete picture frames per second.

The process of interlacing consists in scanning all odd lines first, subsequently returning and scanning the even lines required to complete the frame; and it is claimed that the apparent flicker frequency is doubled without materially increasing the technical difficulties of transmission. Flicker is said by this method to be reduced to imperceptibility.

Dissecting the Picture

MECHANICAL METHODS

Many methods have been employed, from time to time, in the dissection of the picture prior to transmission, and one of the earliest made use of the Nipkow disk, invented many years ago and named after its inventor. This device consists of a circular metal disk, pivoted at its centre, and drilled with a series of holes on a spiral path. Upon rotating the disk, these holes scan an area. Reference to Fig. 1 will make this clear.

Sundry variations of this arrangement have appeared, such as mirror drums, disks carrying a spiral of lenses in place of the small holes, etc., and, while these devices are more efficient in the transmission of light, they have dropped out of use as they cannot be constructed with sufficient accuracy to be suitable for high-definition television.

The original Nipkow disk alone survives, and this type of disk, in a modern form, running at high speed in an evacuated casing, is utilized by Messrs. Baird for transmission by all their processes. In the spotlight method, which is applicable to close-up and three-quarter length pictures of one or two persons only, a projected spot of light is caused to traverse the subject in a series of lines and frames in the usual manner. Light reflected from the subject falls upon photoelectric cells, the resultant current variations from which constitute the vision signal.

Standard motion-picture films are scanned in a similar manner by passing the flying spot of light through the film and so to a photo-cell.

The intermediate film process is applicable to more extensive scenes to be televised from

the studio, and involves the recording on film of a photographic image of the scene by means of an ordinary motion-picture camera. Details are given elsewhere; here it is enough to say that immediately after exposure the film is rapidly developed, washed, fixed, and scanned by means of a Nipkow disk while it is still wet.

ELECTRONIC METHODS

The Baird system installed an 'Electron' camera and with this, as indeed with the Marconi-E.M.I. system, the process is entirely different in that scanning is carried out by purely electronic means, without the use of any moving parts.

In the Marconi-E.M.I. system the 'Emitron' is used, a device which has been described with some accuracy as the 'electric eye'. A lens, representing the cornea, casts an image of the scene to be transmitted upon a specially prepared plate which is a close imitation of the retina and which is placed at the wide end of a cathode-ray tube. This plate, which is made of insulating material, is covered with tiny photo-sensitive nodules, very close together but each separated from its fellows. When the optical image falls upon this plate or 'mosaic', photo-emission takes place, and the elements acquire a charge of electricity which is greater or less in proportion to the amount of light falling upon them, so that the plate has upon it a faithful electrical picture of the original scene.

In the tube is also a device known as an 'electron gun', which shoots a stream of electrons, or particles of negative electricity, like bullets from a machine-gun. The gun is aimed at the mosaic, and its aim is varied by application of suitable electric fields so that the point where the beam impinges on the mosaic is moved across the surface in a series of lines. By this means the whole of the surface of the mosaic is explored line by line, and the charges that have accumulated on it are carried away by the electron stream, which acts as a weightless brush, and form the vision signal to be transmitted. After the passage of the beam the mosaic is left wiped clean like a slate, and ready to receive the next series of impressions. The 'Emitron' is mounted in a portable camera similar to a motion-picture camera, and several such

cameras may be used in the presentation of studio and outside scenes, or in conjunction with a projector for reproduction of standard film.

The amount of information which has to be transmitted to make up a good picture is very great, and it may be said that one picture signal contains as much information as would be contained by about 1000 simultaneous telephone calls. Speaking electrically, this implies the necessity of transmitting a band of frequencies, or electrical vibrations, ranging from 1 vibration in many seconds to about 2,500,000 vibrations per second. Compared with the frequency range required for the transmission of sound, this band is enormous; for good sound can be transmitted embracing the band of frequencies 30 to 10,000 vibrations per second only.

Transmitting the Picture

The radio transmitter used for television has much in common with transmitters used for sound broadcasting, in that the signals are sent out superimposed on a carrier wave. The carrier wave may aptly be likened to one of those endless belt conveyors which are installed beneath the counter in some warehouses. The conveyor rolls along silently by itself, conveying nothing, until an assistant at one end of the counter wraps up a parcel of goods and throws it on to the belt. The parcels are carried down to the other end of the counter and deposited in a receptacle where the customer waits.

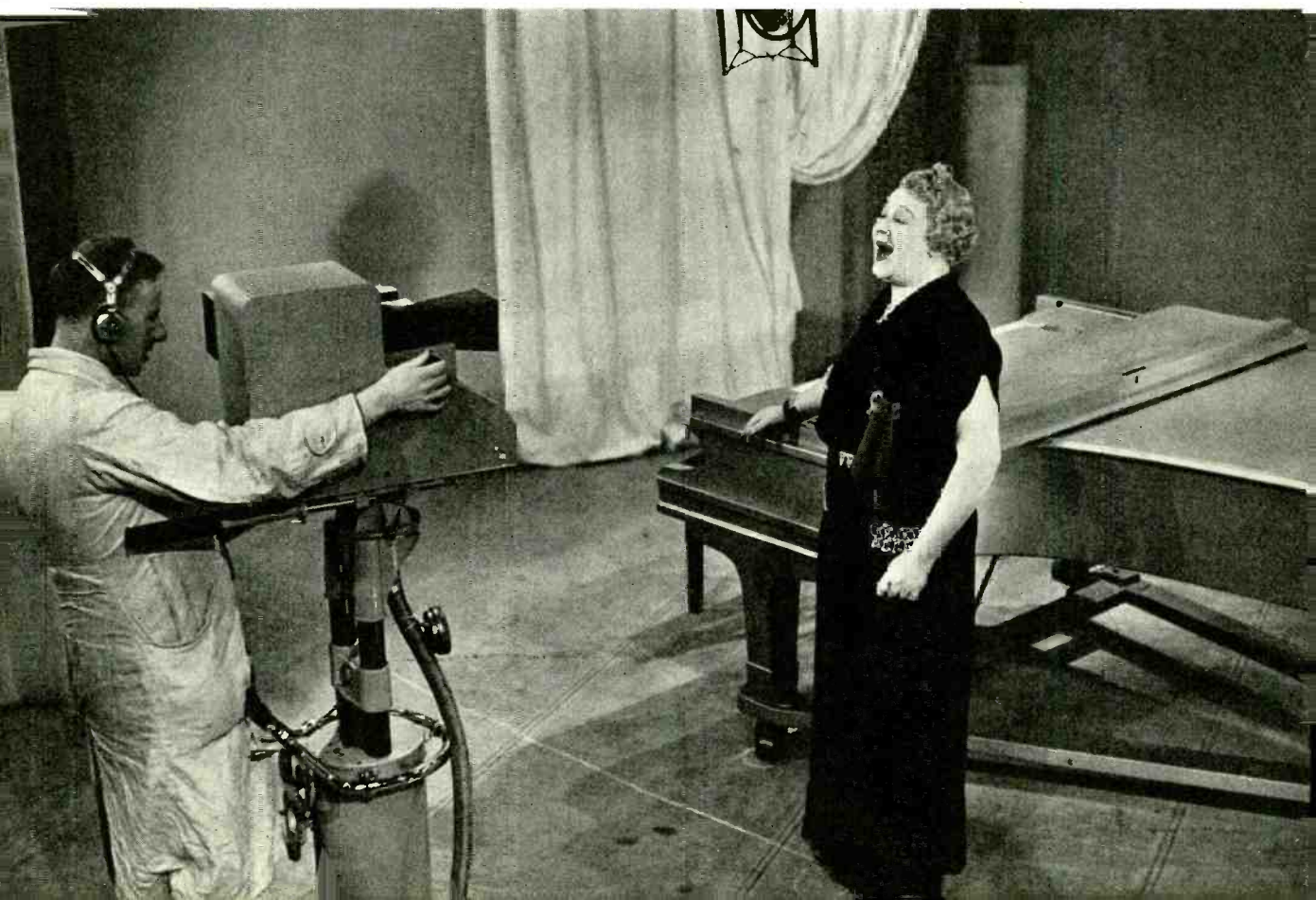
In sound broadcasting the parcels are speech or music, the assistant is the artist in the studio, the carrier wave of the radio transmitter is the conveyor, and the customer is the listener. Similarly, in television, the parcels are bits of picture to be conveyed to the viewer by the carrier wave which forms the conveying link through the ether.

Remembering the great band of frequencies to be transmitted, it will be appreciated that the parcels come in almost overwhelming numbers and at a great rate. Consequently, the conveyor must move very swiftly, or one parcel will jostle another and the whole system become clogged, so that many of the parcels will be unable to get on the conveyor at all.

Turning from the analogy, the carrier



The B.B.C. Television Orchestra
Sophie Tucker in 'Starlight' Programme



wave must move rapidly—in electrical parlance it must have a very high frequency of vibration. As a result of this fact, the carrier wave frequency employed for vision at the London Television Station has a frequency of vibration of no less than 45,000,000 a second, which corresponds to a wavelength of about 6.7 metres.

It is this enforced use of the ultra-short-wavelength that limits the range of the station at present to a radius of about 30 miles under ordinary conditions. Reports of more distant reception have, however, been published, and it is hoped that the range may ultimately be substantially increased.

Reproducing the Picture

The signals emanating from the transmitting aerial are picked up by a receiving aerial and passed to a receiver, which functions in a manner very similar to a sound receiver, except that the output is not passed to a loud-speaker, but to a reproducing scanner instead.

A number of types of reproducer have been used, but the present-day tendency is to employ a cathode-ray tube. This consists of an evacuated glass vessel having a bulb at one end and a narrow neck at the other. An electron gun is situated at the narrow end, trained upon a chemically coated screen at the bulbous end. This screen is composed of a thin, practically transparent layer of a mineral salt, which is deposited upon the glass, and which possesses the property of fluorescence. A fluorescent material is one which glows and emits light when it is subject to electronic bombardment, the

brightness of the glow depending upon the number of electrons striking it in a given time.

As in the 'Emitron', the aim of the gun is varied by suitably applied electrical fields, so that the point of impact of the electrons on the screen is caused to trace a series of lines side by side across the screen. By means of the synchronizing signals previously referred to, the movement of the spot of light on the receiving screen is made to follow exactly the movement of the scanning aperture or beam at the transmitting station. The 'line' synchronizing impulse tells the receiver cathode beam when to start a new line, while the 'frame' synchronizing impulse tells it when to start a new frame.

At the same time the number of electrons fired by the gun is controlled by the intensity of the electric currents coming from the transmitting scanner and being transmitted, so that a particular area of the receiving screen is either bright or dim, according to whether the particular portion of the subject being scanned is light or dark.

In this way an image is built up at the receiver which is a faithful reproduction of the scene exposed to the television camera in the studio. Pictures in the home are at present limited to a size of about 12 in. by 10 in., where cathode-ray tubes are employed, owing to the impracticability of constructing larger tubes which will stand up to the pressure of the atmosphere. It is to be hoped, however, that means of enlarging the picture will be forthcoming in due course, and a great deal of research work is at present being directed to this end.

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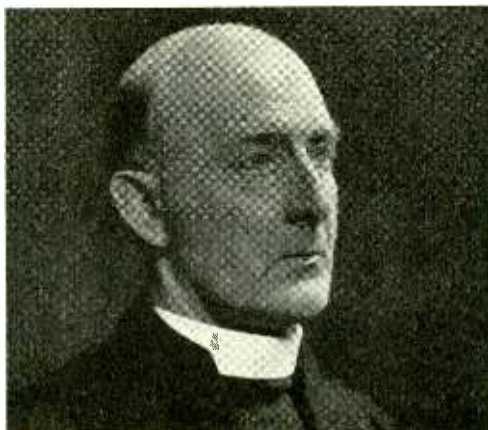
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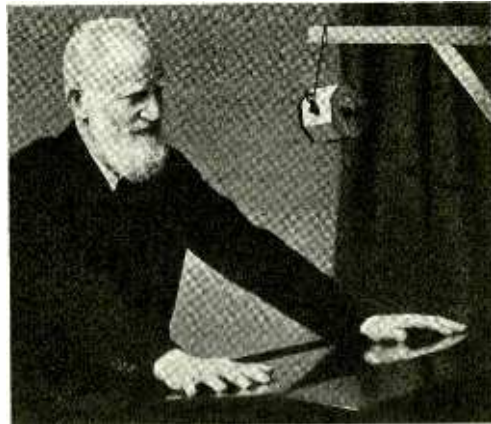
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' . . . BELIEVED TO BE TRAVELLING IN ESSEX GO AT ONCE TO . . . '

RULES FOR S.O.S. MESSAGES

1. FOR RELATIVES OF SICK PERSONS

The B.B.C. will broadcast messages requesting relatives to go to a sick person only when the Hospital Authority or the Medical Attendant certifies that the patient is *dangerously* ill, and if all other means of communication have failed. In the normal course of events messages will be broadcast only when the full name of the person wanted is available.

Note

When the person sought is known to be on board a ship at sea, a message can only be broadcast if the ship is not equipped with apparatus for the reception of messages by wireless telegraphy. Further, there must be a possibility that the return of the person sought can be hastened by the reception of such a message. This is not considered to be the case where the ship is on its way to a known port. In such cases, inquirers are advised to communicate with the owners or agents of the ship or with the port authorities.

In no case can an S.O.S. be broadcast requesting the attendance of relatives after death has occurred.

2. FOR MISSING PERSONS

Apart from official messages originated by the Police, the B.B.C. does not broadcast messages concerning other missing persons.

3. FOR WITNESSES OF ACCIDENTS

Requests for witnesses of accidents are not broadcast except when contained in official messages originated by the Police.

4. No message can be broadcast regarding lost animals or property.

5. There is no charge for broadcasting S.O.S. messages.

THE TIME SIGNAL SERVICE

Time	Signals on Droitwich National Programme	Signals on Regional Programmes	Notes
<i>Weekdays:</i>			The official broadcasting Time Signal is that which is received from Greenwich Observatory. It consists of six dot seconds, the last dot indicating the point of time to a normal accuracy of one-twentieth of a second. The signal will normally be radiated at the times shown on the accompanying chart. Any signal, however, with the exception of those at 10.30 a.m. and 6.0 p.m., is liable to suppression if superimposition on a current programme is strongly inadvisable on artistic grounds. The signals at 10.30 a.m. and 6.0 p.m. will be suppressed only in exceptional circumstances, and advance notification will be given should such a case arise. Any signal which may be suppressed on artistic grounds will be radiated normally at the next available quarter.
10.15 a.m.	Big Ben	Big Ben	
10.30 a.m.	G.T.S.	G.T.S.	
2.00 p.m.	G.T.S.	G.T.S.	
5.15 p.m.	Big Ben	Big Ben	
6.00 p.m.	G.T.S. (1st News)	—	
7.00 p.m.	—	G.T.S. (2nd News)	
9.00 p.m.	G.T.S. (3rd News)	—	
10.00 p.m.	—	G.T.S. (News Sum.)	
11.30 p.m.	G.T.S.	G.T.S. (Late News Summary)	
12.00 midn.	Big Ben	Big Ben	
<i>Sunday:</i>			
10.30 a.m.	G.T.S.	—	
12.30 p.m.	Big Ben	Big Ben	
4.00 p.m.	G.T.S.	G.T.S.	
9.00 p.m.	G.T.S.	G.T.S.	
10.45 p.m.	Big Ben	Big Ben	
			Big Ben will be broadcast in accordance with the chart when possible. On Sundays at 10.45 p.m. Big Ben will only be broadcast when the Epilogue is over by this time.

WEATHER FORECASTS

WEEKDAYS

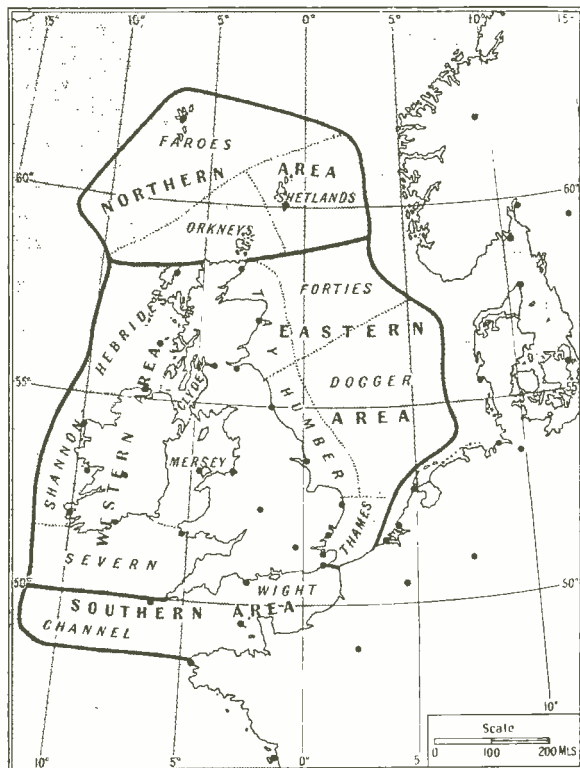
- 10.30 a.m. Weather Forecast for Farmers and Shipping read twice; first at natural speed and second time at longhand dictation speed. (Droitwich National and all Regional and Local transmitters)
- 6.00 p.m. General Weather Forecast with the first News. (National Programme)
- 7.00 p.m. General Weather Forecast with the second News. (Regional Programme)
- 9.00 p.m. General Weather Forecast, followed by Shipping Forecast, with the third News. (National Programme)
- 10.00 p.m. General Weather Forecast with News Summary. (Regional Programme)
- 11.30 p.m. General Weather Forecast with late News Summary. (Regional Programme)

SUNDAYS

- 10.30 a.m. Weather Forecast for Farmers and Shipping. (Droitwich National only)
- 8.50 p.m. General Weather Forecast with the News. (From all National, Regional and Local transmitters)
- 11.00 p.m. Shipping Forecast. (Droitwich National only)

Gale Warnings

Gale Warnings are received from the Meteorological Office and are broadcast at:



WEEKDAYS

- 10.30 a.m. With the Shipping Forecast (Droitwich National and all transmitters except medium-wave National transmitters).
- 2.00 p.m. Droitwich and medium-wave National transmitters.
- 5.15 p.m. Droitwich and medium-wave National transmitters.
- 6.00 p.m. With the first News (Droitwich and medium-wave National transmitters).
- 9.00 p.m. With the third News (Droitwich and medium-wave National transmitters).
- 11.30 p.m. Droitwich and medium-wave National transmitters.

SUNDAYS

- 10.30 a.m. With the Shipping Forecast (Droitwich National only).
- 12.30 p.m. Droitwich National and all transmitters except medium-wave National.
- 4.00 p.m. Droitwich National and medium-wave National transmitters.
- 8.50 p.m. With the News (All transmitters).
- 11.00 p.m. With the Shipping Forecast (Droitwich National only).

Navigational Warnings

Navigational warnings are received from the Admiralty and are broadcast at any time set apart for Gale Warnings.

S.O.S. AND POLICE MESSAGES 1936

	Successful	Un-successful	Not known	Total
Illness ..	444	268	53	765
Police Messages (a) <i>Witnesses</i> ..	145	156	—	301
(b) <i>Crime</i> ..	4	12	2	18
(c) <i>Special</i> ..	9	24	3	36
TOTAL	602	460	58	1,120

VISITS TO B.B.C. STUDIOS

Visits fall into two categories: (1) Presence in the studio during certain broadcasts of light entertainment; (2) conducted tours round the studios.

London: STUDIO AUDIENCES.—Applications may now be made for inclusion on the waiting list, but owing to the demand for admission it will be appreciated that there may be considerable delay before requests can be complied with. Applications should be addressed to the Director of Office Administration, Broadcasting House, London, W.1.

VISITS TO BROADCASTING HOUSE (CONDUCTED TOURS).—Owing to the serious interference caused to rehearsals or transmissions taking place in the various studios at Broadcasting House, it has been found impossible to accede to all of the large number of applications for tours round the building. No waiting list is kept.

Manchester: Audiences are allowed for orchestral concerts and occasional variety programmes. Maximum of 30 in one party. Conducted parties, up to 15 persons, are allowed after office hours and on Saturday afternoons. Applications should be addressed to the North Regional Director, Broadcasting House, Piccadilly, Manchester, 1.

Newcastle: No audiences. Conducted parties in exceptional cases. Applications should be addressed to the Newcastle Director, Broadcasting House, 54, New Bridge Street, Newcastle-upon-Tyne.

Leeds: Audiences are allowed for orchestral concerts and occasional variety programmes. Maximum of 40 in one party. Conducted parties on Saturday afternoons only. Applications should be addressed to the Leeds Representative, Broadcasting House, Woodhouse Lane, Leeds, 2.

Edinburgh: Audiences are allowed occasionally for both variety programmes and orchestral concerts. When audiences are desired, notification will be made.

Cardiff: Conducted parties are allowed, and small studio audiences not exceeding 10, as accommodation is limited. Applications should be addressed to the Welsh Regional Director, Broadcasting House, 38, 39 and 40, Park Place, Cardiff.

Bristol: Conducted parties, and small studio audiences of about 25 people, are allowed. Applications should be addressed to the West of England Regional Director, Broadcasting House, 21-23, Whiteladies Road, Clifton, Bristol.

Birmingham: Conducted parties of a technical nature only are allowed. Maximum of 15 in one party. Applications should be addressed to the Midland Regional Director, Broadcasting House, 282, Broad Street, Birmingham.

Belfast: Conducted parties of not more than 20 people are permitted occasionally. Applications should be addressed to the Northern Ireland Regional Director, 31, Linenhall Street, Belfast, Northern Ireland.

B. B. C. ADDRESSES

Headquarters

HEAD OFFICE	Broadcasting House, London, W.1.	Telegrams: Broad- casts, London. Telephone: Welbeck 4468.
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Regional Centres

		<i>Telegrams & Telephone</i>
MIDLAND REGION	Broadcasting House, 282, Broad Street, Birmingham.	Birmingham Midland 3761.
WELSH REGION	Broadcasting House, 38, 39, & 40, Park Place, Cardiff.	Cardiff 3207.
NORTH REGION	Broadcasting House, Piccadilly, Man- chester.	Manchester Central 2931.
SCOTTISH REGION	Broadcasting House, 5 & 6 Queen Street, Edinburgh	Edinburgh 30111.
NORTHERN IRELAND REGION	31, Linenhall Street, Belfast.	Belfast 25834.
WEST OF ENGLAND REGION	Broadcasting House, 21, 23 & 25, White- ladies Road, Clifton, Bristol.	Bristol 33052.

Other B.B.C. Offices

ABERDEEN	15, Belmont Street.	Aberdeen 2296.
GLASGOW	268, West George Street.	Glasgow Douglas 5230.
LEEDS	Broadcasting House, Woodhouse Lane.	Leeds 28131.
NEWCASTLE	Broadcasting House, 54, New Bridge St.	Newcastle 20961.
PLYMOUTH	Athenæum Chambers.	Plymouth 2283.
SWANSEA	Oxford Buildings, Oxford St.	Swansea 3107.
BANGOR (N. WALES)	Broadcasting House, Meirion Road.	Bangor 561.
NEW YORK CITY (U.S.A.)	British Empire Building, 620, Fifth Avenue	Circle 7-0630. Cables: Broadcaste, New York.