



THE OFFICIAL ORGAN OF THE B.B.C.

Vol. 2. No. 26.

[Registered at the
G.P.O. as a Newspaper]

EVERY FRIDAY.

Two Pence.

OFFICIAL PROGRAMMES OF THE BRITISH BROADCASTING COMPANY.

For the Week Commencing
SUNDAY, MARCH 23rd.

LONDON	CARDIFF
ABERDEEN	GLASGOW
BIRMINGHAM	MANCHESTER
BOURNEMOUTH	NEWCASTLE
SHEFFIELD (Relay)	
PLYMOUTH (Relay)	

SPECIAL CONTENTS:

STORIES AND STORY TELLING.
A Talk by Stacy Aumonier.

THE MYSTERY OF THE MICROPHONE.
By P. P. Eckersley.

RADIO PIONEERS OF LONG AGO.

OFFICIAL NEWS AND VIEWS.

REVIVAL OF THE HARPSICHORD.

RATES OF SUBSCRIPTION to "The
Radio Times" (including postage to any
part of the world): SIX MONTHS, 6s. 9d.;
TWELVE MONTHS, 13s. 6d.

In Reply to John o' London.

By J. C. W. Reith, Managing Director of the B.B.C.

The following is a reply to the article by Mr. Wilfred Whitten (John o' London), entitled "The Lure and Fear of Broadcasting," reprinted in last week's "Radio Times" from "John o' London's Weekly."

I AM vexed with my secretary. By her remissness I have lost an opportunity. I am on the look-out for opportunities at all times myself, but I keep a secretary to help me to find them. If she had not "slipped up," as the Americans say, I should have met "John o' London." She has an instruction to notify me of the projected visits of celebrities to 2, Savoy Hill. It does not imply that I turn out to greet them, but I just like to know about it. Perhaps the office-boy gets a message to be handy to take the personage's hat, or the liftman to be ready to lift. Perhaps even I ask the Controller, or Director of Programmes, to be there to control or direct. But my organisation has failed. "John o' London" has come and gone, and I was not of it. As I said, I am vexed.

I was first made conscious of my loss when I read his letter to Gog and Magog, and felt a little hurt by some of his remarks. In the first place, his description of the colour scheme is enough to frighten off the artistic and the temperamental. When he comes again, as I hope he will (giving due notice), I shall show him that the carpet is blue, not green. Then again the artificial sunlight comes in through the artificial windows and not from the roof; it took a great deal of thought to get this right. I think that wait in the corridor till the red light went out must have upset him. The corridor is draughty. Had I been on the spot I should have piloted him gently but determinedly up to the reception-room, where he would have had more comfort and retained a happier outlook on life and broadcasting.

Incidentally, I must have a look at those commissionaires again. They had not struck me as being ghostly. I am afraid they will

become supercilious if they happen on "John o' London's" letter. Anyhow, I shall hesitate before sending one for a taxi again. But what if I tell our accountant people to try the effect of a shadow pay-envelope on them?

As I read on in his letter I began to be disappointed. He indicated that some of his broadcasting friends are less enthusiastic than they were. Novelty soon wears thin, yes. What more natural? I am sure when he comes again to Savoy Hill he will notice that somebody has just dropped a cigarette end outside the studio door, and that the announcer took an appalling liberty with the King's English. The novelty and the excitement will have in a measure passed. But I could still show him many new and interesting things that did not come within his purview before. When the romantic glamour of getting anything by wireless has passed, one grows more stolid, rather blasé, and one is always expecting something new and better. The chiming and the tolling of Big Ben heard echoing through all the wireless homes of the land was wonderful for a week, but now if we hope to thrill by a time-signal we must get the Time-gun on Battery Point, New York.

It is always interesting to meet a man who has never listened to broadcasting. I do not often have the chance. I hear my Company, my colleagues, myself, and all our operations discussed with engaging, if occasionally embarrassing candour, in the railway train, restaurants, everywhere. Only last week I vacated a favourite corner in a club because my neighbours were discussing broadcasting in general terms, and I wanted an off period after dinner. I found myself eavesdropping uneasily beside a group criticising my last article in *The Radio Times*.

I want to suggest to "John o' London" that there is a certain diffidence abroad. Broadcasting has found its way into every class of

(Continued overleaf in column 2.)

A Burns' Problem Song.

The Story of "O Wat Ye Wha's in Yon Town?" By A. B. Cooper.

ANOTHER Burns puzzle has been sprung upon the world. The story starts with John Syme, a personality we have met before in these song-stories, for he it was who was riding by the side of Burns, between Gatehouse and Kilmorie, in a storm of wind and rain, on the occasion when the poet composed "Scots Wha Hae."

When Burns went to Dumfries to be an exciseman, he lived over the office of Mr. Syme, who had been appointed distributor of stamps there, in 1791—a much superior position to that which Burns held, although they were much of the same age. But Mr. Syme was a lawyer and "Robbie" Burns was only a poet! But Syme was a good fellow, fond of entertaining on a somewhat lavish scale, and Burns was always an honoured guest on great occasions, whilst the two men in private were great cronies.

Syme remained the poet's good friend to the last, was one of the executors of his will, and spent some time at Liverpool helping Currie with his famous edition of Burns's works.

A Cryptic Letter.

Now, as the two men lived in the same town, few letters passed between them, but one of these has just now taken a new lease of interest for all Burns lovers. Here it is:—

"You know that among other high dignities, you have the honour to be my supreme court of critical judicature, from which there is no appeal. I enclose you a song which I composed since I saw you, and I am going to give you the history of it. Do you know that among much that I admire among the characters and manners of those great folk whom I have now the honour to call my acquaintances, the O—— family, there is nothing charms me more than Mr. O's unaccountable attachment to that incomparable woman."

A Poet's Despair.

"Did you ever, my dear Syme, meet with a man who owed more to the Divine Oliver of all good things than Mr. O? A fine fortune; a pleasing exterior; self-evident amiable dispositions, and an ingenious upright mind, and that informed too, much beyond the usual run of young fellows of his rank and fortune; and to all this, such a woman!—but of her I shall say nothing at all, in despair of saying anything adequate."

"In my song I have endeavoured to do justice to what would be his feelings on seeing, in the scene I have drawn, the habitation of his Lucy. As I am a good deal pleased with my performance, I, in my first fervour, thought of sending it to Mrs. O——, but on second thoughts, perhaps what I offer as the most honest increase of genuine respect, might, from the well-known character of poverty and poetry, be construed into some modification or other of that servility which my soul abhors."

Who Was Mrs. O——?

Now out of this letter at least two questions arise. Who was Mr. and Mrs. O——? What was the song, supposed to be written by the amiable husband to his wife in the days of courtship, when looking at the distant "town," or farm-house, in which the fair lady dwelt?

Incidentally, it may be noted that the use of "town" for "farm" is good Old English.

The song which Burns enclosed with his letter to Mr. Syme is given in the next column.

The answer to the second question is that the lady whom Burns so evidently admired was Mrs. Oswald, who, after five years of happy married life, died in Lieben a short two years after the death of the poet. Burns's biographer describes her as a "most accomplished and most lovely woman, worthy of the beautiful strain

of sensibility which will convey some impression of her attraction to other generations."

And now a strange thing has come to light. On March 11th were sold for £350 at Sotheby's auction some pages of Burns's exercise book, upon which is written, in the handwriting of the poet, not only notes of amiable articles like tea and tobacco, but this very poem, yet with some strange and astonishing departures from the accepted version printed herewith. The fourth stanza, for instance, read as follows:—

"Sweet blink the sun on yon town
Among the broomy braes see green,
But my delight in yon town,
And dearest pleasure is my Jean."
In fact, Jean is substituted for Lucy through-

O wat ye wha's in yon town,
Ye see the e'en'ing sun upon?
The fairest dame's in yon town,
That e'en'ing sun is shining on.

Now haply down yon gay green shaw,
She wanders by yon spreading tree;
How blest ye flow'rs that mind her blaw,
Ye catch the glances o' her e'e.

How blest ye birds that round her sing,
And welcome in the blooming year,
And doubly welcome be the spring,
The season to my Lucy dear.

The sun bleeks blithe on yon town,
And on yon bonnie braes of Ayr;
But my delight in yon town,
And dearest bliss is Lucy fair.

Without my love, not a' the charms
O' paradise could yield me joy;
But gie me Lucy in my arms,
And welcome Laphland's dreary sky.

My cave wad be a lover's bower,
Tho' raging winter rent the air;
And she a lovely little flower,
That I wad tent and shelter there.

O sweet is she in yon town,
Yon sinking sun's gone down upon;
A fairer than's in yon town,
His setting beam ne'er shone upon.

If angry fate has sworn my foe,
And suffering I am doom'd to bear,
I care naught else aught else below,
But spare me, spare me, Lucy dear.

Far whillie life's dearest blood is warm,
As thought free her shall na'er depart,
And she—as fairest in her form!
She has the truest kindest heart.

and there is no mention of Ayr. Now, there was only one Joan for Burns, and that was Joan Armour whom he married, to whom he addressed some of his sweetest songs, and of whom he wrote: "Never man adored a woman more than I did her."

It has always been supposed that Burns wrote the song printed above when storm-bound at Ecclefechan, famous to-day as the birthplace of Thomas Carlyle, in February, 1795, and from whence he sent it to his friend in Dumfries. Now, did he write it there, or did he only revise a song he had written long before, and somewhat spoil it in the process, in order to pay a compliment to Mrs. Oswald?

This remarkable manuscript is described in the catalogue as "Lot 460. The property of a lady," and has set Burns lovers and students a pretty problem to discuss, and, if they can, to settle.

In Reply to John o' London.

(Continued from the previous page.)

home. He who once scuffed succumb sooner or later. He finds there is something in it, even for him, but he is diffident of admitting it. He looks on it as a vice, a bad habit, perhaps rather childish.

Now I come to that part of his letter which I have been longing to deal with:—

"But I wish also that there could be an exchange of experience between the silences of Nature and the hum of the city. I would set up my aerial to-morrow, if in the heart of London, I could hear the cattle lowing on remote hills, or the barking of a fox in Essex, or the scream of an eagle over a Scottish glen. I would gladly summon the roar of Niagara to redress the roar of the Strand; but such things are not yet."

We will give him the sounds of the country. We meant to all along. If only he had listened already, he would have known it. Why, we have already fixed the very spot from whence the liquid notes of the nightingales shall be borne in mystic aether waves to the home of the jaded town-dweller. Though we haven't yet broadcast the barking of a fox in Essex, we have provided the nearest substitute—the barking of a dog in Savoy Street. Niagara will come in due course, but won't the breakers at Brighton suffice meantime? It is all planned. Heretofore, all these and many other sounds have been artificially created. The real thing is coming, but even now we might get over a plausible imitation of Niagara with the bathroom tap.

Let "John o' London" beware lest, like Macbeth, he belittle too far the power of prophecy.

I cannot bear to think of the terrible isolation and reserve of "John o' London's" evenings. I feel that I want to carry along a loud speaker to his room and say "You shall listen to us." I will tell him now that, whether he likes it or not, his room is full of the strains of music, great symphony concerts, light operas, songs, stories of high adventure from the lips of the greatest explorers in the realms of science—all manner of things to suit even his every mood. Wave the magic wand, turn the switch, the Genie is at his service. But the aether waves are there, whether he turns it or not. They do not obtrude. They are not alighted by his neglect. They exercise their beneficent or enlightening functions for those who care. Perhaps it is better that he should not turn the switch. That list of technical names to publishers (three and a half lines of them) may have incited him to experiment. He may use reaction and oscillate to the extent of overgearing his neighbour's aerial.

If he absolutely will not listen, I foresee a dire and tragic fate awaiting him. One night there will be an R.O.S. from 21.0. "John o' London," who when last heard of was said to be travelling round the country in an isolated copper van, stopping only in areas reputed to be shielded from broadcasting, is urgently required by his former solicitors, as they have received notification of a large fortune left him."

There will be no reply.

And I shall be glad. The green carpet ripples.

WIRELESS IN THE WEST INDIES.

Seven high-powered wireless stations are shortly to be opened in the West Indies. These will be on the islands of St. Kitts, Antigua, Dominica, St. Lucia, St. Vincent, Grenada, and Barbados, and they will be operated by the Pacific Cables Board, which is under the joint control of the Imperial Government and the Governments of Canada, Australia and New Zealand.

Waterloo, par Victor Hugo.

The following poem will be broadcast from London Station by M. E. M. Stephan, on Tuesday, March 25th. It is printed here in French so that readers of "The Radio Times" may follow the speaker word by word. In this way, listeners will be enabled to correct any errors of pronunciation.

WATERLOO! Waterloo! Waterloo! morne plaine!

Comme une onde qui bout dans une urne trop pleine,
Dans ton cirque de bois, de cotéaux, de vallons,
La pâle nuit mêlait les sombres bataillons.
D'un côté c'est l'Europe et de l'autre la France.

Choc sanglant! des héros Dieu trompait l'espérance!

Tu désertais, victoire, et le sort était las.
O Waterloo! je pleure et je m'arrête, hélas!
Car ces derniers soldats de la dernière guerre
Font grande; ils avaient vaincu toute la terre.

Chassé vingt rois, passé les Alpes et le Rhin,
Et leur âme chantait dans les clairons d'airain!

Le soir tombait; la lutte était ardente et noire.
Il avait l'offensive et presque la victoire;
Il tenait Wellington acculé sur un bois.
Sa lunette à la main, il observait parfois

Le centre du combat, point obscur où trépassait
La mêlée effroyable et vivante broussaille,
Et parfois l'horizon, sombre comme la mer.
Soudain, joyeux, il dit: "Grouchy!"—C'était
Blucher!

L'espoir changea de camp, le combat changea d'âme.

La mêlée en hurlant grandit comme une flamme.
La batterie anglaise écrasa nos carrés.

La plaine où frissonnaient les drapeaux déchirés
Ne fut plus, dans les cris des mourants qu'on
égorge.

Qu'un gouffre flamboyant, rouge comme une
ferme;

Gouffre où les régiments comme des pans de
mur,

Tombaient, où se couchaient comme des épis
morts.

Les hauts tambours—majors aux panaches
énormes,

Où l'on entrevoyait des blessures difformes!
Carnage affreux! moment fatal! L'homme
inquiet.

Sentit que la bataille entre ses mains pliait.
Devant un mamelon la garde était massée.

La garde, espoir suprême et suprême pensée!
—Allez! faites donner la garde," cria-t-il—

Et lanciers, grenadiers aux gaitres de cuivre,
Dragons que Rome eût pris pour des légion-
naires,

Cuirassiers, canonniers qui traînaient des ton-
nerres,

Portant le noir colback ou le casque poli,
Tous, ceux de Friedland et ceux de Rivoli,

Compréhensifs qu'ils allaient mourir dans cette
fête,

Saluèrent leur dieu, debout dans la tempête.

Leur bouche d'un seul cri, dit: "Vive l'Em-
pereur!"

Puis, à pas lents, musique en tête, sans fureur,
Tranquille, souriant à la mitraille anglaise,

La garde impériale entra dans la fournaise.
Hélas! Napoléon, sur sa garde penché,

Regardait, et, si tôt qu'ils avaient débouché
Sous les sombres canons crachant des jets de
soufre,

Voyait, l'un après l'autre, en cet horrible
gouffre,

Fondre, ces régiments de granit et d'acier,
Comme fond une cire au soufflé d'un brazier.

Ils allaient, l'arme au bras, front haut, graves,
étiqués,

Pas en arrière. Dormez, morts héroïques!

Le reste de l'armée hésitait sur leurs corps
Et regardait mourir la garde—C'est alors

Qu'élevait tout à coup sa voix désespérée,
La Déroute, géante à la face effarée,

Qui, pâle, épouvantant les plus fiers bataillons,
L'abaissant subitement les drapeaux en haillons,

A de certains moments, spectacle fait de lumière,
Se leva grandissante au milieu des armées,

(Continued on the next column.)

Official News and Views.

Gossip About the B.B.C.

THE broadcasting station KFI, of Los Angeles, which sent out the programme that was rebroadcast in this country in the early hours of March 9th, has the greatest range of any Pacific Coast station.

More American Broadcasting.

The American Station KDKA has arranged a programme for Saturday, the 20th March, for the benefit of British listeners. We hope to relay it from 11 p.m. till midnight.

The Mighty Atom.



SIR WILLIAM BRAGG.

The Talk which Sir William Bragg, President of the Royal Institution, broadcast from 2LO on the 17th inst. on "The Atoms of Which Things Are Made," proved to be highly popular. Listeners, therefore, will be glad to learn that this is the first of a series of Talks similar to those which he delivered at the Royal Institution at the beginning of the year.

The series was called "Concerning the Nature of Things," and dealt with (a) the atoms of which things are made, (b) the nature of gases, (c) the nature of liquids, (d) the nature of crystals—diamond, (e) the nature of crystals—ice and snow, (f) the nature of crystals—metals.

Sir William hopes to broadcast the second of these Talks, on "The Nature of Gases," on the 7th April, continuing the series on the 19th May, 2nd June, 10th June, and the 30th June.

London's New Station.

For some time we have been endeavouring to find a suitable site for the erection of a new transmitting plant for 2LO. We have at last been successful, and now await the decision of the London County Council upon the plans we have submitted. Should permission be obtained, we propose to erect two steel lattice towers 150ft. in height, and about 150ft. apart. A hut will be built in which the operating gear will be working, and one side of this we propose to have large windows so that the public can see the Station without interfering with the progress of the work.

The site we have chosen is on fairly high ground, not very far from the Studio. The power of the new station will be double that used at present, but that does not mean that the signal strength will be better, because in applying to the peculiar conditions of broadcasting from the centre of a town, the aerial constance cannot be calculated, nor the radia-

tion. On the face of it, however, will be double power, and a much more efficient aerial. The new station will certainly be at least as efficient as the present one. The public are warned, however, not to expect a tremendous increase in signal strength.

Broadcast Plays.

On Tuesday, April 1st, Mr. Lewis Casson is to produce three plays at the London Station. They will also be broadcast to Bournemouth and Glasgow. They will be *The Death of Tinseltown*, by Maurice Maeterlinck, *Box and Car*, by Madison Morton, and *The Man Who Sang in His Bath*, by Richard Hughes.

A Popular Orchestra.

On the 6th April, listeners to 2LO will have an opportunity of hearing De Groot and his Orchestra playing at the Piccadilly Hotel. This is one of London's most popular hotel orchestras, and it will be broadcast from 9 p.m. to 10.0 p.m. and from 10.15 p.m. to 10.30 p.m.

Wireless at the Boat Race.

A new attraction for the Boat Race festivities will be provided by 2LO between 2.30 and 4.30 p.m. on Saturday April 6th, when the Grenadier Guards Band will be broadcasting a special programme for the benefit of the crowds lining the river during the progress of the race.

Manchester's New Assistant Director.

Mr. E. H. Goldsmith, who has been appointed Assistant Station Director at Manchester, is a retired Paymaster Lieut-Commander of the Royal Navy. He has spent many years in the Mediterranean and around the coast of India and Ceylon. On the East-Indies Station he was attached to the staff of the Commander-in-Chief, Vice-Admiral Sir George Warrender, with whom he served in the North Sea during the war. Later, he was one of the three members of Lord Chamwood's ex-service students' Appeal Tribunal at the Board of Education. He also represented the Admiralty on a Demobilisation Sub-Committee of the War Cabinet, the Demobilisation Co-Ordination Committee of the War Office, and the Officers' Re-Settlement Committee under Lord Burnham's chairmanship.

Since 1920, Mr. Goldsmith has been engaged in business both in London and on the Continent.

A New Musical Director.

Mr. W. A. Cross, who has been the Conductor of the Newcastle Wireless Orchestra for a considerable time, has now been appointed Musical Director to the Newcastle Station.

Continued from the previous column.

La Déroute apparut un soldat qui s'émeut,
Et, se tordant les bras, cria: "Sauve qui peut!"

Sauve qui peut! affront! horreur! toutes les
bouches

Criaient; à travers champs, fous, éperdus,
farouches,

Comme si quelque souffle avait passé sur eux,
Parmi les lourds canons et les fourgons

poudreux!
Roulent dans les fossés, se cachant dans les
seigles,

Jettent stakos, manteaux, fusils, jetant les
aigles

Sous les sabres prussiens, ces vétérans, ô deuil!
Tremblaient, hurlaient, pleuraient, couraient!

En un clin d'œil

Comme s'enlevait au vent une paille enflamée,
S'élevait ce bruit qui fut la grande armée.
Et cette plaine, hélas, où l'on rêve aujourd'hui,
Vit fuir ceux devant qui l'univers avait fui!
Quarante ans sont passés, et ce coin de la terre,
Waterloo, ce plateau funèbre et solitaire,
Ce champ sinistre où Dieu mêla tant de néants,
Tremble encore d'avoir vu la fuite des géants!
Napoléon les vit s'écouler comme un fleuve;
Hommes, chevaux, tambours, drapeaux;—et
dans l'épreuve

Sesant confusément recevoir son remords,
Lisant les mains au ciel, il dit:—Mes soldats
morts,

Moi vaincu! mon empire est brisé comme verre,
Est-ce le châtiement cette fois, Dieu sévère?

Alors, parmi les cris, les rumeurs, le sillon,
Il entendit la voix lui répondant: Non!

IMPORTANT TO READERS.

LETTERS FOR THE EDITOR should be addressed to "The Radio Times," 8-11, Southampton Street, Strand, W.C.2.

LETTERS FOR THE R.B.C. should be sent to 2, Savoy Hill, W.C.2.

"The Radio Times," the official organ of the British Broadcasting Company, Ltd., is concerned solely with broadcasting programmes and the technical problems relating to their transmission.

Technical inquiries dealing with the reception of broadcast telephony, such as the types of sets to be employed, etc., etc., should NOT be addressed to "The Radio Times." Letters from Readers concerning the programmes and their transmission are welcomed.

Letters requiring an answer MUST contain a stamped and addressed envelope.

THOSE "HOWLERS."

If you hear a howl in your receiver, you may be oscillating and interfering with thousands of people's pleasure.

To tell if you are oscillating, perform the following operation—

Alter your tuning.

If the NOTE of the howl varies as you vary your tuning, it is you.

It is not cricket to oscillate on purpose because you disapprove of a programme, as items, the B.B.C. or your neighbours.

Your neighbours may not agree with you.

Messrs. George Newnes, Ltd., have now prepared a handsome case in red cloth with gilt lettering for "The Radio Times," complete with cord down the back to hold a copy of this publication. A pencil is indispensable to the listener during the course of the programme, and this is included conveniently in a slot at the side. Listeners should order this to-day from any Newnes agent. It is published at 2s. 6d., or send 4d. extra to cover postage for a case from the Publisher, 8-11, Southampton Street, Strand, London, W.C.2.

ALTERATIONS TO PROGRAMMES, ETC.

AS THE RADIO TIMES goes to press many days in advance of the date of publication, it sometimes happens that the B.B.C. finds it necessary to make alterations or additions to programmes, etc., after THE RADIO TIMES has finally gone to press.

KEY LIST OF MUSIC PUBLISHERS.

1. Boosey and Co.
2. Curwen, J., and Sons, Ltd.
3. Herman Danowski Music Publishing Co.
4. Elkin and Co., Ltd.
5. Enoch and Sons.
6. Feldman, B., and Co.
7. Francis, Day and Hunter.
8. Larway, J. H.
9. Lawrence Wright Music Co.
10. Cecil Lennox and Co.
11. Novello and Co., Ltd.
12. Phillips and Page.
13. Reynolds and Co.
14. Stainer and Bell, Ltd.
15. Williams, Joseph, Ltd.
16. Cavendish Music Co.

DO WORMS USE WIRELESS?

PROPOS the article in last week's *Radio Times* on "When Will Insects Broadcast?" it is interesting to note that the suggestion that earthworms communicate with each other by wireless is put forward by Mr. John D. Leckie in *The Occult Review*.

"Darwin noticed that the earthworms were in the habit of projecting the upper part of their body outside their burrow while the lower half remained embedded in the soil," he says. "The upper or protruding portion was raised erect in the air, and was sometimes waved in different directions. 'Is the earthworm occupied in sending wireless messages to distant friends?'"

Smoke and Fog—The Cause and Cure.

A Talk from Manchester, by Marion FitzGerald.

ISN'T it amazing that in the twentieth century, when such wonderful things are accomplished, somebody has not succeeded in clearing up the air of large towns? Pittsburgh can talk to Manchester by means of wireless; but neither Manchester nor Pittsburgh has got rid of its smoke.

It has been calculated that over the whole country three million tons of soot are poured out into the air every year. That means six million pounds worth of wasted fuel, for soot is, of course, only imperfectly burnt coal. But, worse than that, all this filth in the air will come down sometime and we have to clean up the mess. London has an annual soot-fall of nearly 40,000 tons.

If you live in a smoky town, your chances of dying of some form of disease connected with your breathing apparatus are nearly three times as great as if you live in the country.

Sending Up the Death Rate.

I haven't said anything yet about fogs; so far, I have been talking about the constant shower of soot which is falling day by day, year in and year out. Happily for us, fogs only come seldom, because the weather is generally a good friend to us. All the same, there is always enough soot in the air of towns to provide a good thick fog if the state of the atmosphere does not allow most of it to escape. It is well known that two or three days of fog will send up the death-rate—not from street accidents as you might suppose, but from bronchitis and pneumonia.

The cause of all this is our reckless and extravagant method of burning coal. No more and no less. We burn every year 100 million tons of coal in factories, and about 40 million tons in houses, and a large proportion of that is burnt in wasteful ways.

"Yes," you will say, "it is those dreadful factory chimneys that do all the harm. They ought to be stopped, and, surely, there is a law about it."

Wait a minute! Of course, they ought not to pour out black smoke, and there is a law about it; but are you quite sure they are the chief and only offenders?

Would it surprise you if I told you that of the two sorts of chimneys, house chimneys are much guiltier of polluting the air than factory chimneys; that not only do they make more soot, but it is a much nastier kind of soot—fatty and greasy? If you burn 100 lbs. of coal in a boiler furnace, you will get about half a pound of soot. If you burn the same amount in any ordinary domestic fireplace, you will get 6 lbs. of soot. That is twelve times as much.

So that the house chimney is just twelve times as bad for making smoke as the chimney attached to a factory.

Worth Some Sacrifice.

I expect by now some of you are looking anxiously at your own fires and saying you could not possibly give them up; they are so cheerful. Let us see if we can effect a cure for the smoke nuisance without making people unhappy. We once had a forerunner of smokeless cities—in the coal strike. We don't want more strikes, but wouldn't it be worth some sacrifice to get back to that condition of clean air, sunlight and clear views? For that, we must have an alteration in our present smoke laws to get rid of factory smoke, and we must also be willing to make changes in our ways of burning coal in houses. Instead of burning coal lavishly as at present, we must use it sparingly and employ other cleaner and smokeless methods of heating and cooking.

FOREIGN STATIONS.

FRANCE.

Eiffel Tower. PL. Paris. 2600 metres.
6.40 to 7.0 a.m.; 11.0 to 11.30 a.m.; 3.40 to 4.0 p.m.; 5.30 to 7.20 p.m.; 10.0 to 10.30 p.m.
Compagnie Française de Radiophonie (Emission Radiola). SFR. Paris. 1750 metres.
12.30 to 2.0 p.m.; 4.30 to 5.0 p.m.; 9.30 to 10.0 p.m.; Sundays and Thursdays Radio Dancing at 10.0 p.m. Close down at 10.45.
L'Ecole Supérieure des Postes et Télégraphes.
PTT. Paris. 450 metres.
Sunday 8.30 p.m.; Monday 9.0 p.m.; Tuesday 8.0 p.m.; Wednesday 3.45 p.m.; 8.45 p.m.; Thursday 8.30 p.m.; Friday 8.30 p.m.; Saturday 9.0 p.m.

SWITZERLAND.

Radio Station Marconi. TSP. Geneva. 1100 metres.
Wireless transmissions daily (Sundays excepted) 1.15 to 1.30 p.m.

Lausanne. HB2. 1100 metres.
4.0 p.m. Tuesday, Thursday, Saturday.
7.0 p.m. Monday, Wednesday, Friday, Saturday.

NETHERLANDS.

Radio-Electrique, Brussels. 410 metres.
5.0 p.m. Music. 8.30 Concert.
Poste de Haguen, Brussels. BAV. 1100 metres.
At intervals 1.0 to 5.30 p.m. daily. News and Weather Report.
9.0 p.m. Concert, Tuesdays only.

HOLLAND.

The Hague. PCGG. 1070 metres.
3.0 to 5.0 p.m. (Sunday); 8.40 to 10.40 (Monday and Thursday).
Labor. Heussen. PCDU. 1050 metres.
1070 metres.
8.40 to 10.40 a.m. (Sunday) Concert; 9.40 to 10.40 p.m. (Sunday) Concert; 7.40 to 9.40 p.m. (Tuesday) Concert; 7.45 to 10.0 p.m. (Thursday) Concert.

Veithuyzen. PCKK.
8.40 to 9.40 p.m. (Friday) Concert.

Amsterdam. PA5.
7.40 to 9.10 p.m. (Wednesday) Concert.

The above times are all Greenwich Mean Time.

AMERICA.

General Electric Co. WGY. Schenectady, N.Y. 380 metres.
Radio Corporation of America. WJZ. New York, N.Y. 455 metres.
John Wanamaker. WOO. Philadelphia, Pa. 609 metres.
L. Hamburger and Co. WOB. Newark, N.J. 405 metres.
Post Dispatch. KSD. St. Louis, Mo. 540 metres.
Rensselaer Poly. Inst. WHAZ. Troy, N.Y. 380 metres.

PEOPLE IN THE PROGRAMMES—GOSSIP ABOUT ARTISTES & OTHERS

A Vain Sacrifice.



MISS CHRISTINE FITZ.

MISS CHRISTINE FITZ, the popular contralto singer at Aberdeen Station, relates an amusing story about a family who had only one pair of headphones to their receiving set. There was, naturally, as a rule, great competition amongst them as to who should use the 'phones; but when they were visited by an old aunt from the

country, they handed them over to her as a great treat.

The visitor had never listened before, and the whole family sat watching her, consoled, in spite of their sacrifice, by the thought of the pleasure she was deriving.

They sat for nearly an hour, until, at last, the youngest boy could stand it no longer, and exclaimed: "Well, auntie, what can you hear?"

"I can't hear a sound," she replied, placidly, "but I am making up some lovely tunes in my own head."

Opera Under Fire.

UNDOUBTEDLY one of the most talked-of operas that have been broadcast recently is *The Dogs of Devon*. Mr. W. K. Bullock, the composer, tells me that he wrote most of the music at odd moments—in the train and elsewhere.

"The most exciting conditions under which I have ever heard my music," he added, "was when I heard a gramophone record of one of the songs played just behind the lines near Diekebusch, early in 1918, the enemy shelling vigorously the while."

Besides being a composer, Mr. Bullock is an accomplished organist, being a Fellow of the Royal College of Organists. In 1908 he was appointed to the little-known post of Lay Vicar of Westminster Abbey, in succession to Mr. Frederick Renslow.

Soldier and Author.



CAPT. FRANCIS GRIERSON.

CAPTAIN FRANCIS D. GRIERSON, whose "Talks" from London Station are always welcomed by listeners, has had an interesting literary career. Besides contributing to many of the leading English and American papers, he has published two novels and a book on military law. He has also edited a monthly magazine and helped to edit a news-

paper. Captain Grierson served for a long time in the Territorial Army, and during the war he became a Staff Officer.

Very Awkward.

CAPTAIN GRIERSON relates a story about an indignant man who visited an editor.

"I was one of the competitors at that boxing match last night," he said, "and in your paper you have alluded to me as the 'well-known light-weight champion.'"

"Well, aren't you?" inquired the editor.

"No, I'm nothing of the kind," replied the visitor, "and it's enormously awkward, because I'm a coal merchant."

Father's Warning.

SIR WALFORD DAVIES, Director of Music at the University of Wales, who is to give the first of a series of talks on Music on April 4th, relates an amusing experience which occurred while he was hearing a rehearsal of one of his cantatas.

"I could not help noticing," he says, "that the clarinet player, a young man, but a clever and steady lad, jumped a good deal during the progress of the rehearsal. Then I found that his father, who played the trombone, sat just behind him, and every now and then he gave him a kick, with the remark: 'Look out, Sammy, there be a flat a-coming!'"

Singer and Composer.

A WELL-KNOWN bass singer in the North of England, Mr. David Jenkins has lately become a favourite at London Station. A native of Lancashire, he first went in for a commercial career, but finding this un congenial, he (to quote his own words), "took the plunge into the whirlpool of music, and, after some furious floundering, is beginning to float into calmer and more pleasant waters."

At one time he held a singing scholarship at the Royal Academy of Music, but he says that he resigned it "because of certain decided opinions of his own regarding the future of his voice."

Mr. Jenkins is a brilliant pianist, and has composed a number of songs which he sings himself with great success.

The Real Annoyance.



MISS MURIEL G. GALTON.

MISS MURIEL G. GALTON, who has achieved popularity at Bournemouth, has a fine voice of a rather unusual type. She is a mezzo contralto, and is heard to particular advantage by wireless. Miss Galton tells me that she recently heard the following amusing conversation—

A visitor remarked to his friend: "Doesn't that chap next door annoy you with his constant singing in his flat?"

"Not nearly so much as his constant flat in his singing," was the reply.

A Famous Tennis Player.

A GREAT authority on tennis is Mr. C. L. Cooper-Hunt, whose talks on the game from Bournemouth have proved very acceptable. Mr. Cooper-Hunt was selected as a member of the Cambridge University Grasshoppers' Club, and played for the University's first VI. as far back as 1907. He also played a great deal in Hong Kong with Mr. H. A. Nisbet, the old International and one-time partner of H. L. Doherty, the famous champion.

Last December he was a member of the Hampshire team which defeated Hertfordshire in the Men's Hard-Court Inter-County Championship.

Mr. Cooper-Hunt is the possessor of over thirty trophies that he has won at various times, and he told me the other day that, although ill-health has prevented him lately from competing much in Tournaments, he is still a keen student of the game, and experiences the greatest interest in trying to impart his enthusiasm to others.

The Havana Band Leader.



MR. CYRIL NEWTON.

York's most successful bands.

THERE are few wireless artistes more popular with listeners than Mr. Cyril Newton, the leader of the famous Savoy Havana Band! For besides playing the violin, he also has a fine singing voice. Before coming to the Savoy, Mr. Newton lived for many years in America and led some of New York's most successful bands.

What—Why?

MR. NEWTON relates a story about a little boy who was taken to his first concert. A celebrated soprano was singing and an equally celebrated conductor was in command.

"Ma," exclaimed the youngster in a loud voice, "why is that man shaking his stick at the lady?"

"Hush, dear!" replied his embarrassed mother, "he is not shaking his stick at her."

But the young hopeful was not to be convinced.

"Then what is she screaming for?" he asked.

Why He Liked It.

THE other day, Mr. Stan Hatton, who has become a favourite at Sheffield Station, told me a good story.

An Irishman who had lived in a remote country district all his life, eventually went to live in a big town. One day a friend called to see him and remonstrated with him forcibly on his very old-fashioned methods of house-keeping.

"Now that you've come to live here," he said, "you must be more up-to-date. You should get gas laid on and have a gas fire installed."

The Irishman promised that he would do so at once, and a few months later his friend came again.

"Well, Pat," he said, "how do you like your gas fire?"

"It's fine!" replied Pat. "D'you know, it hasn't gone out since I lit it about a month ago!"

Two Kinds of Shells.



MISS IDA COWEY.

A PROMISING young artiste at Newcastle is Miss Ida Cowey, soprano. Miss Cowey is fond of telling this amusing theatrical story. An actor and a soldier were discussing their respective callings. "How would you like to stand with shells bursting all round you?" demanded the man of arms.

"Well," replied the actor, quickly, "it would

depend upon the age of the eggs."

To ensure getting "The Radio Times" regularly, ask your newsagent to deliver your copy every Friday.

Broadcast Music of the Week.

Described by Percy A. Scholes.

LONDON, SUNDAY.

D'Indy's "Pavane" Prelude.

Many listeners made an acquaintance with D'Indy through his *Intar*, given at the first of the Westminster Central Hall concerts, under Mr. Pitt's direction. Mr. Pitt appears to be a great admirer of the rather neglected D'Indy, and has not waited long to carry his propaganda further.

Fervant is a music drama, produced at Paris in 1908. Its hero is a young Celtic chief, who, lured by his Druid advisers, defends his country from Saracen invaders, but falls in love with Guthen, a Saracen princess. Fervant is defeated, but Guthen dies, and the curtain drops as Fervant is seen carrying her in his arms towards the mountain peaks from which is heard a mystical choir calling him, and announcing to the world the coming of a new and better religion.

The essential subject of the drama is the conflict between "the cold and rigid religion of the ancients, and the warm religion of love" (Louis Bergeron: "Vincent d'Indy: sa Vie et son Œuvre").

LONDON, TUESDAY.

Harpsichord Music.

The Harpsichord is one of the precursors of the Pianoforte. In a simpler or more elaborate form, it was played by Queen Elizabeth and the musicians about her Court, by Purcell, by Bach and Handel, by Haydn, Mozart, and the younger Beethoven. Then the Pianoforte superseded it, and it has only lately been effectively revived. Mrs. Gordon Woodhouse, the player to-night, is one of its chief modern exponents.

The essential difference between Harpsichord and Pianoforte is that in the former the strings are plucked when the keys are depressed, and in the latter they are hammered.

The instrument in its most developed form, as in the example played by our performer to-night, has two keyboards, and an array of stops and pedals, by which many fine effects of contrast can be obtained.

This is probably the first occasion upon which Harpsichord music has ever been broadcast, and it will be of interest to note how the instrument's clear, incisive tone "carries." My own guess is that it will transmit better than pianoforte tone.

ABERDEEN, SUNDAY.

Haydn's "Surprise" Symphony.

The impresario, Salomon, in 1793-4, brought Haydn over to England, for three visits which were enormously successful. Part of the bargain was that Haydn should compose some special Symphonies, and twelve were thus brought into existence.

These twelve are the best Haydn ever wrote, and the following conversation is recorded:—

SALOMON: "Sir, I think you will never surpass these Symphonies."

HAYDN: "Sir, I never mean to try!" And he never did, for though he lived seventeen years longer (until 1809) he never wrote another.

Why is this one of the twelve called "The Surprise"? The name comes from one chord in the Second Movement. This Movement begins very softly, on strings, alone. Then suddenly comes a crash from the whole band—strings, wind and drums.

A friend called on Haydn, just as he had finished composing this Movement. Haydn played the Movement to him on the piano and remarked: "Dat sure to make de ladies jump!"

There are four Movements:—

I. Slow Introduction, followed by a lively piece of music.

II. A gentle, but steadily moving Air with Variations, with the "Surprise" in the 10th bar.

III. A bold and happy Minuet, alternated with a quieter and more flowing one.

IV. A quick, jolly Movement. Note the many instances of Haydn's playful use of alternation of Wind and Strings.

CARDIFF, SUNDAY.

De Falla's Dance from "The Three-Cornered Hat."

De Falla is the leading living Spanish composer. He was born in 1876.

The story of the ballet, *The Three-Cornered Hat*, is taken from the nineteenth-century Spanish novelist Alarcón. It is about the Governor who flirts with the miller's wife, but falls into the mill-stream, and is merrily mocked by all the villagers.

The music of the Ballet is gay, and very Spanish in its rhythms and orchestral colours.

GLASGOW, TUESDAY.

Debussy's Submerged Cathedral.

"*La Cathédrale Engloutie*" is the purest and strongest thing I know in modern French music. . . . On most listeners it produces a very immediate if at first vague impression. But it is only gradually that we can fully discern the astounding dignity and imaginativeness of this vision of a cathedral under the sea, with its bells and its plain-chant harmonies pealing up through the water. The last half-dozen lines, in particular, seem to me as big music as anyone can want." (DR. ERNEST WALKER.)

GLASGOW, WEDNESDAY.

Bach's Brandenburg Concerto, No. 1.

It is really a wonderful Bach programme that Glasgow is offering on this night. Such a programme announced for the Queen's Hall would fill it.

Bach's six Brandenburg Concertos were made for a Count of Brandenburg, a great lover of music who was making a collection of Concertos by contemporary composers, for his private band to perform. When the Count died and his property had to be valued, the Bach works were, in the inventory, lumped together with 171 concertos by other composers, valued at four groschen (say 3d.) apiece—a modest estimate!

These are not Concertos in the modern sense of the word—i.e., compositions for some solo instrument with Orchestra. This first Brandenburg Concerto is written for three Oboes, two Horns, Bassoon, Solo Violin, and Strings. There are four Movements:—

I. Quick, merry, and bantering.

II. Slow and expressive (note the long florid Oboe solo with which it begins, a moment later taken over by Solo Violin, and a moment later still by Cellos, Double Basses, and Bassoon).

III. Quick and lively.

IV. A Minuet (all the instruments). A Trio (two Oboes and Bassoon). The Minuet repeated. A Polacca (Strings alone). Another Trio (two Horns and Oboes). The Minuet repeated.

MANCHESTER, THURSDAY.

Harry's "With the Wild Geese."

"The Wild Geese" was the name given to the Irish Brigade in the service of France—a brigade that found its origin in the exiles of the end of the seventeenth century.

At Fontenoy, in 1745, the French (thanks to the Irish Brigade, it is said) beat the English,

the Dutch, and the Austrians. Believe what you like of what follows—

During the night following the battle the bodies of the "Wild Geese" rose and flew away, and by dawn the flock was seen on the coast of Ireland.

"Jesus save you gentry! Why are ye so white, Sitting all so straight and still, in this midy light?"

"Nothing ails us, brother; joyous souls are we, Sailing home together on the morning sea."

That verse is from one of the two poems (by the Hon. Emily Lawless) prefixed by the composer to his score.

The course of the music is as follows: (a) A slow Introduction (sad thoughts of the exiles?); (b) A quick Irish tune by the Flutes and another by Flutes and Piccolo (the spirit of Irish adventure?); (c) A quieter passage, with its peaceful Oboe tune broken here and there by a touch of military music; (d) Night music, very quiet, but with an undercurrent of anticipation of the strife of the morrow; (e) A trumpet call, and the Irish tune again, used this time with a suggestion of battle; (f) A final section which suggests the resurrection of the warriors, their flight to Ireland and their apotheosis.

McEwen's "Solway" Symphony.

This was composed in 1911, in the district from which it takes its title, and expresses in music its composer's reaction to the experiences indicated in the titles of the three Movements and the verses prefixed to them.

I. SPRING TIDE.

"Long golden sands, edged with a silver streak, The impetuous surge that races to the shore, The full and steady motion of the flood— When sun and moon combine to tug the tide."

II. MOONLIGHT.

"The third ocean crawls along the beach, Sobbing a wordless sorrow to the moon."

III. THE SOUTH-WEST WIND.

"Sun, wind and cloud shall fall not from the face of it. Stinging, ringing spindrift, nor the folk nor flying free—"

An account of the composer's career appeared in *The Radio Times* of February 22nd. The score of the "Solway Symphony" was published at the expense of the Carnegie Fund, and the Carnegie Administration wrote of it, "A symphony of remarkable beauty, poetic, well-written and original in conception. The slow movement may rank with any piece of symphonic work that has been written in this country; and the whole composition is full of atmosphere, rhythm and colour."

**FREE
PATTERN**

or
SLIP

PETTICOAT

Given FREE in

WOMAN'S LIFE

ON SALE NEXT MONDAY (MARCH 24th), 2d.

If you have trouble in reading a paper, send 6d. to George
Newnes Ltd., 25, Abchurch Lane, London, E.C. 4.



Radio Pioneers of Long Ago.

Romances of the Early Experimenters. By Reginald Pound.

OF the multitude of wireless enthusiasts listening to-day how many, one wonders, give so much as a fleeting thought to those early pioneers whose genius has made of the wireless dream a wonderful reality?

For, let there be no mistake, wireless telegraphy, like many other modern developments, has its roots more deeply in the past than most of us realize. When Senatore Marconi raised wireless from the laboratory stage to the realm of practical science thirty years ago, he crowned with his fertile genius the labours of men who many years before had been experimenting with the object of signalling by wireless. Faraday, Henry, Clerk Maxwell, Hertz, Brandy, Preece, Willoughby Smith—these are names that convey little and, perhaps, even nothing to the lay mind, which, however, owes much to these and other pioneers on whose modest, but vital, accomplishments is based the knowledge that is ours to-day.

An Unknown Genius.

That wireless was preceded by telegraphy with wires it is hardly necessary to remind the reader. The subject of the electrical transmission of messages first received attention in the middle of the eighteenth century, when an anonymous letter appeared in the *Scots Magazine* advocating the use of as many insulated conductors as there are letters in the alphabet, following the discovery by Gray and Wheeler, two of the earliest experimenters, that the electrical energy of a charged Leyden jar may be conveyed by an insulated wire.

Each wire, it was suggested by the unknown correspondent, should be used for the transmission of one alphabetical letter, and a complete message sent by operating the various wires in succession, the reception of the message being recorded by the movements of slips of paper attached to the terminals, every slip being marked with a letter.

But it was not until nearly fifty years had passed that the first glimmerings of the wireless age appeared above the horizon of science.

Five years before the close of the romantic "seventeen-hundreds," a Spanish scientist, named Salva, read a paper before the Academy of Sciences at Barcelona in which he said:

"If earthquakes be caused by electricity going from one point charged positively to another point charged negatively, as Bertolon has shown . . . one does not even want a

cable to send across the sea a signal arranged beforehand. One could, for example, arrange at Mallorca an area of earth charged with electricity, and at Alicante a similar space charged with the opposite electricity, with a wire going to, and dipping into, the sea. On leading another wire from the sea-shore to the electrified spot at Mallorca, the communication between the two charged surfaces would be complete, for the electric fluid would traverse the sea, which is an excellent conductor, and indicate by the spark the desired signal."

Commenting on this in his "History of Wireless Telegraphy," Fable, the noted historian of telegraphic developments, says: ". . . we shall see that Salva's idea is, after all, not so extravagant as it seems. We now know that large spaces of the earth can be electrified, giving rise to the phenomenon of 'bad earth,' so well known to telegraph officials."

The Spaniard's suggestion, however, was not regarded as being anything more than a flash of genius of which, perhaps, its novelty was its chief claim to attention.

Discovered by Accident.

In 1838, K. A. Steinheil, of Munich, had forced on him by accident the realization of the possibilities of wireless telegraphy, and to the experiments he conducted may be traced most of the early developments of the science. A noted German philosopher hinted to Steinheil that the two rails of a railway might form suitable conductors in telegraphic experiments. It was only an idea, but, acting on it forthwith, Steinheil soon proved its value.

He took his apparatus to the Nuremberg-Furth railway, where, as the outcome of the fact that he was unable to obtain an insulation of the rails good enough for his purpose, he discovered that the great conductivity of the earth rendered it possible to dispense with the "return" wire, and to make use of the earth instead. From this simple, but important, discovery there sprang the use of what is known as the earth return—an essential feature of practically every telegraphic circuit.

It was as a result of this discovery that Steinheil was inspired to visualize a time when "wireless" telegraphy would supplant the older order.

(To be continued.)

The Oscillation Nuisance.

An Official Effort to Assist Listeners

HOW YOU CAN HELP.

THE following important notice is issued by the officials of the British Broadcasting Company:—

In order to find out what localities are suffering from oscillation and to what extent oscillation is upsetting our service, we should be obliged if all those who are irritated by this prevalent nuisance would be so good as to send in a report framed as below to "Oscillation," the British Broadcasting Co., 2, Savoy Hill, London, W.C.2. We ask you to report oscillation troubles always in this way as it enables us so much more easily to tabulate statistics and to report clear cases to the authorities.

We do not wish to adopt a "policeman's" attitude, as we feel that in ninety-nine cases out of a hundred people oscillate through ignorance. In persistent and proved cases, however, where malignity or gross carelessness can be proved, we mean to ask the Post Office to take action.

We have distributed many thousands of pamphlets on how to prevent a set oscillating. We hope to distribute many thousands more, so if you have any distributing powers write to 2, Savoy Hill, for 5, 10, 100, or 1,000 pamphlets if you can get rid of them to those who may benefit.

Below is set out the type of information we require when you are bothered by oscillation:—

*YOUR NAME.....

*YOUR ADDRESS.....

*NATURE OF COMPLAINT (Duration, intensity, whether constant or intermittent, etc.)

NAME AND ADDRESS OF OFFENDER (if known)

* Will be treated confidentially.

† This must be given to help us in locating the area of interference.

‡ It is useless to make wild guesses; this information is not to get people into trouble; they may be doing it unwittingly. (In cases of persistent trouble, however, the information may be useful.)



The Power that Pelmanism gives

Is Power that Endures. So says Canon Hannay (George A. Birmingham), whose amusing novels of Irish life are so well known to readers. "Pelmanism," he writes, "is not for the elect few only, but is valuable to all men and women. The results endure. Certain habits of mind are formed which are of the *very highest value in life*. The man who forms them is not merely stimulated to unwonted mental activity for a time, but gains *Power which endures*. This is what makes the effort—the pleasant and interesting effort—of a course of Pelmanism so well worth while."

The New Pelmanism

The New Pelmanism is a great improvement on the former Course. The famous journal *Truth* says that it is "100 per cent." better. It is based on the experience gained in training 500,000 minds, includes the latest discoveries in Psychology, and is certainly the most perfect and comprehensive system of scientifically training the mind that has ever been devised.

A short course of Pelmanism brings out the mind's hidden powers and develops them to the highest pitch of efficiency. It removes all those defects, those little inefficiencies—Forgetfulness, Indecision, Diffidence and so on—which interfere with the effective working power of the brain, and it develops in their place such qualities as CONCENTRATION, INITIATIVE, SELF-CONFIDENCE, PRESENCE OF MIND, OBSERVATION and A RELIABLE MEMORY. Above all it develops DRIVING FORCE, ENERGY and MENTAL POWER—"Power that Endures."

Thousands of men and women in every walk of life testify to the Power that Pelmanism gives. Their letters make wonderful reading. They show how Pelmanism has increased their efficiency in every way—how it has enabled them to gain Promotion—how it has developed their Personalities—how it has enabled them to hold their own (and more than hold their own) in the fierce competition of Business and the Professions—how it has developed their speaking ability—how it has increased their *Earning Power* (even doubled and trebled it), how it has enabled them to realise their aims, dreams and ambitions.

The Power that Pelmanism gives is fully explained in "The Efficient Mind." No thoughtful, earnest, ambitious man or woman can afford to miss the opportunity of writing for a free copy of this book to-day.



CANON HANNAY
(George A. Birmingham).

Photo by
E. O. Hopper

The well-known author of "Spanish Gold," "The Last Trek," "General John Regan," and many other well-known books. His views on Pelmanism are amongst those quoted in the free book mentioned below.

FREE



The Fourth Edition of this famous book, "The Efficient Mind," is now ready. It is fully illustrated and contains a complete description of the New Pelmanism. It also shows you how you can enrol for the Course on the most convenient terms (paying, if you like, by instalments). This book can be obtained **GRATIS and POST FREE** by everyone who sends the following coupon to the Pelman Institute, 95, Pelman House, Bloomsbury Street, London, W.C.1. **WRITE FOR YOUR FREE COPY TO-DAY.** Callers also invited.

To the Secretary, THE PELMAN INSTITUTE,
95, Pelman House, Bloomsbury St., London, W.C.1.

Please send me, gratis and post free, a copy of "THE EFFICIENT MIND," together with full particulars of the New Pelmanism.

NAME

ADDRESS

OCCUPATION

If Coupon is sent in OPEN envelope it only needs 1d. stamp.

WIRELESS PROGRAMME—SUNDAY, March 23rd.

The letters "S.B." printed in italics in these programmes signify a Simultaneous Broadcast from the station concerned.

LONDON.

2.0-2.15—*Time Signal from Big Ben.*
2.15-2.30—**THE BAND OF H.M. GRENADEER GUARDS.**

By permission of
Col. R. N. S. Grenadier, C.M.G., D.S.O.

Director of Music,
Lieut. G. MILLER, L.R.A.M.

"Marche des Mousquetaires" *Reverie*
Overture, "Stradella" *Flute*
Cortina, Solo, "So Fair Thou Wilt" (Solo from "Doris") *Clarinet*

(Soloist, Miss W. West)

MAVIS SHREVE (Songs at the Harp).

"Away on the Hill" *London Herald (S)*
"Little Winding Road" *For D'Arques*

E. KENDAL TAYLOR (Solo Pianoforte).

"As I heard it from the East" *And*
Polonaise in A Major ("The Military") *Chopin*
ROMANO CLAROFF (Russian Tenor).

"Berceuse" *Grieg*
"Air and Cavatina of Vladimir" ("Primo Igno") *And*

"An Printemps" *Debussy*
"Gives Me Oblivion, Unleashed" *Napier*

The Band.

Knappey, No. 2 *And*
Selection from the Songs of Paul Verlaine *And*
March "Stradella" *And*

"On Wings of Song" *Mendelssohn*
"If I Might Only Come to You" *Spencer (S)*

E. Kendal Taylor.

Solo Air and Quick Dance *And*
Study in E Flat *And*

"When Night Descends" *And*
"Spring Water" *And*

Selection, "La Cigale" *And*
Rondo Capriccioso *And*

2.50-3.00—**CHILDREN'S CORNER.** S.B. from Manchester.

3.00-3.15—Hymn, "Ye Holy Angels Brigh" (E.H. 117, A and M 144).

The Rev. Dr. JOHN G. VANCE, M.A., Ph.D., etc., Vice President of St. Edmund's College, Religious Address.

Hymn, "When I Survey" (E.H. 107, A and M 108).

Antiphon, "O Saviour of the World" (E.H. 109, R and M 110).

Light Symphony Concert.

Conducted by Percy Pitt.

THE AUGMENTED WIRELESS ORCHESTRA.

Solo Pianoforte, HERBERT FRYER.

Overture, "Mireille" *And*
Prelude, "Festiva" *And*
Pavane, Dance *And*
Concertino in F Minor, for Piano and Orchestra *And*
Serenade *And*

10.0-10.15—**TIME SIGNAL FROM GREENWICH AND GENERAL NEWS BULLETIN.** S.B. in all Stations, except Cardiff.

Local News and Weather Forecast.

10.15-10.30—Two Hungarian Dances *And*
Serenade in B Flat Minor *And*
Tombola in A Flat, Op. 53 *And*

"Boys' March" *And*

10.45—Close down.

BIRMINGHAM.

2.0-2.15—**THE STATION ORCHESTRA.**

under the direction of JOSEPH LEWIS.

Overture from "Tannhauser" *And*
"The Harmonious Blacksmith" *And*
Prelude and Fugue No. 2 in C Sharp *And*
Prelude in F Major *And*

LESLIE BROUGHTON (Soprano).

"Let the Bright Seraphim" ("Soprano") *And*

Selection from "La Traviata" *And*
JAMES HOWELL (Baritone).

Rond, "I Feel the Debt Within" ("Julius Maximilian") *And*
And, "Ave, Ave, Ave" *And*

Music, DILLON, BLANCH, and CLARKE.

Trios for Flute, Clarinet, and Bassoon.

"Andante Gracioso" *And*
Rondo-Allegretto *And*

Novelty in D, Op. 21, No. 2 *And*
Two Arabesques *And*
Jardin sans la Plante *And*

"Ah-Yes" ("The Magic Flute") *And*

Solo, "A Lover in Disguise" *And*
(a) "Far Across the Desert Sands"; (b) "Where the Habermas Flows"; (c) "Beloved in Your Absence"; (d) "How Many a Lonely Caravan" *And*

"Honour and Arms" ("Soprano") *And*

March, "Festiva" *And*

3.0-3.15—**CHILDREN'S CORNER.** S.B. from Manchester.

3.15-3.30—**THE STATION REPERTORY CHOIR.**

Hymn, "Conquering Kings Their Titles Take" *And*
(A and M 175)

Antiphon, "Lord, for Thy Tender Mercy Sake" *And*
Canon P. R. WATSON, St. Patrick's Church, Bordesley *And*
Religious Address.

AMY CARTER (Contralto).

"The Silver Song" *And*
"The Blacksmith" *And*
HAROLD CASEY (Baritone).

"Nazareth" *And*
STATION ORCHESTRA.

Overture, "Stadella" *And*
Symphony, "The Military—No. 12 in G" *And*
Serenade, "Serenade No. 2" *And*
"March Militaire" *And*
Selection, "Songs Without Words" *And*

10.0-10.15—**NEWS.** S.B. from London.

Local News and Weather Forecast.

10.15—Close down.

Announcer, Percy Edgar.

BOURNEMOUTH.

2.0-2.15—**ORGAN RECITAL.**

relayed from the Bournemouth Arcade.

ARTHUR MANTON, A.R.C.O., Organist.

Mand, "Solenne" *And*
Cantata Overture in C Major *And*
Prayer and Credo Song *And*
Overture in D Flat *And*
Missa *And*
Scherzo *And*
Legende and Finale Symphonique *And*

4.0—**THE ROYAL BATH HOTEL ORCHESTRA,** relayed from King's Hall, Bournemouth, David S. Lill.

5.0-5.30—**CHILDREN'S CORNER.** S.B. from Manchester.

5.30-5.45—**THE WILTON AINSLEY QUARTETTE.**

MARGARET REYNOLDS *And*
DOROTHY PAIR *And*
LORRIE EDGE *And*
E. WILTON AINSLEY *And*

"Now but the Weary Heart" *And*
5.45-5.55—**CORPUS CHRISTI ROMAN CATHOLIC CHURCH CHOIR, BOSCOMBE.**

Under the direction of CHARLES LEESON.

Motet, "Ave Verum" *And*
Hymn, "Holy Spirit, Lord of Light" (Westminster Hymnal, No. 44).

5.55-6.05—**THE REV. FATHER TRIGGS, Roman Catholic Church, Bournemouth, Religious Address.**

6.05-6.15—Hymn, "O Paradise" (No. 172 Westminster Hymnal).

Motet, "Jesu Dulcis Memoria" *And*

6.15-6.25—**THE WILTON AINSLEY TRIO.**

Selection, "Capella" *And*
DORRIE EDGE (Solo Violin).

6.25-6.35—**"Le Cygne"** *And*
Serenade *And*

6.35-6.45—**"Serenade"** *And*
Noted, "Serenade" *And*
The Wilton Ainsley Quartette.

6.45-6.55—**"Mon Coeur s'ouvre à ta Voix"** ("Soprano and Violin") *And*
Soprano and Violin.

6.55-7.05—**Margaret Reynolds (Solo Violin).**

"Cavatina" *And*
"Favanne" *And*

7.05-7.15—**The Wilton Ainsley Quartette.**

"Serenade" *And*
"Serenade" *And*

7.15-7.25—**NEWS.** S.B. from London.

Local News and Weather Forecast.

7.25-7.35—Close down.

Announcer, John B. Raymond.

CARDIFF.

An Hour of Good Music.

Vocalist, LORNA MANSFIELD (Contralto).

Solo Pianoforte, AMY BERNARD COOK.

Solo Violin, LENA MASON.

Recitals, EDITH LESTER-JONES.

2.30-2.45—**"Nocturne No. 1" (Op. 15)** *And*
"Intermezzo in C Sharp Minor" *And*
"Waltz in A Flat" (Op. 45) *And*

2.45-2.55—**"As a Souvenir of Mary"** *And*
"Thou Art Like a Lovely Flower" *And*
"O Wondrous Mystery of Love" *And*

2.55-3.05—**Violin Solo.**

Sonata for Violin and Piano in F Major (Op. 24)—First Movement only *And*
Recitals.

3.05-3.15—**"Ardanza"** *And*
Lyric from "Mozart" *And*
Pianoforte Solo.

3.15-3.25—**"Rigolotto"** *And*
Songs.

3.25-3.35—**"The Willow Song"** *And*
Cradle Song *And*

3.35-3.45—**Violin Solo.**

Air on G String *And*
"Schön Romanin" *And*

3.45-3.55—**CHILDREN'S CORNER.** S.B. from Manchester.

3.55-4.05—**CHOIR OF BARRY DOCK WESLEYAN CHURCH.**

Hymn, "At Even ere the Sun was Set" *And*
Antiphon, "Son of My Soul" *And*
The Rev. J. WILLIS BESKINWORTH, Barry Dock Wesleyan Church, Barry Dock, Religious Address.

Hymn, "O Day is Dying in the West."

Spanish Night.

THE STATION SYMPHONY ORCHESTRA.

Conductor, OLIVER RAYMOND.

Vocalist, JOHN COSS.

3.55-4.05—**I. "Fandango"** *And*
II. "Rhapsody Espana" *And*
III. Songs, Selected *And*
IV. "Fantasia Espagnole" *And*
V. Songs, Selected *And*
VI. Three Dances from "The Three-Cornered Hat" *And*
VII. "Carmen," Suite No. 1 *And*
The National Anthem.

NEWS BULLETIN.

10.20—Close down.

Announcer, W. N. Settle.

MANCHESTER.

2.0-2.15—**Request Programme.**

RADIO MILITARY BAND.

Conductor, HARRY MONTGOMERY.

March, "The Boys" *And*
Selection, "Carmen" *And*
Serenade, "The Tales of the Bell" *And*
JENNIE COPELAND (Soprano).

Songs, Selected.

Overture, "Rienzi" *And*
Morceau Myrse, "Salut d'Amour" *And*
Suite in F Major *And*
Jennie Copeland.

Songs, Selected.

Selection, "Carmen" *And*
Morceau Japonais, "La Marmite" *And*
Overture, "Hans Heiling" *And*
Descriptive Scene, "In a Moorish Garden" *And*

March, "Colonel Bogey" *And*
5.0-5.30—**CHILDREN'S CORNER.** S.B. in all Stations.

5.30-5.45—**THE REV. K. W. THOMPSON, M.A., B.D., Religious Address.**

5.45-5.55—**FAT RYAN (Solo Clarinet).**

"Jewel Song" ("Faint") *And*
"Oh! Just a Little" ("Faint") *And*

5.55-6.05—**MOLLY GRAY (Soprano).**

"The Shepherd's Song" *And*
"Sad Lullaby" *And*
KYLE MCDONALD (Solo Violin).

"Legend" *And*
NORMAN FAWCETT (Solo Pianoforte).

Etude in A Minor *And*
Fut Roun.

Gavotte ("Mignon") *And*
Polonaise ("Mignon") *And*
Molly Gray.

"Faint of Pen" *And*
"Will of the Wisp" *And*
Norman Fawcett.

Concert Study in A Flat *And*
10.20—Close down.

Announcer, Victor Smythe.

NEWCASTLE.

2.0-2.15—**THE WIRELESS SYMPHONY ORCHESTRA.**

Conductor, W. A. CROSS.

Allegro from the "Jupiter Symphony" *And*
LILY ADAMS (Contralto).

"Good Morning, Brother Sunshin" *And*
"Sweet Noam" *And*
JACK TODD (Tenor).

"East Nod Ye, O Israel" *And*
"Sanctuary" *And*
ALFRED SEABRIDGE (Solo Violin).

Andante from "Cocorico" *And*
"La Procession" *And*
Andante from "Jupiter Symphony" *And*
JACK TODD.

"If With All Your Heart" *And*
"Home is Where You Are" *And*
Scherzo and Finale from "Jupiter Symphony" *And*
LILY ADAMS.

4.0-4.15—**"There are Paths in the Garden of Our Garden"** *And*
LILY ADAMS.

"The Magic of Thy Presence" *And*
ALFRED SEABRIDGE.

4.15-4.30—**"Allegretto"** *And*
"Children's Dance" *And*
JACK TODD.

4.30-4.45—**"Where'er You Walk"** *And*
Orchestra.

4.45-4.55—**Ballet Music, "Pavane"** *And*
Gordon.

4.55-5.05—**CHILDREN'S CORNER.** S.B. from Manchester.

5.05-5.15—**DURHAM CITY WEST END MALE VOICE CHORUS.**

"Shades of the Morn" *And*
"An Old Man's Song" *And*
Hymn, "Through the Night of Doubt and Sorrow" *And*
The Rev. W. G. PECK, Religious Address.

5.15-5.25—**Hymn, "Praise the Lord."**

5.25-5.35—**RALPH JACOBSON (Solo Cello).**

"La Solve" *And*
Choir.

5.35-5.45—**"Music, All Powerful"** *And*
"The Vision" *And*
WILLIAM A. CROSS (Solo Pianoforte).

Impromptu, Op. 90, No. 2 *And*
5.45-5.55—**"Simple Aven"** *And*
"Ave Maria" *And*
Choir.

5.55-6.05—**"Come, Let Us Join the Roundelay"** *And*
"How Sweet, How Peaceful" *And*
"My Dear Mistress Had a Heart" *And*
"With Sigh, Sweet Rose" *And*

10.0-10.15—**NEWS.** S.B. from London.

Local News and Weather Forecast.

10.15-10.20—Close down.

Announcer, C. R. PARKER.

A number against a musical item indicates the name of its publisher. A key list of publishers will be found on page 464.

Buy
British
Goods
Only.



Kuchen,
Mon.

"Please forward me two pairs of your famous 'Ericsson' 4,000 ohm 'phones. I have personally tested your make of 'phone against seven other 'phones' and find that 'Ericssons' are the 'goods' every time. I have recommended them to several of my wireless friends who, after trying them, are loud in praise of the quality of speech and music (not to mention Morse sign) rendered by your make of 'phones.'"

(Extract from letter to us.)

Selling Depots:
Manchester: 22, Bridge Street, Deane-
rose, Salford; W. J. Surry & Co.,
Trades House, Birmingham 14-15,
New B. 1, Scotland Yard, London
W.C.2; 53, Rotherhithe Street, Glasgow;
N. E. England: Messrs. H. A. Newson
on Tyne, Newcastle 121 High Street.

1 against 7

—but that 1 was an
Ericsson Headset

PERFORMANCE is the supreme test of telephones and the performance of Ericsson (British) Telephones stamps them as head and shoulders over any 'phone on the market to-day. The accompanying letter testifies to this.

Superbly made, comfortable, robust in construction, yet extraordinarily sensitive in operation they are the ideal telephone for extra results on any set, valve or crystal.

	Prices:	
120 ohms	24/6	
2,000 "	25/6	
4,000 "	26/6	

Look for "Ericsson Beeton Notts" on each earpiece —this is missing from the Continental imitations.

Write at once for lists and information of our valve and crystal sets, also our famous "Super Tone" Loud Speaker.

The British L.M. Ericsson Mfg. Co., Ltd.,
International Buildings,
47, 73, Kingsway, London, W.C.2.

Ericsson
(British)
Telephones



Light at its best

LAMPS are the most important material item in any lighting installation; and it is, of course, essential that only lamps of proved worth and established repute should be used.

It is, however, of even greater importance that the lamps and other equipment should be selected and arranged in such a manner as will ensure the greatest possible benefit from the light produced. Good lighting—whether in the factory, shop or office—is the product of good lamps and right planning.

In other words use Mazda lamps—which are unsurpassed in lighting qualities—and have your installation planned for maximum effect and efficiency. Thus you will get "light at its best."

Imported by The British Thomson-Houston Co. Ltd.



Radio Valves



B5 Type.



R Type.



B4 Type.

THE amber-tinted bulb of the R type and B4 valves, and the silvered bulb of the B5 valve are the outward and visible signs of a perfect vacuum. The colouring of the bulbs is an incidental result of a process which produces a high and permanent vacuum. Bear this point in mind and buy B.T.H. valves always.

B5 TYPE VALVE, 30/- each. The latest development the B5 valve takes only 0.06 of an ampere, and can be operated on standard dry cells.

Filament volts	—	2.5 to 3 volts
Filament current	—	0.06 amp
Anode volts	—	20-30 volts

R TYPE VALVE, 12/6 each. There is no better "general purpose" valve than the amber tinted B.T.H. R type. It can be operated on 4, 6, 8, 10, or 12 volts, or on a 100-0-100 volt a.c. supply. It is a very efficient reflex and triode.

Filament volts	—	4 volts
Filament current	—	0.63 amp
Anode volts	—	40-60 volts

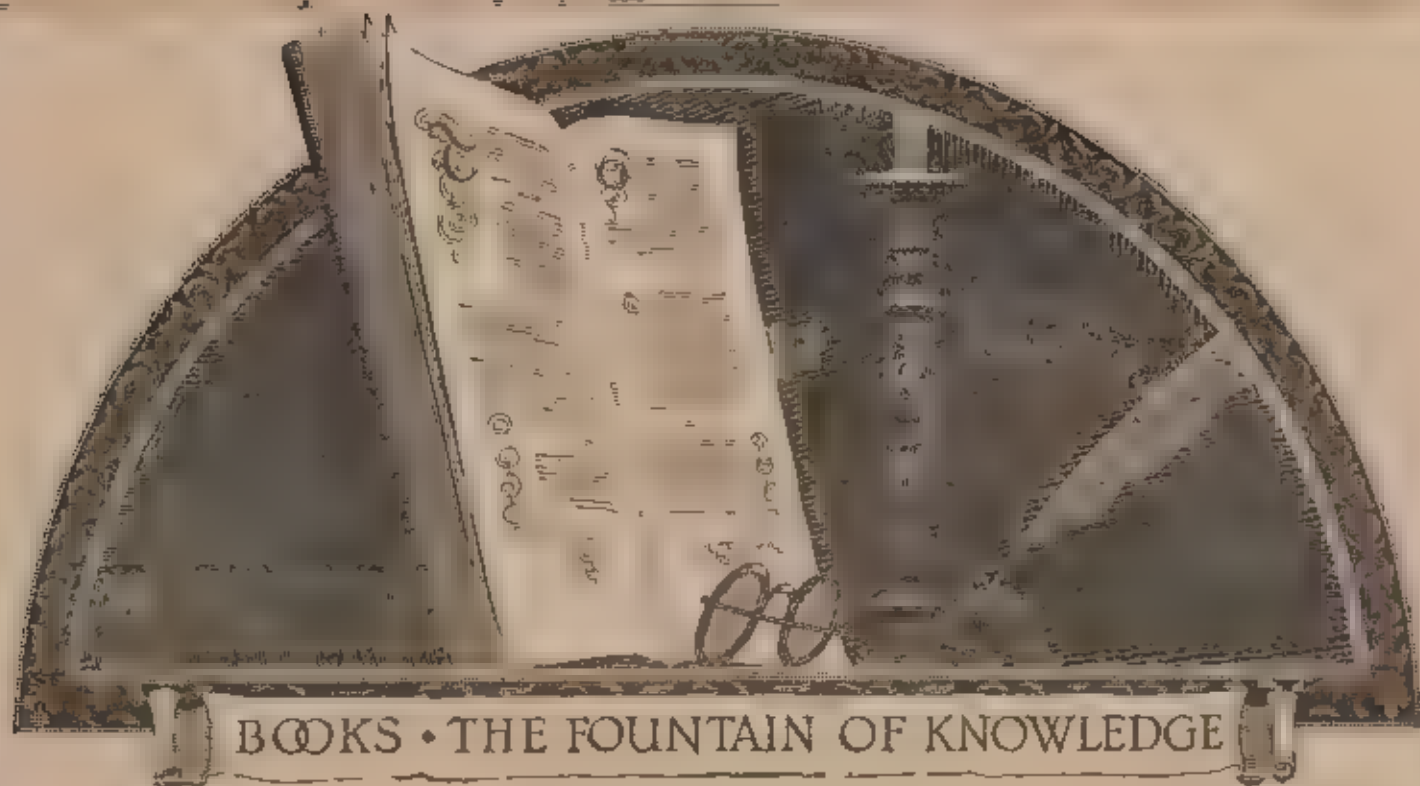
B4 TYPE VALVE, 35/- each. The B4 valve has a very great amplification factor and is free from distortion. It is the ideal valve for loud speaker work.

Filament volts	—	6 volts
Filament current	—	0.25 amp
Anode volts	—	40-100 volts

The British Thomson-Houston Co., Ltd.
(Wholesale only)

Works: Coventry. London Office: Crown House, Aldwych, W.C.2

Branches at Belfast, Birmingham, Cardiff, Dublin, Glasgow, Leeds, Liverpool, Middlesbrough, Manchester, Newcastle, Swansea, Sheffield.



Homebuilt Wireless Components

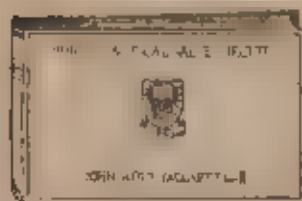
A thick mist shows how much larger numbers at the ceremony would be if the Chinese Embassy ever made diplomats and their wives still have no voice as can be seen throughout today.

R. P. Series
No. 16.
2/6



Pictorial Wireless Circuits

A new idea in front book. Each time an idea about by means of the action on the front. This thinking is easy let a template inside to follow the diagram and to wire up the front on the back.



More Practical Valve

A new Book 4 (rehabilitation) Tappan
in P. 6 (very old) edition but a
large number of new Circuits
including N. & T. 100. Armstrong
Super, & something, and many of
the new reflex Circuits.

3/6

You can always depend
on Radio Press Books

BECAUSE every responsible person on the staff of Radio Press, Ltd. is an experienced Radio man and because Radio Press, Ltd., publish only Radio Books, every one can be relied upon as being the most authoritative of its kind. There is now such a wide range of R.P. Books that, no matter in which section of Radio you want information, there is a Radio Press Book to give it to you. All Booksellers sell them, or they may be obtained direct from Publishers (Postage 2d. per book extra).

Recent additions to the list

Tuning Coils and How to Wind Them

There is probably no single component in any Recovery Set able to exert an overall influence on oil prices. A highly efficient set of five would include all the different sectors, as well as a major energy and world economy.

Every day you feel like you are present yet so
missing something... go... actually, the children
are that it will be... every other
attention that goes into being...
in the water... I was...
made me... the... have
and...
I am... all trees of
the...
of...
to...
R.D. ... 16

Radio Press Envelope
No. 1—The S.T. 100

Nat. J. Zool. 1991, vol. 8, no. 1, pp. 1-6
 ISSN 0028-771X © 1991 CSIRO
 Printed in Australia

Simplex Radio Charts

We have just published a full line of receivers such as

1. A Two-Valve Receiver 1-

2. A Three-Valve Receiver 1-

3. A Four-Valve Receiver 1-

No.	A	Two-Valve Receiver	1
No.	A	Three-Valve Receiver	1
No.	A	Four-Valve Receiver	1

Wireless Sets for Home Constructors

By E. Sudpink

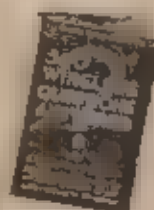
Early on these last years as a farm class
one and the other are up in the air
... ..
... ..
... ..
... ..
... ..

26

Radio Press Envelope
No. 2—Four-Valve Set

26 mg free Ca^{2+}

500 Wireless Questions Answered

[illegible]

R. P. Series
No. 13.
216

Radio Valves and How to Use Them

A new phase in the history of the S. F. P. which will be well illustrated by the number who were able to attend the 1934 convention at the Hotel St. Francis. The program is being given in the new building which will be ready for occupancy in the near future.

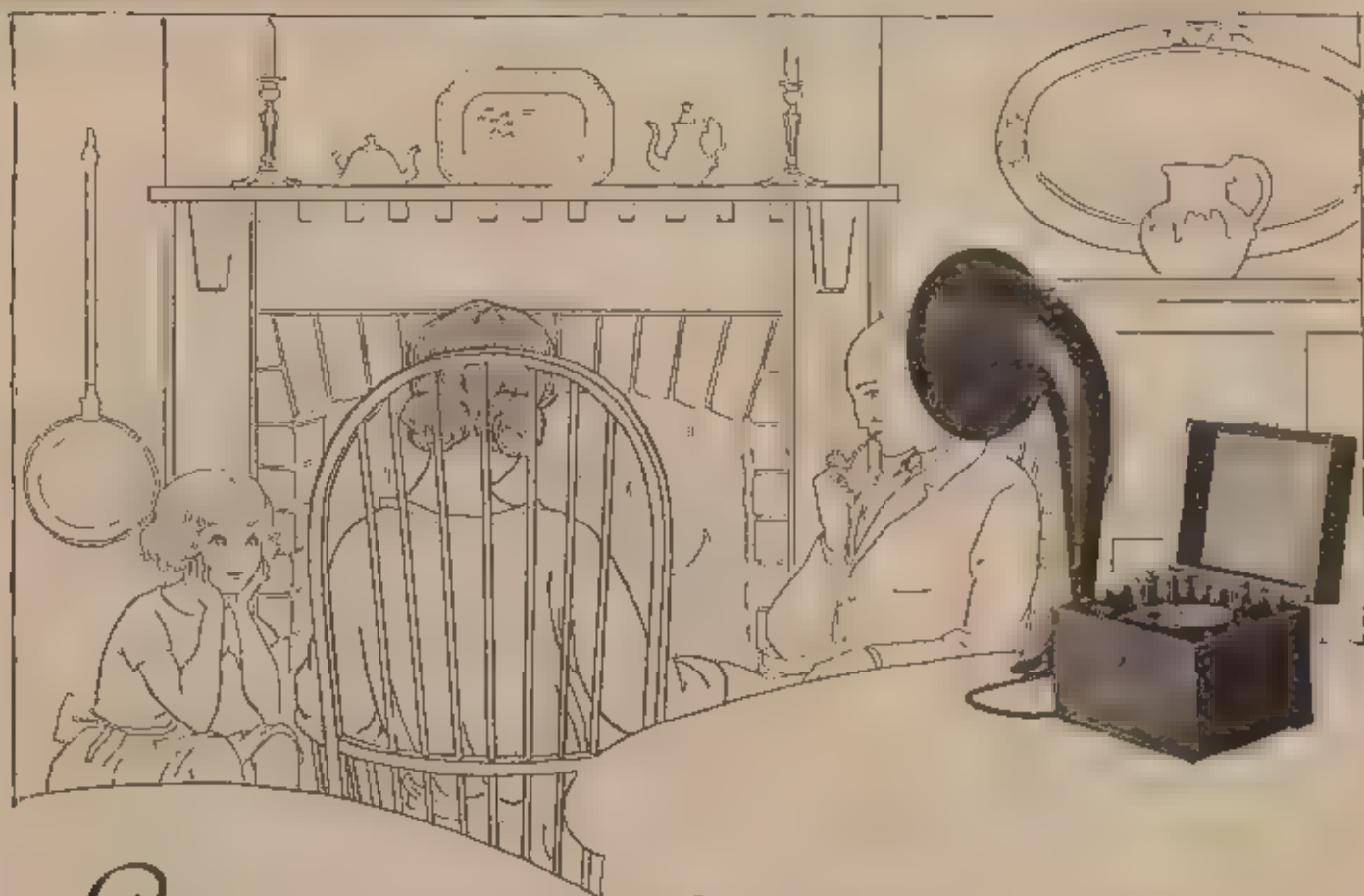


R P Series
No 12
2/6

Broadcast Listener's Year Book

[illegible]

RADIO PRESS, Ltd., Devereux Court,
Strand, W.C.2.



Listening to the city—

Away in your Cottage home, outside the City, far from the hub and bustle of business, you may sit in comfort during these cold evenings and yet share the enjoyment of music, the interest of late news, and other matters for your edification.

Providing you are within a radius of 30 miles of a B.B.C. Station this wonderful little set will give you unbounded pleasure. The Crystal Set and 2-Stage Amplifier combined will give most perfect results in your small room and will operate the Western Electric Loud Speaker No. 44004 direct. It is fitted with Weco valves, which operate off dry batteries, so that you have none of the trouble attendant upon the use of accumulators, and the special distortionless transformers render the combination almost perfect in its reproduction.

If you prefer to use Head-phones then the range of the set is at least doubled.

Western Electric

MAKERS OF OVER HALF THE WORLD'S TELEPHONES.

The combination illustrated above consists of —
 Wecoconomy Set No. 44080, a Crystal Set
 with Double Amplification. £12 0 0
 Loud Speaker No. 44004 of medium size
 with a metallic diaphragm and adjustable
 air gap. £3 17 6
 (B.B.C. Contributions extra)

Suitable for reception of a B.B.C. Station within
 a radius of 30 miles and sufficiently powerful
 to fill a small room.

WECO VALVES AND WECO ECONOMY SETS
 ENSURE ECONOMY. THEY OPERATE
 OFF DRY BATTERIES, AND NO ACCUMU-
 LATORS ARE NECESSARY.



ADVERT OF THE WESTERN ELECTRIC COMPANY, LIMITED, CONNAUGHT PLACE, ALDWYCH, W.C.2.
 ASK YOUR DEALER FOR PARTICULARS

A number nearest a sponsor item indicates the number of its publisher. A key list of publishers will be found on page 134.

The Mystery of the Microphone.

By P. P. Eckersley, Chief Engineer of the B.B.C.

MYSTERY? Why mystery? The microphone is simply our instrument for converting the wave motions of sound into equivalent variations of electro-motive force so where's the mystery? (Swank.)

Well let me try and delve a little deeper into it and explain as best I may the very heart of broadcast—the microphone.

Do you know what sound is? It is (assuming you don't) a wave motion in the air. If you blew middle C on the organ, and you had a quick moving sensitive barometer in the field of the sound, you would notice that the pressure of the air was changing some 500 times a second, and first the pressure would be above the steady pressure of the air when the sound was not present, and next the pressure would be below this normal pressure, and the alternations would follow one another 500 times a second. These pulsations of pressure falling upon the ear, produce the sensation we call sound. If the pulsations follow one another as slowly as thirty or forty times a second, we say that this is a very deep or low note. If, on the other hand, the frequency of the pulsations is 10,000 a second, people start looking round for a bat—a very high note is produced.

Where Animals Excel Us.

The human ear's limit is about 10,000 to 15,000, varying with different people; but dogs and other animals can hear higher notes. One day, during the Children's Hour a note was blown on a very high-pitched whistle—but no one listening on his wireless, or even in the studio, heard the whistle. On the other hand, lots of dogs got very excited whenever they were in range of 'phones or loud speaker. This proves that dogs have remarkable hearing for high notes, but that human beings are limited. (Query: Do dogs converse in superhuman whispers? At any rate, if they do, why don't they stick to it and stop barking? Dogs in our street, please note.)

When Sound is Dead

Thus sound is present in the air, and if we place an alarm-clock alarming away fit to wake the dead in a bell jar from which all the air has been removed, you can't hear it. (The lady who gets my breakfast ready, please don't note.) Thus, even if we shout our utmost, our prayers can never reach heaven as sound, nor can we communicate the loudest warnings to another planet were she untactful enough to hear this way.

But, Wireless, yes! Now suppose we leave a diaphragm made of steel somewhere in the way of these impulses. A diaphragm is simply a circular piece of thin metal, clamped round the edges and free to move at its centre (see your own telephones). The impulses hit the middle of the diaphragm, and make it wobble in and out; faster wobbles for higher frequency of impulses, bigger wobbles for more intense impulses.

Changing the Magnetism.

Now near the diaphragm put a magnet wound over with little spools of copper wire. When the diaphragm is nearer or further from the magnet, so the intensity of the magnetism in and around the coils varies. Changing the magnetism creates corresponding changes of electric currents in the coils, and the quicker the diaphragm wobbles, the faster change the currents, the bigger the wobble on the diaphragm, the bigger the changes in the electric currents. Thus the currents copy in intensity and frequency the sound waves impinging on the diaphragm, and this is the principle of the microphone.

Test this for yourselves by getting two pairs

of ear-phones and joining the leads together on a long piece of thin flex wire. Let a friend sit into one room and listen. Talk into your own telephones, and your friend will hear all you have to say.

This was the principle of Graham Bell's first telephone. It is the principle, more or less, of the microphone we use in London to day. The reason the telephone acts both ways is obvious, for if you vary the current in the circuit formed as above, obviously the diaphragm on the other end wobbles, too, and makes with pressure and rarefactions in the air corresponding to the original sound, and therefore, corresponds to the sound at the other end. It is so simple.

Bat's Squeak and Borscown.

Of course, we don't use exactly this principle for broadcasting, but it is something like it. We have to ensure that every frequency of sound gets an equal chance, and that the bat's squeak thrills the diaphragm just as much as the bassoon when the player is really frowning.

A resonant diaphragm such as you have in your telephones is very efficient, but it is far fonder of middle C than A or G. It also loves middle C to the detriment of organ pedal notes. Our diaphragm is so soggy, so wrapped up in cotton wool, that it favours no frequency particularly.

We use another sort of diaphragm, too, in our work, which is so tightly stretched that it yeams only to resonate to those same superhuman dog notes, and to all the human frequencies it gives an equally courteous, but unfailingly unbiased attention—the true ideal of a broadcast microphone.

A Simple Problem.

We take great care that nothing shall allow our microphones to favour one frequency, and that is why in one type it rests sedately on a hammock of sponge rubber, in another the business part is hung on little springs so that the case may not resonate and affect the sounds.

So that is the mystery of the Microphone: we have nothing that moves in sympathy with the intensity and frequency of the sound waves, and in moving creates corresponding sympathetic electrical pressures. But in a broadcast microphone that sympathy must be extended to all frequencies alike from 20 to 10,000 a second. In an ordinary telephone microphone, you can, and do, use microphones that only favour those frequencies that make for intelligibility, the middle frequencies, in fact. This enables you to make these microphones sensitive without having to use valve amplifiers.

Importance of the Amplifier

Our microphones are so insensitive by themselves that you could not hear anything hardly if you were connected up to them with telephones direct. That is where the ubiquitous valve comes in, and with the amplifier our microphones are sensitive enough to hear a wisp at five yards, or an announcer changing his mind about the pronunciation of an Oxford college at the length of the studio.

Usually, when a singer sings a solo, the microphone is about ten feet from the singer—the piano is, perhaps, 15 feet to its centre away.

Resonance, or favouring any one particular note of sound either in transmitter or receiver, tends to spoil reproduction. We have done our bit; it is now up to you to eliminate your 'phone and loud-speaker resonance. But that is all another story, and you will want to turn back to my article on "Your Receiver—Our Transmitter."

Revival of the Harpsichord.

Mrs. Gordon Woodhouse and Her Art.

It is rare that the notes of the harpsichord are heard in homes to-day. Yet in the seveneenth and eighteenth centuries it was the most important of all keyed instruments. It is now regarded as essentially a musician's instrument, possessing an irresistible appeal for masters in orchestration, and has been described as a stringed orchestra in miniature. Both Delius and Vaughan Williams have composed for it.

Quite Unlike the Piano.

Mrs. Violet Gordon Woodhouse, whose unerring mastery of the capabilities of this instrument makes her one of the finest British harpsichordists of to-day, and who stands unrivalled as an interpreter of Bach and Mozart, is to play at the Station on the 25th of March.

For this reason, will have a unique opportunity of judging for themselves the charm of this rarely played instrument, for her sympathetic musical temperament, and her great technique, are qualities which lend to this occasion will appreciate.

The ancestry of the harpsichord goes back to the early days of the fifteenth century, for the principle of its mechanism is identical with that of the virginals. It is entirely different from that of the piano, in which the strings are struck by a hammer, for the virginal, like the spinet and the harpsichord, has a wood upright called a jack, which is raised when the key is struck, and this in turn causes a plectrum to pluck the strings.

A Specially-Made Instrument.

Various materials were used for the plectra, the principal being quills and leather. The former give more brilliancy, the leather produces a sweeter tone, and has the added advantage of being more durable.

In the early harpsichord the stops were controlled by the hand, but Mace's "Monument of Music," 1674, gives a description of an instrument with "various stops at pleasure, and quick and nimble to the ready touch of the foot." They are so controlled by the six wheels of the instrument played by Violet Gordon Woodhouse. The organ was made for her by Arthur Hill, whose introduction to the instrument caused her to abandon her studies as a pianist under Oscar Beninger, in order to devote herself to the mastery of the harpsichord.

Favoured by the Masters.

Apart from the Elizabethan writers, all the great masters down to Mozart and Beethoven have written for the harpsichord. Purcell, the Couperins, Rameau, Scarlatti, and Bach. The latter's harpsichord works reveal beauties unsuspected and hidden when presented upon the piano.

The programme Mrs. Gordon Woodhouse will broadcast includes works by Bach, Mozart, Scarlatti, and Handel.

It is hard to say why the harpsichord should have fallen into disuse, for particularly to the student it has a great value, and no lover of the old masters can form any idea of what their music was like, until it has been heard on the instrument for which it was written.

Listeners to 2LO will have this opportunity when Mrs. Gordon Woodhouse broadcasts on Tuesday next.

TRAINING in wireless is to be included in the syllabus of short courses of instruction for teachers arranged by the Board of Education to be given this summer.

Stories and Story-Telling.

A Talk from London by STACY AUMONIER.

The short story is acknowledged to be one of the most difficult forms of literary expression, and the masters of this style of fiction can almost be counted on the fingers of one hand. Among them must undoubtedly be classed Mr Stacy Aumonier, and in the following Talk he deals with the history of his art, and has some entertaining things to say about broadcasting.

STORY TELLING began when man first became articulate. When I generalized into what we can only call the art form, it is impossible to say. Possibly in some remote tribe a tribesman in recounting some episode of the life of the chase did it in such a manner as to catch the ear of the chief, who bade him repeat the account. The tribesman, pleased that the chief was pleased, went home and thought about it. After mature reflection, he realised that what he had said had form and order. He looked out for other episodes that he could embellish in a similar manner. Not finding these episodes happen with satisfactory regularity, he began to invent them or to twist normal happenings into a more romantic and dramatic form. The story emerged.

The Test of a Good Tale.

And these early stories were handed down and became legends. And legends became myths, and myths became sagas. And in time man began to inscribe them upon stone and upon bone, and, later, upon papyrus. Epigraphy was invented, and then calligraphy, and after a great lapse of time, printing.

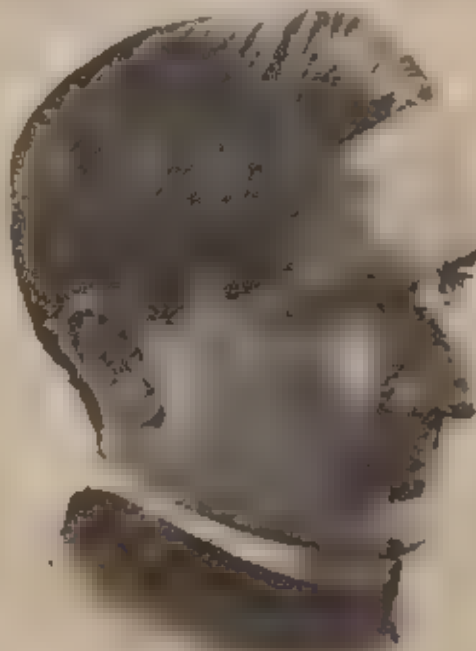
But all these sciences were merely codes, an amplification of the spoken word. For the story remains in the end a story to be told. And I think you will find that the test of a good story is that it always lends itself to reading aloud. The spoken word must inevitably have the advantage over the written word.

Seven Folds in the World.

The Bible is an oral story, or, rather, a collection of oral stories, recounted by numerous reporters. The Arabs, who have always been known as the best of story-tellers, do not write their stories down. They are handed down by word of mouth, and built upon tradition the same way that the Gothic churches were built by the masons, the difference only being that the masons recognized the limitations of architecture, whilst the story-tellers recognized the limitations of human nature.

The Arabs have asserted that there are only seven stories in the world. And this you will find substantially true, in that the crises arising at by the intersection of human passions and human emotions are limited to about this number. Thus, you will find the same story being told in the north of Iceland, and in the south of India, with the only difference of change of character and setting.

Æsop and O. Henry, Grimm and Leonard Merrick work in essentially the same material and the inventions of steam engines, motor-cars, telephones, gramophones and wireless only affect the story to the



Mr STACY AUMONIER.

same extent that stage properties affect a drama.

I must say, then, as a person whose job it is to tell stories that Broadcasting appeals to me strongly, in that it is a reversal to the old order of things—the spoken word. It opens up an endless vista of possibilities. I foresee that on a rainy day coming when instead of buying a magazine at a railway station, you will go up to a motor car and say: "Please, I want a pennyworth of Æsop's Fables."

It also holds out a further attraction. You will probably remember in Kipling's preface to

"Life's Handicap," he describes a very old one-eyed hole man, named Gobind, who lived on an island and fed the fishes twice a day with little pellets of bread. And Kipling had long talks with him about life and philosophy and such things.

And one day Gobind told the old man about his own profession, and, after reflection, old Gobind said: "Even so. That is the work of the bazaar story-teller; but he speaks straight to the men and women and does not write anything at all. Only when the tale has aroused expectations and calamities are about to attack the virtuous, he stops suddenly, and demands payment ere he continues the narration. Is that so in your craft, my son?"

Arousing Expectations.

Now this, I am sure, must appeal strikingly to professional tellers of tales. For you cannot do it with the written word. The story is typed and the editor corrects it, and you do not see it again until it appears in print. But suppose you were engaged to broadcast your story. You could work it up until it "aroused expectations," and then "when calamities were about to attack the virtuous" you could leave off.

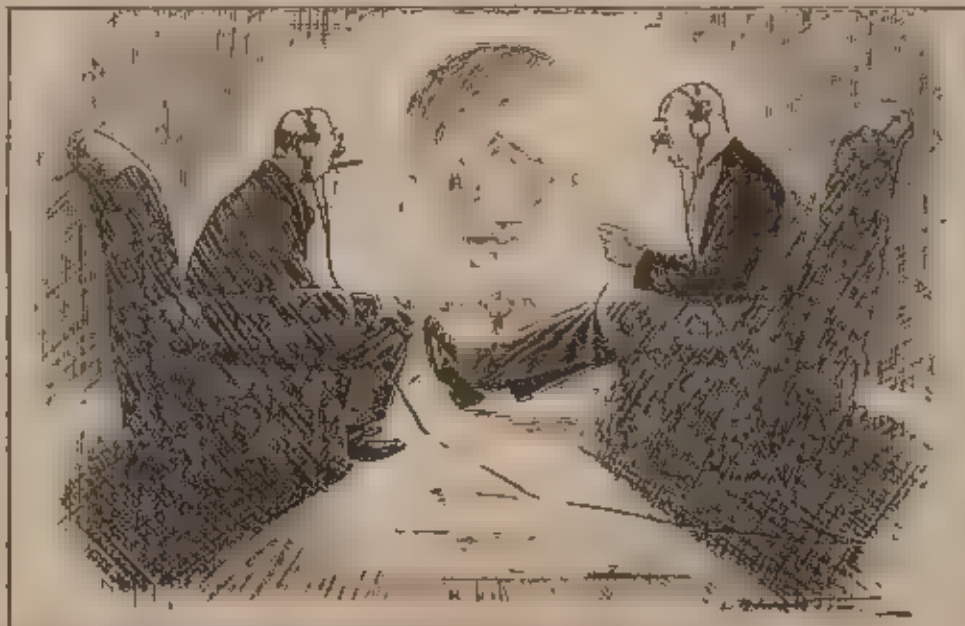
Of course the manager would come rushing in, and he would shout: "Go on, for goodness' sake, the listeners want to know what happens next!"

And then, of course, you've got him. You simply say: "Oh, do they? Well, that's all right. I'll tell them, but that will be seven-and-sixpence!"

The Dearth for Expression.

These are, perhaps, rather frivolous and absurd reasons for wishing to revert to the spoken word. But there are more commendable ones. The story of story-telling is the record of man's endeavour to convey that which is in his heart and brain to his fellow-beings. One lives and suffers and struggles; falls in love and does silly things. One finds oneself surrounded by beings apparently enduring similar experiences.

There they all go with their loves, hopes, disappointments, their regrets of hatred and treachery, their courage and optimism, their weaknesses and frailties, and one day the whole thing gets you. You want to do something with it. You want to express it in some form or another. The painter will do it in terms of paint, the sculptor hew it out of stone, the musician will find a melodic idiom, but the story-teller wants to tell people about it. The exigencies of social life have driven him to set it down in black and white, but in his heart it is always the spoken word which is the more vibrant, because through that he becomes in closer contact with his fellow man.



WIRELESS ENTHUSIAST "Have you tried an amplifier?"
HOMELY "No, old man—but one cannot beat a good coal fire!"

You can now get the wonderful Marconiphone V2 for £6-1-1 down



You can now obtain the famous Marconiphone V2—the peerless two-valve Receiver which has given perfect reception of all the British and Continental Broadcasting Stations and has received America *direct*—for a first payment of £6 1s. 1d., with the balance payable in twelve equal monthly instalments.

The terms of this new offer are as simple as the Marconiphone V2 itself. You can have the Marconiphone V2 by itself, or with the accessories illustrated here in the Marconiphone Ideal Home Combination; and if you already have a Marconiphone V2 you can obtain the Marconiphone Amplifier (Two-Stage) on the Hire Purchase Terms.

Now that it is easier to get the Marconiphone V2—the acknowledged leader—than any other receiver of its class, will you hesitate longer?

Fill up the form below and post it to-day

The Marconiphone

The Triumph of the Master Mind

THE MARCONIPHONE Co. Ltd.,
Head Office: MARCONI HOUSE, STRAND LONDON, W.C.2.
District Offices and Showrooms:
LONDON AND SOUTHERN DISTRICT:
Marconi House, Strand, W.C.2.
CARDIFF DISTRICT:
Principality Buildings, Queen Street, Cardiff.
MANCHESTER DISTRICT:
1, Cornhill Street, Deansgate, Manchester.
NORTHERN DISTRICT:
161 St. Vincent Street, Glasgow.

POST THIS COUPON TO-DAY
to your local Distributor or Marconiphone Branch.

Please send me a free copy of the book, "The Marconiphone Makes It Easy," containing Hire Purchase Application Form.

Name _____

Address _____

R.T. 1

PAGE 414.

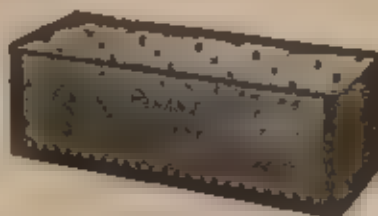
WATES

PRODUCTS

ENSURE SATISFACTION!

"PYRAMID" HIGH-TENSION BATTERIES.

Long life, constant voltage and silent working are distinctive features of the new improved model. Owing to a secret method of construction, perfect insulation is obtained between adjacent cells. Tapped every three volts, they permit the most critical tuning.



15 VOLT - 2/6
25 VOLT - 7/6
50 VOLT - 12/6
80 VOLT - 18/6

Prices include
Two Insulated
Wander Plugs.

The "DOMINOE CONNECTOR" & KWIKPINS



3/6

3d. each
for KWIKPINS.

Any sort of wire can be
attached to a Kwikpin in
five seconds.

A simple and necessary
permitting every possible
combination up to four
pairs of telephones. Series,
parallel, or series-parallel in
a moment.

Many other uses will be
apparent, such as connecting
up condensers, inductances,
or batteries.

Whenever a clean, quick
change is necessary, use the
DOMINOE CONNECTOR
and Kwikpins.

SIMPLE, SOUND CONNECTIONS.

Often you have had the annoying experience of intermittent signals, making proper tuning impossible. And it always happens at the critical moment, whilst trying to hold the weak signal, or being told how to dodge income tax and make a will instead! After the family have expressed their annoyance, we hunt for the trouble, which is invariably traced to a loose or dirty connection.

WATES' "SPADE" TERMINALS make a sound job of every joint at a trifling cost.

POST
FREE



1d. each
or
1/6 doz.

WATES BROS., Ltd.,

12, 13, & 14, Gt. Queen St., Kingsway, W.C.2

'Phone—Garrard 575-6.

'Grange—Zyretasing, Westend.

Southern Depot (Wholesale)—101, Old Christchurch Road, Bournemouth.

'Phone—Bournemouth 3573

South-Western Depot (Wholesale)—Central Mill, Raleigh Street, Plymouth.

'Phone—Plymouth 2481

INCORPORATED IN THE UNITED KINGDOM



Valves may
come and Valves may
go BUT

MARCONI VALVES
(MADE AT THE OSRAM LAMP WORKS)

STILL REMAIN THE STANDARD
WHEREBY THE REST ARE JUDGED

The products of the Firm which makes
Osram Lamps—and incidentally were,
nearly four years ago making "Dull
Emitter" Valves—can be relied on to
give you MAXIMUM SATISFACTION.

It costs no more to say MARCONI VALVES
whilst their reputation is founded on their
quality and high standard of efficiency.

SOLD BY ALL LEADING WIRELESS
DEALERS, STORES, ELECTRICAL
CONTRACTORS, Etc.

"R" TYPE - 12/6

D.E.R. " - 21/-

D.E.3. " - 30/-

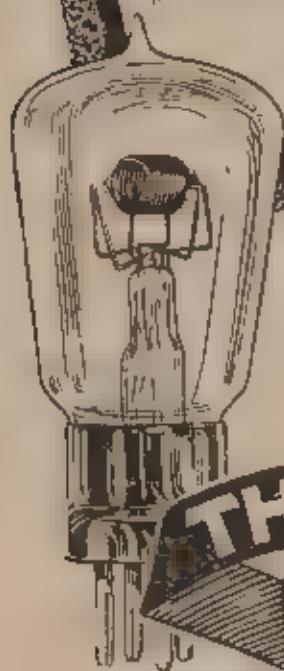
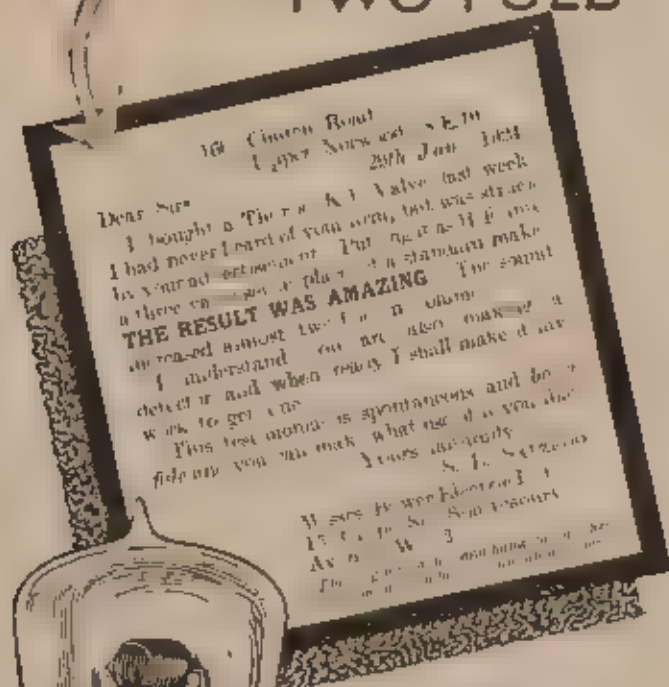
BUY BRITISH
GOODS ONLY.

And all transmitting
and power types.

Advert of The General Electric Co. Ltd., Magnet House, Kingsway, W.C.2.

"The Result was Amazing"

"THE SOUND
INCREASED ALMOST
TWO-FOLD"



Consumption 0.42 amp. average.
Filament Voltage 5.0 volts.
Anode Valve 50 100.
All British
Every Valve stamped B.E.C.
ADAPTABLE TO EVERY TYPE
OF RECEIVING CIRCUIT, BUT
MORE ESPECIALLY TO THOSE
EMPLOYING DUAL AMPLIFI-
CATION AND SUPER-
REGENERATION



OBTAINABLE OF ALL DEALERS—or direct from the Sole Distributors for Great Britain and Ireland:

PRICE:
10/-

BOWER ELECTRIC LIMITED,
15, Grape Street, Shaftesbury Avenue, LONDON, W.C.2.

The food for your job

No matter whether your work demands great stamina or just a little energy—whether your hours are long or short—what you eat you work indoors or outdoors—Shredded Wheat is the best breakfast for you to start the day on. It is the best food for keeping muscles, bones and nerves in the fittest of condition.

Made from pure whole wheat without adulteration of any kind, the dried Wheat is always reliable, always available, always ready to serve with hot or cold milk—no cooking necessary.

8^d.
per pkt.

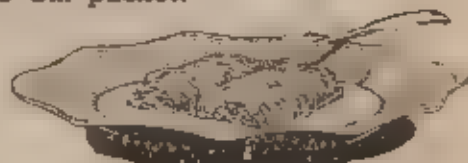
Shredded Wheat

100%
WHEAT

Price 8d. packet.

TRIAL FREE

Free Taster and Cook Book on application to the Shredded Wheat Co. Ltd., George Burdage, Aldwych, W.C.2.



Ready-to-Serve



*Firm
Fixtures
in your
Home
for
3/6*

In every home there are dozens of places which may be fixed securely and neatly. Only the Rawlplug, we had will ensure a permanent fix to wall or any material—nails, brackets, picture frames, etc. The Rawlplug does it contains everything necessary for anyone without previous experience to do these jobs in ease.

(Obtainable from Ironmongers, Electricians and Shop everywhere)

RAWLPLUGS

HOUSEHOLD OUTLET
3/6

The RAWLPLUG Company Ltd.
London
S.W.7

MECHANICAL OUTLET
5/6

For more U.S. data on AIDS in these programs, contact the International Broadcast News and Media Information Service.

[illegible]

1. **Local News and Views**
 2. **Children's Program**
 3. **Orchestra**
 4. **Local News and Views**
 5. **Children's Program**
 6. **Orchestra**
 7. **Local News and Views**
 8. **Children's Program**
 9. **Orchestra**
 10. **Local News and Views**
 11. **Children's Program**
 12. **Orchestra**
 13. **Local News and Views**
 14. **Children's Program**
 15. **Orchestra**
 16. **Local News and Views**
 17. **Children's Program**
 18. **Orchestra**
 19. **Local News and Views**
 20. **Children's Program**
 21. **Orchestra**
 22. **Local News and Views**
 23. **Children's Program**
 24. **Orchestra**
 25. **Local News and Views**
 26. **Children's Program**
 27. **Orchestra**
 28. **Local News and Views**
 29. **Children's Program**
 30. **Orchestra**
 31. **Local News and Views**
 32. **Children's Program**
 33. **Orchestra**
 34. **Local News and Views**
 35. **Children's Program**
 36. **Orchestra**
 37. **Local News and Views**
 38. **Children's Program**
 39. **Orchestra**
 40. **Local News and Views**
 41. **Children's Program**
 42. **Orchestra**
 43. **Local News and Views**
 44. **Children's Program**
 45. **Orchestra**
 46. **Local News and Views**
 47. **Children's Program**
 48. **Orchestra**
 49. **Local News and Views**
 50. **Children's Program**
 51. **Orchestra**
 52. **Local News and Views**
 53. **Children's Program**
 54. **Orchestra**
 55. **Local News and Views**
 56. **Children's Program**
 57. **Orchestra**
 58. **Local News and Views**
 59. **Children's Program**
 60. **Orchestra**
 61. **Local News and Views**
 62. **Children's Program**
 63. **Orchestra**
 64. **Local News and Views**
 65. **Children's Program**
 66. **Orchestra**
 67. **Local News and Views**
 68. **Children's Program**
 69. **Orchestra**
 70. **Local News and Views**
 71. **Children's Program**
 72. **Orchestra**
 73. **Local News and Views**
 74. **Children's Program**
 75. **Orchestra**
 76. **Local News and Views**
 77. **Children's Program**
 78. **Orchestra**
 79. **Local News and Views**
 80. **Children's Program**
 81. **Orchestra**
 82. **Local News and Views**
 83. **Children's Program**
 84. **Orchestra**
 85. **Local News and Views**
 86. **Children's Program**
 87. **Orchestra**
 88. **Local News and Views**
 89. **Children's Program**
 90. **Orchestra**
 91. **Local News and Views**
 92. **Children's Program**
 93. **Orchestra**
 94. **Local News and Views**
 95. **Children's Program**
 96. **Orchestra**
 97. **Local News and Views**
 98. **Children's Program**
 99. **Orchestra**
 100. **Local News and Views**

#46 - TOPICS FOR WOMEN

$\frac{1}{\sqrt{2}} \begin{pmatrix} 1 & -i \\ 0 & 1 \end{pmatrix}$

"Hour of Melody of the Wireless Quartette"
"Home Partnership Central."
"Weather Forecast for Farmers."
F. H. Black on "Scottish Folk Songs,"
"From London."

Conducted by HERBERT A. CARR, B.A.
 & M. HENNINGSON (Organist to the University of
 the City of London)

1. "Overture"
 2. "The Song of the Lark"
 3. "The Song of the Lark"
 4. "The Song of the Lark"
 5. "The Song of the Lark"
 6. "The Song of the Lark"
 7. "The Song of the Lark"
 8. "The Song of the Lark"
 9. "The Song of the Lark"
 10. "The Song of the Lark"
 11. "The Song of the Lark"
 12. "The Song of the Lark"
 13. "The Song of the Lark"
 14. "The Song of the Lark"
 15. "The Song of the Lark"
 16. "The Song of the Lark"
 17. "The Song of the Lark"
 18. "The Song of the Lark"
 19. "The Song of the Lark"
 20. "The Song of the Lark"
 21. "The Song of the Lark"
 22. "The Song of the Lark"
 23. "The Song of the Lark"
 24. "The Song of the Lark"
 25. "The Song of the Lark"
 26. "The Song of the Lark"
 27. "The Song of the Lark"
 28. "The Song of the Lark"
 29. "The Song of the Lark"
 30. "The Song of the Lark"
 31. "The Song of the Lark"
 32. "The Song of the Lark"
 33. "The Song of the Lark"
 34. "The Song of the Lark"
 35. "The Song of the Lark"
 36. "The Song of the Lark"
 37. "The Song of the Lark"
 38. "The Song of the Lark"
 39. "The Song of the Lark"
 40. "The Song of the Lark"
 41. "The Song of the Lark"
 42. "The Song of the Lark"
 43. "The Song of the Lark"
 44. "The Song of the Lark"
 45. "The Song of the Lark"
 46. "The Song of the Lark"
 47. "The Song of the Lark"
 48. "The Song of the Lark"
 49. "The Song of the Lark"
 50. "The Song of the Lark"
 51. "The Song of the Lark"
 52. "The Song of the Lark"
 53. "The Song of the Lark"
 54. "The Song of the Lark"
 55. "The Song of the Lark"
 56. "The Song of the Lark"
 57. "The Song of the Lark"
 58. "The Song of the Lark"
 59. "The Song of the Lark"
 60. "The Song of the Lark"
 61. "The Song of the Lark"
 62. "The Song of the Lark"
 63. "The Song of the Lark"
 64. "The Song of the Lark"
 65. "The Song of the Lark"
 66. "The Song of the Lark"
 67. "The Song of the Lark"
 68. "The Song of the Lark"
 69. "The Song of the Lark"
 70. "The Song of the Lark"
 71. "The Song of the Lark"
 72. "The Song of the Lark"
 73. "The Song of the Lark"
 74. "The Song of the Lark"
 75. "The Song of the Lark"
 76. "The Song of the Lark"
 77. "The Song of the Lark"
 78. "The Song of the Lark"
 79. "The Song of the Lark"
 80. "The Song of the Lark"
 81. "The Song of the Lark"
 82. "The Song of the Lark"
 83. "The Song of the Lark"
 84. "The Song of the Lark"
 85. "The Song of the Lark"
 86. "The Song of the Lark"
 87. "The Song of the Lark"
 88. "The Song of the Lark"
 89. "The Song of the Lark"
 90. "The Song of the Lark"
 91. "The Song of the Lark"
 92. "The Song of the Lark"
 93. "The Song of the Lark"
 94. "The Song of the Lark"
 95. "The Song of the Lark"
 96. "The Song of the Lark"
 97. "The Song of the Lark"
 98. "The Song of the Lark"
 99. "The Song of the Lark"
 100. "The Song of the Lark"

2.30. A. M.—An Hour of Melody by the Wireless Quartette and Edith Johnson (Soprano).

4.45. P. M.—

5. P. M.—

6.5.—Weather Forecast for Farmers.

7. P. M.—

8. P. M.—

PERCY SCHOLLES. S.H. from 1 to 10

11. P. M.—

12. P. M.—

1. P. M.—

2. P. M.—

3. P. M.—

4. P. M.—

5. P. M.—

6. P. M.—

7. P. M.—

8. P. M.—

9. P. M.—

10. P. M.—

11. P. M.—

12. P. M.—

7.45. THE STATION ORCHESTRA
moderato
Edinburgh Gaelic Quartette.
Suite, Ballet Music from "Faust."
8.10. AMY MURDOCH (Contralto)
"Edgemoor"
(Violin Obligato by ISAAC LEOVANSKY, Leader
Wireless Orchestra.)

[illegible]

(1) "Fort of Many Ships" - (2) "Trade Winds"
 (3) "Mother Lode" - (4) "The Old World"
 (5) "The New World"
 Concert Value + Les Feuilles"

7:16—THE CHILDREN'S CORNER.
E.E. Weather Forecast for Farmers.
Local News and weather report
7:18 ALEXANDER S. MALCOLM on "How to Buy a New Motor Car."
Dance Night.
Conducted by HERBERT A. CARROUTHERS
Vocal Numbers by LIL FRANKLIN (Taper)
Jazz Band at 9:00
Quadrille, "Real Time," Valse, "Wine, Women and Song," Tango, "Les Noctes," Blues, "Blue Bird"
Dinner at 11:00
Announced Maud H. Dewar

A number against a musical stem indicates the number of its publisher. A key list of publishers will be found in page 184.

THE CHILDREN'S CORNER.

CONDUCTED BY
UNCLE CARACTACUS

New Ways of Blowing Bubbles.

HELLO, children!

A little while ago the Bournemouth Station held a competition on "My Favourite Book, and Why." Lots and lots of people went in for it, and the winner in the class for those under seventeen was Miss S. Brewer, Lindum House, Churchill Road, Gloucester. Her entry was so good that I am printing it here:—

My favourite book! What gems these wireless wizards are! Did they know that I've just read the most glorious book and am simply bubbling over with enthusiasm, and dying to tell someone all about it? And it is so difficult to find sympathetic listeners when your favourite is "Heirs Apparent." No! Not because they're not interested. Oh, no! Simply because they're too absorbed in it themselves to listen to your juvenile jubilation!

A Thrilling Story.

I adore that book for all the reasons that a book-lover musters to justify his mania. It is a thrilling story of modern youth, told in the vivid style essential to its theme, and free from those unignominious interpolations of the author known as "personal ornament."

I am sure it will be of more immediate benefit to England than any classic. It is so easy to read that it will be read by hundreds to whom "Dickens" is but a name, and a forbidding one at that!

So closely are we in sympathy with the characters that we are drawn imperceptibly into the vital problems of modern life forming the heart of this absorbing book. The greater freedom gained by the youth of to-day, with its attendant difficulties and temptations, is cleverly depicted and set against the old regime, until we almost agree that "the young idea is only the old in a different kind of slang."

To those who have seen, "Heirs Apparent" brings new questions; in those who have not, it must awaken thought—and thought guided by such a freshly written book is surely invaluable.

To turn to the more personal side, the characters are magnificently true to life, especially, I consider, in the case of Audrey Nythe—the modern type, frank, healthy, common-sensed, and also, unfortunately, Major Lifford, gallant but utterly selfish old soldier.

Finally, the story ends happily—and I think unhappy endings should be prohibited by law, for their poison deserves that mental glow which is Othello's triumph.

After all,

A merry heart goes all the day.

Your sad tires in a minute."

You agree, Heirs Apparent? . . .

Here's a talk which you may have heard broadcast a little while ago.

A TALK ABOUT BUBBLES.

By ERNEST WALTHAM.

Children, have you ever longed to blow bubbles which will last enough time for you really to enjoy them before they burst? When you blow them into the air from a pipe they soon break, do they not?

Why not try blowing them on to wires for a change?

I will tell you of a pretty experiment which

I have just made for myself. I call it a bubble chute, or aerial roadway. Most of you have seen a water-chute at an exhibition, where little boats run down an in-line on two rails and bounce about in a pond at the foot. Well, you can do this with bubbles if you make a little runway of two thin wires, and stretch them, slightly, a little distance from the floor at the highest point, and only a few inches from the floor at the lowest point. They should be fastened to a piece of furniture at a distance apart of one inch and a quarter; they must be kept parallel and tight all the way down to the floor, where you hang them over the edge of a box, or something of the kind, so that the bubble can slide easily off the rails on to the floor. On the floor you make a "pond" to

such runways might be made, both meeting at the "pond," and then the fun would start when the "pond" tries to fill up with bubbles from the accumulated efforts of several blowers.

By the way, I thought that BLO were spoiling my bubbles when I first started my bubble chute, as they happened to be broadcasting a concert at the time. Every bubble I tried to make on the wires broke at once.

My wire frame looks just like a miniature aerial, and I thought that it was being affected by the wireless waves, so I connected it with the earth terminal of my set, but still the bubbles broke! I then discovered what the trouble really was, I had forgotten to wet the wires with the soap solution first. Do not forget to do that, it is most important. Keep the wires well wetted.



UNCLE JEFF AND HIS DOG "GEORGE."

The other night quite a lot of dogs broadcast their barks from London Station. In this photograph Uncle Jeff is seen rehearsing his pet terrier before the microphone.

receive them, not of water, but just a piece of woollen cloth, bunched up all round to form a "hollow pond."

To give you an idea of the best angle to make your railway, I have made one for a table. My two upright supports for the wires are five feet apart.

The highest end is two feet high, and the lowest end is only ten inches high. Draw a straight line from the highest to the lowest to see the angle of fall. When you have made it, stand well above the highest end, on a chair if necessary, and blow a bubble on top of the two wires, and it will run slowly down the chute and fall into the "pond." Blow another quickly to follow it, and this will fall so near to the first one, if your "pond" is not too big, that it will press on to it, and, if you are lucky at the first shot, the two will jump into one bubble, with a jolly-like spring, making one large bubble.

A First-Class Game.

Now, instead of letting them fall into the "pond," you can place a piece of woollen cloth on the wires, to form a buffer stop, and, when the two bubbles spring into one, the big bubble will jump up a little way into the air, and land on the wires again, without falling off.

There is such a variety of amusement to be had from this simple experiment, that it is quite worth while trying it. For instance, two

The Professor's Experiment.

Talking about electricity, I had good reason to suppose that the wireless was affecting the bubbles, because I well remember seeing a professor place two bubbles side by side, each one hanging from a wire ring, and when he brought them close together, so that they just touched each other, he made them join into one, by pulling a stick of sealing-wax from under a piece of warm, dry flannel, although he was at the other end of the room. I believe the wires were carefully insulated from each other. You are all electricians nowadays, so you know what "insulating" means.

The wire ring dodge for holding a bubble is quite a good idea. Make a hole in the air, and twist a piece of wire round it! Better still, wind a thin wire round the base of a tumbler, and twist the end round the wire, and you have a serviceable ring, leaving a length for a handle, so that it will rest in the mouth of an empty bottle for support.

Next, dip your ring into a saucer of soap solution, and pull it out sideways, and you will find that there is a film of soap in it. Examine the film under a good light, and watch the colours forming on it.

One Inside the Other.

There is an apparatus to be bought for that purpose, but it is rather expensive. Now replace the ring, with its handle in the mouth of the bottle, and blow a bubble through the top of the ring on to its lower side, with a glass tube.

This tube must be well wetted with the solution, all over.

We will now suppose that you have a bubble hanging on the ring, remove the tube, dip it again in the solution, and you will be able to pierce the film as before and blow another bubble inside the first one.

In order to blow bubbles successfully, especially the sort which I have just described, it is necessary to have a good strong soap solution.

Try with a good brown or yellow soap, scrape fine shavings off it, enough to fill an egg-cup.

Turn this into a breakfast cup of cold water, and add about an egg-cup full of the best glycerine you can buy. If you allow it to stand long enough you ought to have a good solution.

On my other desk I've got a whole collection of bubbles who will send me another to add to my family? (ARA TALKS.)

(Continued on the facing page.)

The Children's Corner.

SABO IN A BALLOON.

By E. W. Lewis.

ON November the Fifth Isabel had a party and in the evening, as soon as ever it was dark there were fireworks.

Isabel thought that Sabo would like to see the fun, and she took him out into the garden. But he was so terrified by the loud banging of the maroons and the spattering of the Catherine wheels and the roar of the rockets, that he hid himself inside a large paper balloon which was waiting against the wall.

Everybody was so interested in the fireworks that no one noticed that Sabo had gone, or where he had gone to, and he made himself warm and cosy inside the tissue paper.

When the last rocket had been let off two boys came running for the balloon. Sabo felt himself being lifted off the ground, and was in two minds whether he should call out or not; through the bottom on to the lawn. Then he thought that Isabel might scold him for hiding there, and so he clung as tightly as he could on to the framework inside.

The next moment there was a smell of burning. The air round about him became all at once very warm, and before he could make out what was happening, the balloon was off!

As it took the air, swaying gently like a bell. Sabo could hear the children clapping their hands and shouting with delight.

They watched it as it rose higher and higher, looking now like a huge yellow pear, and drifted further and further away. Now it was so far off that it looked quite tiny, and the light in it was so faint that, right away in the distance, it hung in the sky for a moment like a dual star, and then passed out of sight.

"I wonder where it will drop," said one of the boys, whose name was Billy.

(Continued from the facing page.)

"Over the hills and far away!" cried Isabel, laughing. "Let's go inside and warm ourselves by the fire."

Billy stood looking at the place where the balloon had disappeared, and then at the rising moon. "I wouldn't mind going off in a balloon," he said to himself.

Sabo did not mind much either. He was not



The next moment a monkey began tearing the balloon to pieces.

the least bit afraid. His first thought was that he was leaving Velvet, and he wished he had had a chance of saying good-bye to her, she would be worried when she did not find him in his usual place. But there was no help for it now, he was off on a journey, and it was really most exciting.

The cotton wool had burned itself out and had fallen like a crumpled black leaf somewhere to the earth, and no doubt the balloon would have begun also to fall, as the air inside it grew cooler, had not some young Breezes, who were playing games together about the tree-tops under the moon, caught sight of it. They began to blow it, as you blow a feather or some bubble down, and chased it through the sky.

Let us blow it back home with us," said one of them; and, just as a long walk seems shorter if you have something to play with as you go along, the Breezes blew the balloon before them on their way back home.

By this time Sabo had made himself as comfortable as he could; and, except that he felt a little cold, he was enjoying himself.

Sabo must have slept, rocked in that funny cradle, for when he opened his eyes the dawn had come. The sky all about him was full of a "rosy light"; and then, over the rim of the earth, the blazing forehead of the sun appeared. It was day.

The Breezes scurried off like children who fear to be caught playing truant; and down through the still air the balloon began to fall.

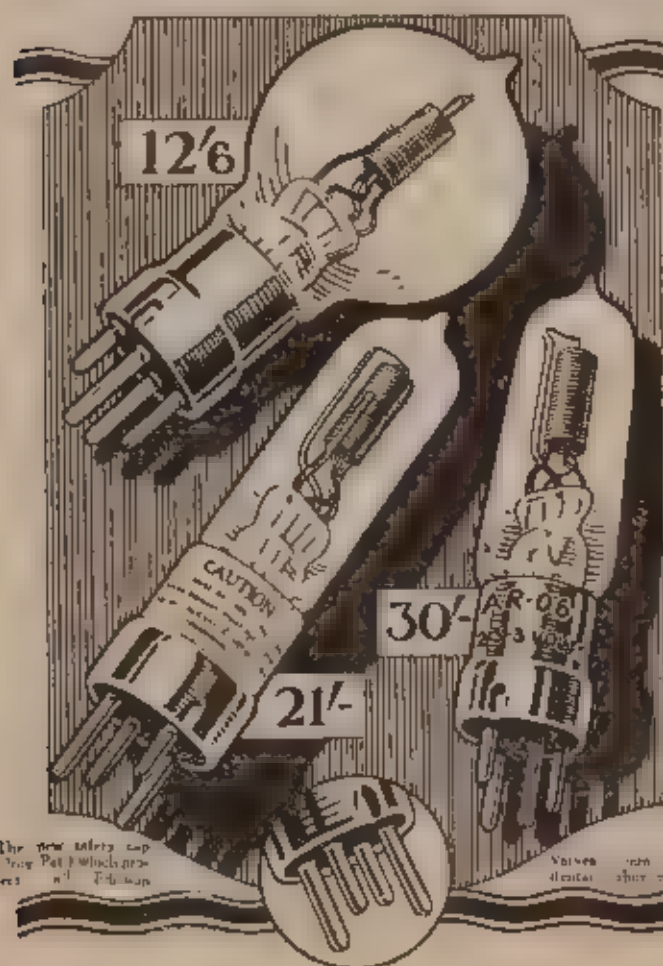
Sabo could see blue water, yellow sands, and leafy trees beneath him. They came nearer to him. They seemed to rise to meet him. And soon the balloon dropped gently upon the shore, bounced once or twice, and then lay over on its side.

Sabo crept out, looked round about him, and stretched himself.

The next moment, to his surprise, a young monkey came hopping out from the trees above the beach, and, tearing the balloon to pieces, began to stuff his cheeks with tissue paper.

Sabo watched him. "Well," he said to himself, "I've got here; but however I will get back again, goodness knows!"

Another "Sabo" Story Next Week.



The Recognised Best.

Ediswan superiority is acknowledged everywhere. "The valve with a name behind it" is preferred by all discriminating listeners-in and experimenters. Actual results soon confirm the wisdom of their choice and further conclusive evidence is the fact that for many years they have been used by H. M. Air Force, War Office and Royal Air Force. Outstanding merit is the secret of Ediswan popularity.

Type A.R. & R. 12/6 Type A.R. '06 30/-
Type A.R.D.E. 21/- The latest Dull Emitter.

Have you had your FREE copy of illustrated booklet, "The Thermionic Valve"? If not, send a post-card to-day.

Your Dealer holds stocks to supply you. If not, write us direct, giving his name and address.

EDISWAN VALVES

THE EDISON SWAN ELECTRIC Co., Ltd.

Contractors to H. M. Admiralty, War Office, Royal Air Force

121/125, Queen Victoria Street, E.C.4, and 71, Victoria Street, S.W.1

W. & A. London and Manchester.

Branches in all Principal Towns.



The new safety cap type Pat. which are not Edison.

Valves with anti-dust and anti-shock.



Naturally —
— the small Brown
for the small room.

JUST as music lovers are compelled to adapt themselves to circumstances and to select a piano suitable for the size of their room, so the same methods should be employed in choosing a Loud Speaker.

The Brown H.2 is produced not to satisfy a demand for an inexpensive Loud Speaker, but as the ideal instrument for use in a small room.

Incidentally, of course, scientific methods of production permit the H.2 being sold at an extremely moderate price, but the point we wish to emphasise is that the small Brown possesses all the characteristics of the H.1 so far as tonal purity and sensitiveness are concerned, but that its volume of sound is naturally smaller.

Both Loud Speakers incorporate the same distinctive features—that of a cone shaped aluminium diaphragm and a moving reed.

It is these principles which enable every Brown Loud Speaker to give perfectly life-like reproduction with a complete absence of muffle or distortion. Pay as much attention to the selection of a Loud Speaker as you would a piano—both must satisfy the musically critical—and hear a Brown at your dealers.

B. G. Brown, Ltd.

Wholesale:
Victrola Road, N. Acton,
W.3.

Retail:
15, Mortimer Street, W.1.
15, Moorfields, Liverpool.

From all Dealers.

Model H.2, 12in. high:		Model H.1, 21in. high:	
120 ohms	£2 5 9	120 ohms	£5 5 0
2,000 ohms	£2 8 0	2,000 ohms	£5 8 8
4,000 ohms	£2 10 0	4,000 ohms	£5 10 0



THE ONLY RECORDS WITHOUT SEARCH



The World's
Greatest Dance Bands
Savoy Orpheans
and the
Savoy Havana Band
at the Savoy Hotel, London
Record ONLY for
Columbia Records.

A Selection from their Latest Records

The SAVOY ORPHEANS

- 3353 Little Boy, Fox Trot.
Foolish Child, Fox Trot.
Dreams of India, Fox Trot.
3359 First, Last and Always, Fox Trot. (Introduced by
the Savoy Orpheans by permission of Messrs.
J. & W. E. & Co.)
3352 In a Tent, Fox Trot.
Dreams of India, (SAVOY HAVANA BAND).
3374 When It's Night Time in Italy, It's Wednesday Once Here.
(Fox Trot).
(I Love You, Fox Trot).
3376 (I Love You (Little Jessie James), Fox Trot.
(Larger a While, Fox Trot (SAVOY HAVANA BAND).

The SAVOY HAVANA BAND

- 3349 Last Night on the Beach Front, Fox Trot.
(The Queen-Pah Trot, One-Step).
3351 I Love Me (I'm Wild about myself), Fox Trot.
Whispering, Fox Trot.
3357 Nights in the Woods, Fox Trot.
(Just Keep on Dancing, Fox Trot).
3358 Fella Keep on Walking, Fox Trot.
(Why Robinson Crusoe Got the Blues, Fox Trot).
3375 Oh You Little Raggy-Gee, Fox Trot.
(I'll Be a Star, Fox Trot).
(Marilyn Will Come, Fox Trot).
3377 You Darling, You, Fox Trot (Introducing "Dipsy"
(a new dance) (California Rhapsody).
3337 My Sweetie went away, One-Step.
(Broadway Blues - London Blues).
3340 The Cat's Whiskers, Fox Trot.
(Pamperington, Fox Trot).
3339 A Kiss in the Park, Waltz.
(Marching, Fox Trot).
3338 Anabelle, Fox Trot.
(Kiss me, Waltz (Introducing "Arrow")
3276 My Gallagher and My Simon, One-Step.
(I Wish I Could Shimmy Like My Sister Kate, Fox Trot).
3203 There's a Clock in the Museum, Tango.
(Symphony Suite, Fox Trot).

Only on Columbia
For all Gramophones

DOUBLE SIDED **3/-** 10-inch.
EACH

Complete List of Records by these Famous Dance Bands,
in order of issue, for sale by all the leading Gramophone
and Record Dealers in the United Kingdom.

THE SALES STALLS, LONDON

Wireless Programme.

Week beginning March 23rd, 1924.

SUNDAY, March 23rd.

2.0-4.20 and 8.20-10.15.—Programme S.B. from Birmingham.

MONDAY, March 24th, to THURSDAY,

3.30-4.10 Programme relayed by Wireless S.B. from Birmingham.
8.0-8.4 S.M. L. & S. W. N. H. E. W. E. R.
10 and onwards Programme S.B. from Birmingham.

FRIDAY, March 25th.

3.30-4.10 Programme relayed by Wireless S.B. from Birmingham.
8.0-8.4 S.M. L. & S. W. N. H. E. W. E. R.
10 and onwards Programme S.B. from Birmingham.

Grand Opera Night.

8.15-10.15 S.M. L. & S. W. N. H. E. W. E. R.
under the direction of the STATION
S.M. L. & S. W. N. H. E. W. E. R.

Chorus: "The Nightingale's Song"

Solo: "The Nightingale's Song"

Solo: "The Nightingale's Song"

George Huggins, L.R.A.M., A.R.C.M.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

S.M. L. & S. W. N. H. E. W. E. R.

WIRELESS VALVES



THE ONE VOLT ORA.
30/-

Progress.

The Mullard spirit of progress produced the celebrated "ORA." This same spirit of progress now gives you the

"ONE VOLT ORA"

The "ORA" has a tungsten filament, but in the ONE VOLT ORA the filament is made of that most durable metal

PLATINUM

and is consequently mechanically unbreakable. Naturally it has all the high efficiency of the "ORA," and in addition requires only

ONE DRY CELL

to operate it.

Send to-day or ask any dealer for Mullard List No. VR7 giving full particulars of this wonderful valve.

Mullard

A Valve for Every Wireless Circuit

The Mullard Manufacturing Co. Ltd.
Nightingale Works, Nightingale Lane, Balham, S.W. 12.

(R.P.S. 110).

Wireless Programme. Plymouth.

FRIDAY, March 25th.

Official Opening of the Plymouth Relay Station.

7.0-8.0 S.M. L. & S. W. N. H. E. W. E. R.
CONCERT BY THE PLYMOUTH RELAY STATION

7.15-8.0 S.M. L. & S. W. N. H. E. W. E. R.
Mr. J. C. W. R. L. M. (General Director of the
Plymouth Relay Station) will be in attendance

8.20-9.0 S.M. L. & S. W. N. H. E. W. E. R.

SATURDAY, March 26th.

8.20-9.0.—Programme S.B. from London.

8.20-9.0.—Programme S.B. from London.

8.20-9.0.—Programme S.B. from London.

8.20-9.0.—Programme S.B. from London.

8.20-9.0.—Programme S.B. from London.

8.20-9.0.—Programme S.B. from London.

8.20-9.0.—Programme S.B. from London.

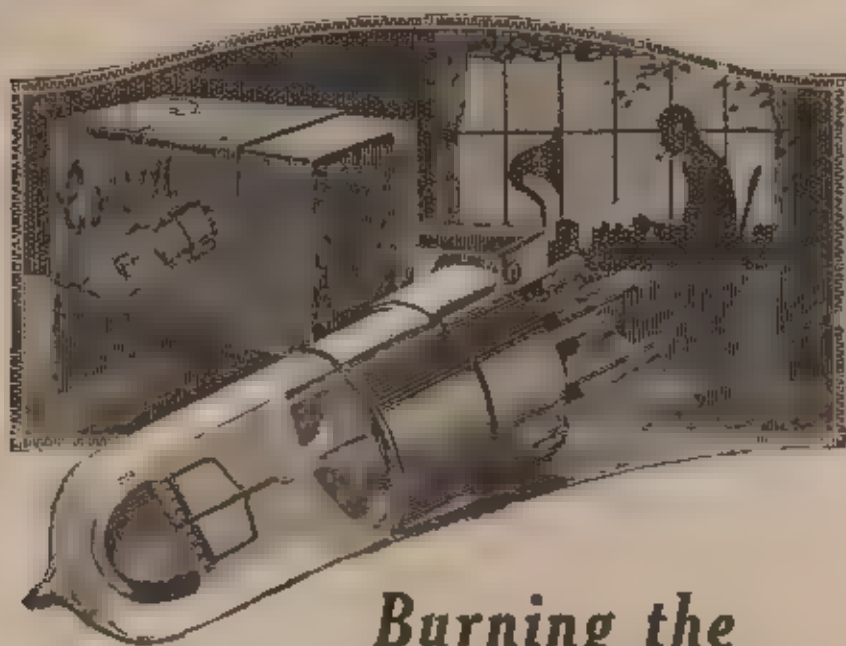
8.20-9.0.—Programme S.B. from London.

8.20-9.0.—Programme S.B. from London.

8.20-9.0.—Programme S.B. from London.

8.20-9.0.—Programme S.B. from London.

8.20-9.0.—Programme S.B. from London.



Burning the midnight oil!

THAT'S just the trouble with Cossor Valves! It is so easy to pick up long distance stations and the "10 watters" who shake the ether after the B.B.C. Stations have closed down that one is sorely tempted to sit up late and see how many can be logged.

And the reason for this marked superiority in long distance reception lies in the unique construction of the Cossor Valve.

Its curved filament—high up inside the hood-shaped Grid and Anode—gives off an immense stream of electrons, and because it is thoroughly shielded against leakage practically the whole of this electron stream is used.

But this unique principle is productive of other advantages. No microphonic noises can possibly occur with a Cossor.

Microphonic noises are a sure sign of the mechanical fragility of a Valve because they are caused by the vibration of the filament itself. Then again in the ordinary Valve the straight filament is stretched between its two supports, and because metal, when heated, expands, and when cooled, contracts, so the filament is constantly undergoing a stretching and shrinking process.

Obviously this is not good for it and sooner or later (generally sooner!) it fractures and the Valve is rendered useless.

The curved filament of the Cossor is not kept under tension, but is held in such a position that it supports its own weight—just like an arched bridge—and the result is long life.

Next time you buy a Valve see that it is a Cossor, for no other Valve in the world can be an effective substitute, no matter what price you are prepared to pay.

Advertisement of A. D. Cossor, Ltd.,
Alderden Works, Highbury Grove, N. 5

Types •
P-1. For Detector 12/6
and Low-Frequency Amplification
P-2. (with red top) 12/6
For High-Frequency Amplification.

From all Dealers.

Cossor

General 41 42

Two Outstanding Achievements.

THE PORTABLE-FIVE.

The only Portable Receiving Set in a leather suitcase, requiring No Aerial and No Earth! is Entirely Self-Contained, including valves, batteries, movable loop aerial and Loud Speaker. Really good reception on the Loud Speaker at 25 miles or on Headphones at 500 miles.

THE SUPERFIVE.

A Five-Valve Cabinet Receiver for use with either Dull or Bright emitter valves—owing to its many Special and Exclusive features really good Loud Speaker reception may be easily obtained at 500 miles under normal conditions—under reasonably favourable circumstances good Loud Speaker reception at 3,000 miles has been frequently obtained by private users.

Write for special illustrated catalogues describing the above to:—



Office: 7, Southampton 1042-17, Southampton 41 D
42, QUEEN ST., HAMMERSMITH, LONDON, W.6
Phone: Westminster 1016. Telegrams: TINGEY WIRELESS LTD.
FEW AGENCIES STILL OPEN

*If you want to
earn more money,
here's your chance!*

It takes but a moment to mark the career of your choice, and you can post it to attract attention upon the oldest and largest institution in the world.

That simple act has started tens of thousands of British men and women to good success.

In every line of business and industry there are many openings for men and women who are willing to accept positions and receive splendid salaries when they made use of the coupon.

You can, by staying at home in your own home, earn money for the position you want. It is the only way to get a job without leaving home.

As a first step, try and find out more about the International Correspondence Schools.

International Correspondence Schools, Limited,
41, International Buildings, Kingsway, London, W.C.2.

This is the only school in the world which has been in existence for over 40 years and has a reputation for excellence in every branch of its work.

Accountancy	Engineering every branch, static and dynamic
Advertising	French and Spanish
Architecture	Seamanship
Building	Textiles
Commercial Art	Woodworking
Organisational Management	
Self-Making	

The school is open to all who are able to do the work. 100 Courses of Study. If, therefore, your subject is not in the above list, write to them.

Name _____
Address _____

"QUALITY
—
FLAVOUR"

BOURNVILLE COCOA

MADE UNDER
IDEAL

SEE THE NAME "CADBURY" ON EVERY PIECE
OF CHOCOLATE

EMBROIDERY MACHINE



REDUCED
FROM 39/6
1/9

The E.J.B. CO. (Dept. R.T.),
597, Holloway Rd., London, N.19.

Stand by for one minute please and try—

"RABOK" CLEANING and POLISHING WOOL.

The Best, Simplest and Cleanest Medium for Cleaning
GOLD, SILVER and ELECTRO-PLATE
Removes all tarnish and produces a beautiful finish in one operation.
Guaranteed Free from Mercury or Cyanide.

"RABOK" Manufacturing Co., Oughtibridge, Nr. Sheffield.
1/3 per packet post free or Free Sample on receipt of 1d. stamp for postage

From SAMUEL GLAZIER & Co., Ltd. and other Manufacturers, Montgomery
West & Humphreys, Ltd., London

Agents "RABOK" Manufacturing Co., Oughtibridge, Nr. Sheffield. Agents for the
London & South Coast. Agents for the Midlands & North. Agents for the
East of England. Agents for the West of England. Agents for the
South of England. Agents for the North of England. Agents for the
Ireland & Scotland. Agents for the Colonies & Foreign.

SAFETY FIRST

Protect your W. & A. class
Set with

ROBINS'

Combination Light-
ning Arrestor and
Leading-in Tube.

Very specially protected
No. 1000000 Set or
Lightning in 40 ft. from
lightning without it.

PRICE 3/6

Postage 3d. each

To be had from any W. & A.
class dealer in direct from
the Patent and Manu-
facturers Telephone 3616

ROBINS ELECTRICAL & WIRELESS
DEPOT & INSTITUTE, LTD.

11, Wyndham Street, Cardiff.
CARDIFF.

£300-£400



£500 A YEAR for Certificated Book-keepers

Let the City Correspondence College experts show you the way to success
they guide you through the various stages step by step. Postal tuition
80s. monthly including books.

SUCCESS guaranteed at ten advanced examinations.
From 10 to 1000 hours of study. 10 to 1000 hours of study.
CITY CORRESPONDENCE COLLEGE (Dept. 543)
20, N. W. 10, 101-5 W. LONDON W.P.A.

BEGINNERS' GUIDE TO WIRELESS

Best Book Obtainable.

If you wish to make your own receiver, or to improve the set you
already have, you cannot do better than obtain this book.

HOW TO ERECT, CONNECT, AND MAKE

Aerials, complete crystal and valve receivers, coils, tuners, etc.
also the latest two and three valve tuned circuits receivers and one
and two valve amplifiers.

144 pages (including 28 diagrams). 1/3 post free.

SAXON RADIO CO. (Dept. 24), South Shore, BLACKPOOL.

You Can Construct This 3 Valve Set in One Hour

The "D.W." CONSTRUCTOR'S SET.

Provided in a handsome oak cabinet 30 in x 10 in x 7 in) 30 panels with all components mounted. Strip comes one lettered and numbered, ready drilled and shaped, with complete diagram and instructions, enable you to construct the set without soldering. The circuit includes H.F. Detector and L.F. Valves with tuned anode coupling and reaction control, 3 filament rheostat, variometer, anode condenser and vernier. This set is guaranteed to bring in ALL BRITISH BROADCASTING STATIONS.

Load Speaker reception is clear and undistorted.

Write for full details

G. DAVENPORT (WIRELESS), LTD.,
99-105, CLERKENWELL ROAD, LONDON, E.C.1.
Members of the B.B.C. and N.A.B.C. Telephone Museum 848



DURING the AFTERNOON

have a cup of

DELICIOUS

H&C PURE
TEA

2'6 per lb.

And during the evening
a cup of H&C Coffee

HOME & COLONIAL

STORES LIMITED
BRANCHES EVERYWHERE

WIRELESS becomes
a NECESSITY after
you hear the—

Polarphone

"Science's Last Word—Society's First Choice."

The Polarphone has always been its own "best salesman." The words, the music and song which come from the Polarphone find willing ears amongst the most critical of listeners, and leave no ground upon which prejudice may stand.

The refreshing absence of mechanical suggestion, in rendering everything that can be given by Wireless, is a triumph of which the R.C.C. is justly proud.

**No receiving instrument
can possibly be more
perfect**

than any one of the handsome Polarphone models illustrated. In the Polarphone the eye accustomed to the refinements of a beautiful home finds as much delight as the ear cultured to the perfections of good music.

A GUARANTEE—and an INVITATION.

It is a pleasure to give a guarantee with an instrument which is faultlessly built under the expert supervision of Britain's leading Wireless Engineers.

It is equally a pleasure to invite prospective buyers of the Polarphone to visit the beautiful R.C.C. Showrooms for the purpose of hearing, for the first time, perfect broadcast reception. Will you accept this invitation and let us keep an appointment at your convenience?

**If you cannot accept this invitation
send 5d. for a copy of the Polarphone
Book.**



The POLARPHONE 7-valve Cabinet, remote control, Chippendale Model, finely brushed in polished mahogany.
Price £120 : 0 : 0. B.B.C. Tax £2 0 0.



POLARPHONE 7-valve Receiving Set, (Type R.A. 34-H.6).
Price £48 : 0 : 0. Plus B.B.C. Tax £2 0 0.



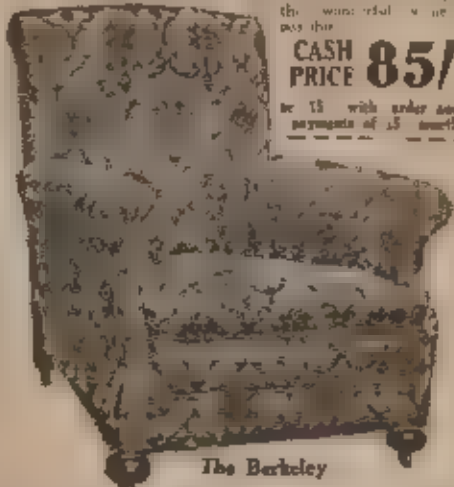
POLARPHONE 7-valve Cabinet Set in mahogany, Adam design, remote control.
Retail Price £116. B.B.C. Tax £2 0 0.

Install Comfort in your home



THE K.F. & Y. Agency for the sale of the Berkeley Easy Chair. The Berkeley is a masterpiece of comfort and durability. It is the most comfortable and elegant chair ever sold at its price. That its fame is broadcast is proved by the fact that it has the largest sale of any Easy Chair in the World.

CASH PRICE 85/-
or 15 with order and 5 payments of 15 monthly



The Berkeley

THE pleasures of "listening-in" by your own fireside will be increased immediately you install the comfort of the Berkeley Easy Chair. Luxuriously upholstered, deep seated, handsome and durable, the Berkeley is the most comfortable and elegant chair ever sold at its price. That its fame is broadcast is proved by the fact that it has the largest sale of any Easy Chair in the World.

The Berkeley

SOLD ON THE MONEY-BACK PRINCIPLE

Soon after receipt of first payment with your order we send the Berkeley Easy Chair Carriage Paid in England and Wales (Scotland 5/- extra). If upon examination it is not completely satisfactory you may return it within 7 days at our expense and we will refund your money in full.

SEND A POSTCARD FOR PATTERNS

and choose your own covering. On receipt of postcard we will send you, post free, a complete range of serviceable and artistic designs to harmonise with any scheme of decoration or colouring in your home.

H. J. SEARLE & SON, LTD *Sole Manufacturers*
(Dept. R.T.), 70-78, OLD KENT ROAD, LONDON, S.E.1.
West End Showrooms: 133, Victoria St., Westminster S.W.1; and at The Arcade, High St., Croydon



A.J.S.

TWO, THREE & FOUR-VALVE RECEIVING SETS

Are Simply Perfect and Perfectly Simple and are unsurpassed for Selectivity, Clearness of Reception and Power

PRICES:

COMPLETE SETS	PANELS ONLY
Two-Valve Set £1 10 0	Two-Valve Panel £1 7 6
Three-Valve Set £2 5 0	Three-Valve Panel £1 5 0
Four-Valve Set £3 5 0	Four-Valve Panel £2 10 0

Complete Sets consist of Panel, as Illustrated Valves, Head Phones, High and Low Tension Batteries, Aerial Wire, Insulator, Lead-in Tube etc. The LIST Price of the A.J.S. Sets is the LAST Price as with them it is not necessary to purchase numerous extras, the Specification embodying everything ready for installation, and the prices include all Royalties and fees.

Write for Illustrated Catalogue.

WALSALL STREET, WOLVERHAMPTON.

Telephone 1510 (3 lines) Wireless Call Sign 5RL Telegrams "Reception, Wolverhampton."

THE SET THAT SETS THE STANDARD.

for only **£3 down.**



You can listen in on a beautiful **2-Valve Wireless**
:: :: Set. :: ::

The "Pelmer" is a simple, compact, and efficient set. It is designed for the beginner and the experienced listener alike. It is a complete set, ready for use, and is a real bargain at the price.

The set is a complete set, ready for use, and is a real bargain at the price. It is a simple, compact, and efficient set, designed for the beginner and the experienced listener alike. It is a complete set, ready for use, and is a real bargain at the price.

The Pelmer set

THE SET THAT SETS THE STANDARD.

2-Valve Set £3 10 0
3-Valve Set £4 10 0
4-Valve Set £5 10 0
5-Valve Set £6 10 0
6-Valve Set £7 10 0
7-Valve Set £8 10 0
8-Valve Set £9 10 0
9-Valve Set £10 10 0
10-Valve Set £11 10 0
11-Valve Set £12 10 0
12-Valve Set £13 10 0
13-Valve Set £14 10 0
14-Valve Set £15 10 0
15-Valve Set £16 10 0
16-Valve Set £17 10 0
17-Valve Set £18 10 0
18-Valve Set £19 10 0
19-Valve Set £20 10 0
20-Valve Set £21 10 0
21-Valve Set £22 10 0
22-Valve Set £23 10 0
23-Valve Set £24 10 0
24-Valve Set £25 10 0
25-Valve Set £26 10 0
26-Valve Set £27 10 0
27-Valve Set £28 10 0
28-Valve Set £29 10 0
29-Valve Set £30 10 0
30-Valve Set £31 10 0
31-Valve Set £32 10 0
32-Valve Set £33 10 0
33-Valve Set £34 10 0
34-Valve Set £35 10 0
35-Valve Set £36 10 0
36-Valve Set £37 10 0
37-Valve Set £38 10 0
38-Valve Set £39 10 0
39-Valve Set £40 10 0
40-Valve Set £41 10 0
41-Valve Set £42 10 0
42-Valve Set £43 10 0
43-Valve Set £44 10 0
44-Valve Set £45 10 0
45-Valve Set £46 10 0
46-Valve Set £47 10 0
47-Valve Set £48 10 0
48-Valve Set £49 10 0
49-Valve Set £50 10 0
50-Valve Set £51 10 0
51-Valve Set £52 10 0
52-Valve Set £53 10 0
53-Valve Set £54 10 0
54-Valve Set £55 10 0
55-Valve Set £56 10 0
56-Valve Set £57 10 0
57-Valve Set £58 10 0
58-Valve Set £59 10 0
59-Valve Set £60 10 0
60-Valve Set £61 10 0
61-Valve Set £62 10 0
62-Valve Set £63 10 0
63-Valve Set £64 10 0
64-Valve Set £65 10 0
65-Valve Set £66 10 0
66-Valve Set £67 10 0
67-Valve Set £68 10 0
68-Valve Set £69 10 0
69-Valve Set £70 10 0
70-Valve Set £71 10 0
71-Valve Set £72 10 0
72-Valve Set £73 10 0
73-Valve Set £74 10 0
74-Valve Set £75 10 0
75-Valve Set £76 10 0
76-Valve Set £77 10 0
77-Valve Set £78 10 0
78-Valve Set £79 10 0
79-Valve Set £80 10 0
80-Valve Set £81 10 0
81-Valve Set £82 10 0
82-Valve Set £83 10 0
83-Valve Set £84 10 0
84-Valve Set £85 10 0
85-Valve Set £86 10 0
86-Valve Set £87 10 0
87-Valve Set £88 10 0
88-Valve Set £89 10 0
89-Valve Set £90 10 0
90-Valve Set £91 10 0
91-Valve Set £92 10 0
92-Valve Set £93 10 0
93-Valve Set £94 10 0
94-Valve Set £95 10 0
95-Valve Set £96 10 0
96-Valve Set £97 10 0
97-Valve Set £98 10 0
98-Valve Set £99 10 0
99-Valve Set £100 10 0
100-Valve Set £101 10 0
101-Valve Set £102 10 0
102-Valve Set £103 10 0
103-Valve Set £104 10 0
104-Valve Set £105 10 0
105-Valve Set £106 10 0
106-Valve Set £107 10 0
107-Valve Set £108 10 0
108-Valve Set £109 10 0
109-Valve Set £110 10 0
110-Valve Set £111 10 0
111-Valve Set £112 10 0
112-Valve Set £113 10 0
113-Valve Set £114 10 0
114-Valve Set £115 10 0
115-Valve Set £116 10 0
116-Valve Set £117 10 0
117-Valve Set £118 10 0
118-Valve Set £119 10 0
119-Valve Set £120 10 0
120-Valve Set £121 10 0
121-Valve Set £122 10 0
122-Valve Set £123 10 0
123-Valve Set £124 10 0
124-Valve Set £125 10 0
125-Valve Set £126 10 0
126-Valve Set £127 10 0
127-Valve Set £128 10 0
128-Valve Set £129 10 0
129-Valve Set £130 10 0
130-Valve Set £131 10 0
131-Valve Set £132 10 0
132-Valve Set £133 10 0
133-Valve Set £134 10 0
134-Valve Set £135 10 0
135-Valve Set £136 10 0
136-Valve Set £137 10 0
137-Valve Set £138 10 0
138-Valve Set £139 10 0
139-Valve Set £140 10 0
140-Valve Set £141 10 0
141-Valve Set £142 10 0
142-Valve Set £143 10 0
143-Valve Set £144 10 0
144-Valve Set £145 10 0
145-Valve Set £146 10 0
146-Valve Set £147 10 0
147-Valve Set £148 10 0
148-Valve Set £149 10 0
149-Valve Set £150 10 0
150-Valve Set £151 10 0
151-Valve Set £152 10 0
152-Valve Set £153 10 0
153-Valve Set £154 10 0
154-Valve Set £155 10 0
155-Valve Set £156 10 0
156-Valve Set £157 10 0
157-Valve Set £158 10 0
158-Valve Set £159 10 0
159-Valve Set £160 10 0
160-Valve Set £161 10 0
161-Valve Set £162 10 0
162-Valve Set £163 10 0
163-Valve Set £164 10 0
164-Valve Set £165 10 0
165-Valve Set £166 10 0
166-Valve Set £167 10 0
167-Valve Set £168 10 0
168-Valve Set £169 10 0
169-Valve Set £170 10 0
170-Valve Set £171 10 0
171-Valve Set £172 10 0
172-Valve Set £173 10 0
173-Valve Set £174 10 0
174-Valve Set £175 10 0
175-Valve Set £176 10 0
176-Valve Set £177 10 0
177-Valve Set £178 10 0
178-Valve Set £179 10 0
179-Valve Set £180 10 0
180-Valve Set £181 10 0
181-Valve Set £182 10 0
182-Valve Set £183 10 0
183-Valve Set £184 10 0
184-Valve Set £185 10 0
185-Valve Set £186 10 0
186-Valve Set £187 10 0
187-Valve Set £188 10 0
188-Valve Set £189 10 0
189-Valve Set £190 10 0
190-Valve Set £191 10 0
191-Valve Set £192 10 0
192-Valve Set £193 10 0
193-Valve Set £194 10 0
194-Valve Set £195 10 0
195-Valve Set £196 10 0
196-Valve Set £197 10 0
197-Valve Set £198 10 0
198-Valve Set £199 10 0
199-Valve Set £200 10 0
200-Valve Set £201 10 0
201-Valve Set £202 10 0
202-Valve Set £203 10 0
203-Valve Set £204 10 0
204-Valve Set £205 10 0
205-Valve Set £206 10 0
206-Valve Set £207 10 0
207-Valve Set £208 10 0
208-Valve Set £209 10 0
209-Valve Set £210 10 0
210-Valve Set £211 10 0
211-Valve Set £212 10 0
212-Valve Set £213 10 0
213-Valve Set £214 10 0
214-Valve Set £215 10 0
215-Valve Set £216 10 0
216-Valve Set £217 10 0
217-Valve Set £218 10 0
218-Valve Set £219 10 0
219-Valve Set £220 10 0
220-Valve Set £221 10 0
221-Valve Set £222 10 0
222-Valve Set £223 10 0
223-Valve Set £224 10 0
224-Valve Set £225 10 0
225-Valve Set £226 10 0
226-Valve Set £227 10 0
227-Valve Set £228 10 0
228-Valve Set £229 10 0
229-Valve Set £230 10 0
230-Valve Set £231 10 0
231-Valve Set £232 10 0
232-Valve Set £233 10 0
233-Valve Set £234 10 0
234-Valve Set £235 10 0
235-Valve Set £236 10 0
236-Valve Set £237 10 0
237-Valve Set £238 10 0
238-Valve Set £239 10 0
239-Valve Set £240 10 0
240-Valve Set £241 10 0
241-Valve Set £242 10 0
242-Valve Set £243 10 0
243-Valve Set £244 10 0
244-Valve Set £245 10 0
245-Valve Set £246 10 0
246-Valve Set £247 10 0
247-Valve Set £248 10 0
248-Valve Set £249 10 0
249-Valve Set £250 10 0
250-Valve Set £251 10 0
251-Valve Set £252 10 0
252-Valve Set £253 10 0
253-Valve Set £254 10 0
254-Valve Set £255 10 0
255-Valve Set £256 10 0
256-Valve Set £257 10 0
257-Valve Set £258 10 0
258-Valve Set £259 10 0
259-Valve Set £260 10 0
260-Valve Set £261 10 0
261-Valve Set £262 10 0
262-Valve Set £263 10 0
263-Valve Set £264 10 0
264-Valve Set £265 10 0
265-Valve Set £266 10 0
266-Valve Set £267 10 0
267-Valve Set £268 10 0
268-Valve Set £269 10 0
269-Valve Set £270 10 0
270-Valve Set £271 10 0
271-Valve Set £272 10 0
272-Valve Set £273 10 0
273-Valve Set £274 10 0
274-Valve Set £275 10 0
275-Valve Set £276 10 0
276-Valve Set £277 10 0
277-Valve Set £278 10 0
278-Valve Set £279 10 0
279-Valve Set £280 10 0
280-Valve Set £281 10 0
281-Valve Set £282 10 0
282-Valve Set £283 10 0
283-Valve Set £284 10 0
284-Valve Set £285 10 0
285-Valve Set £286 10 0
286-Valve Set £287 10 0
287-Valve Set £288 10 0
288-Valve Set £289 10 0
289-Valve Set £290 10 0
290-Valve Set £291 10 0
291-Valve Set £292 10 0
292-Valve Set £293 10 0
293-Valve Set £294 10 0
294-Valve Set £295 10 0
295-Valve Set £296 10 0
296-Valve Set £297 10 0
297-Valve Set £298 10 0
298-Valve Set £299 10 0
299-Valve Set £300 10 0
300-Valve Set £301 10 0
301-Valve Set £302 10 0
302-Valve Set £303 10 0
303-Valve Set £304 10 0
304-Valve Set £305 10 0
305-Valve Set £306 10 0
306-Valve Set £307 10 0
307-Valve Set £308 10 0
308-Valve Set £309 10 0
309-Valve Set £310 10 0
310-Valve Set £311 10 0
311-Valve Set £312 10 0
312-Valve Set £313 10 0
313-Valve Set £314 10 0
314-Valve Set £315 10 0
315-Valve Set £316 10 0
316-Valve Set £317 10 0
317-Valve Set £318 10 0
318-Valve Set £319 10 0
319-Valve Set £320 10 0
320-Valve Set £321 10 0
321-Valve Set £322 10 0
322-Valve Set £323 10 0
323-Valve Set £324 10 0
324-Valve Set £325 10 0
325-Valve Set £326 10 0
326-Valve Set £327 10 0
327-Valve Set £328 10 0
328-Valve Set £329 10 0
329-Valve Set £330 10 0
330-Valve Set £331 10 0
331-Valve Set £332 10 0
332-Valve Set £333 10 0
333-Valve Set £334 10 0
334-Valve Set £335 10 0
335-Valve Set £336 10 0
336-Valve Set £337 10 0
337-Valve Set £338 10 0
338-Valve Set £339 10 0
339-Valve Set £340 10 0
340-Valve Set £341 10 0
341-Valve Set £342 10 0
342-Valve Set £343 10 0
343-Valve Set £344 10 0
344-Valve Set £345 10 0
345-Valve Set £346 10 0
346-Valve Set £347 10 0
347-Valve Set £348 10 0
348-Valve Set £349 10 0
349-Valve Set £350 10 0
350-Valve Set £351 10 0
351-Valve Set £352 10 0
352-Valve Set £353 10 0
353-Valve Set £354 10 0
354-Valve Set £355 10 0
355-Valve Set £356 10 0
356-Valve Set £357 10 0
357-Valve Set £358 10 0
358-Valve Set £359 10 0
359-Valve Set £360 10 0
360-Valve Set £361 10 0
361-Valve Set £362 10 0
362-Valve Set £363 10 0
363-Valve Set £364 10 0
364-Valve Set £365 10 0
365-Valve Set £366 10 0
366-Valve Set £367 10 0
367-Valve Set £368 10 0
368-Valve Set £369 10 0
369-Valve Set £370 10 0
370-Valve Set £371 10 0
371-Valve Set £372 10 0
372-Valve Set £373 10 0
373-Valve Set £374 10 0
374-Valve Set £375 10 0
375-Valve Set £376 10 0
376-Valve Set £377 10 0
377-Valve Set £378 10 0
378-Valve Set £379 10 0
379-Valve Set £380 10 0
380-Valve Set £381 10 0
381-Valve Set £382 10 0
382-Valve Set £383 10 0
383-Valve Set £384 10 0
384-Valve Set £385 10 0
385-Valve Set £386 10 0
386-Valve Set £387 10 0
387-Valve Set £388 10 0
388-Valve Set £389 10 0
389-Valve Set £390 10 0
390-Valve Set £391 10 0
391-Valve Set £392 10 0
392-Valve Set £393 10 0
393-Valve Set £394 10 0
394-Valve Set £395 10 0
395-Valve Set £396 10 0
396-Valve Set £397 10 0
397-Valve Set £398 10 0
398-Valve Set £399 10 0
399-Valve Set £400 10 0
400-Valve Set £401 10 0
401-Valve Set £402 10 0
402-Valve Set £403 10 0
403-Valve Set £404 10 0
404-Valve Set £405 10 0
405-Valve Set £406 10 0
406-Valve Set £407 10 0
407-Valve Set £408 10 0
408-Valve Set £409 10 0
409-Valve Set £410 10 0
410-Valve Set £411 10 0
411-Valve Set £412 10 0
412-Valve Set £413 10 0
413-Valve Set £414 10 0
414-Valve Set £415 10 0
415-Valve Set £416 10 0
416-Valve Set £417 10 0
417-Valve Set £418 10 0
418-Valve Set £419 10 0
419-Valve Set £420 10 0
420-Valve Set £421 10 0
421-Valve Set £422 10 0
422-Valve Set £423 10 0
423-Valve Set £424 10 0
424-Valve Set £425 10 0
425-Valve Set £426 10 0
426-Valve Set £427 10 0
427-Valve Set £428 10 0
428-Valve Set £429 10 0
429-Valve Set £430 10 0
430-Valve Set £431 10 0
431-Valve Set £432 10 0
432-Valve Set £433 10 0
433-Valve Set £434 10 0
434-Valve Set £435 10 0
435-Valve Set £436 10 0
436-Valve Set £437 10 0
437-Valve Set £438 10 0
438-Valve Set £439 10 0
439-Valve Set £440 10 0
440-Valve Set £441 10 0
441-Valve Set £442 10 0
442-Valve Set £443 10 0
443-Valve Set £444 10 0
444-Valve Set £445 10 0
445-Valve Set £446 10 0
446-Valve Set £447 10 0
447-Valve Set £448 10 0
448-Valve Set £449 10 0
449-Valve Set £450 10 0
450-Valve Set £451 10 0
451-Valve Set £452 10 0
452-Valve Set £453 10 0
453-Valve Set £454 10 0
454-Valve Set £455 10 0
455-Valve Set £456 10 0
456-Valve Set £457 10 0
457-Valve Set £458 10 0
458-Valve Set £459 10 0
459-Valve Set £460 10 0
460-Valve Set £461 10 0
461-Valve Set £462 10 0
462-Valve Set £463 10 0
463-Valve Set £464 10 0
464-Valve Set £465 10 0
465-Valve Set £466 10 0
466-Valve Set £467 10 0
467-Valve Set £468 10 0
468-Valve Set £469 10 0
469-Valve Set £470 10 0
470-Valve Set £471 10 0
471-Valve Set £472 10 0
472-Valve Set £473 10 0
473-Valve Set £474 10 0
474-Valve Set £475 10 0
475-Valve Set £476 10 0
476-Valve Set £477 10 0
477-Valve Set £478 10 0
478-Valve Set £479 10 0
479-Valve Set £480 10 0
480-Valve Set £481 10 0
481-Valve Set £482 10 0
482-Valve Set £483 10 0
483-Valve Set £484 10 0
484-Valve Set £485 10 0
485-Valve Set £486 10 0
486-Valve Set £487 10 0
487-Valve Set £488 10 0
488-Valve Set £489 10 0
489-Valve Set £490 10 0
490-Valve Set £491 10 0
491-Valve Set £492 10 0
492-Valve Set £493 10 0
493-Valve Set £494 10 0
494-Valve Set £495 10 0
495-Valve Set £496 10 0
496-Valve Set £497 10 0
497-Valve Set £498 10 0
498-Valve Set £499 10 0
499-Valve Set £500 10 0
500-Valve Set £501 10 0
501-Valve Set £502 10 0
502-Valve Set £503 10 0
503-Valve Set £504 10 0
504-Valve Set £505 10 0
505-Valve Set £506 10 0
506-Valve Set £507 10 0
507-Valve Set £508 10 0
508-Valve Set £509 10 0
509-Valve Set £510 10 0
510-Valve Set £511 10 0
511-Valve Set £512 10 0
512-Valve Set £513 10 0
513-Valve Set £514 10 0
514-Valve Set £515 10 0
515-Valve Set £516 10 0
516-Valve Set £517 10 0
517-Valve Set £518 10 0
518-Valve Set £519 10 0
519-Valve Set £520 10 0
520-Valve Set £521 10 0
521-Valve Set £522 10 0
522-Valve Set £523 10 0
523-Valve Set £524 10 0
524-Valve Set £525 10 0
525-Valve Set £526 10 0
526-Valve Set £527 10 0
527-Valve Set £528 10 0
528-Valve Set £529 10 0
529-Valve Set £530 10 0
530-Valve Set £531 10 0
531-Valve Set £532 10 0
532-Valve Set £533 10 0
533-Valve Set £534 10 0
534-Valve Set £535 10 0
535-Valve Set £536 10 0
536-Valve Set £537 10 0
537-Valve Set £538 10 0
538-Valve Set £539 10 0
539-Valve Set £540 10 0
540-Valve Set £541 10 0
541-Valve Set £542 10 0
542-Valve Set £543 10 0
543-Valve Set £544 10 0
544-Valve Set £545 10 0
545-Valve Set £546 10 0
546-Valve Set £547 10 0
547-Valve Set £548 10 0
548-Valve Set £549 10 0
549-Valve Set £550 10 0
550-Valve Set £551 10 0
551-Valve Set £552 10 0
552-Valve Set £553 10 0
553-Valve Set £554 10 0
554-Valve Set £555 10 0
555-Valve Set £556 10 0
556-Valve Set £557 10 0
557-Valve Set £558 10 0
558-Valve Set £559 10 0
559-Valve Set £560 10 0
560-Valve Set £561 10 0
561-Valve Set £562 10 0
562-Valve Set £563 10 0
563-Valve Set £564 10 0
564-Valve Set £565 10 0
565-Valve Set £566 10 0
566-Valve Set £567 10 0
567-Valve Set £568 10 0
568-Valve Set £569 10 0
569-Valve Set £570 10 0
570-Valve Set £571 10 0
571-Valve Set £572 10 0
572-Valve Set £573 10 0
573-Valve Set £574 10 0
574-Valve Set £575 10 0
575-Valve Set £576 10 0
576-Valve Set £577 10 0
577-Valve Set £578 10 0
578-Val



Make this shaving test and find quicker, better shaves!

Discover how we produced shaving cream composed of five distinct detergents.
It multiplies itself 250 times in rich foamy lather.
Softens your beard—no matter how tough and wiry—in one minute, without "rubbing in."
Lather lasts, soft, moist, luxurious, for 10 minutes, if necessary, on your face.
Hairs are held erect to meet the blade, by extra strong bubbles—making your shave cleaner, easier.
And afterwards your face is cool, comfortable—thanks to the blend of palm and olive oils.
Try ten perfect shaves at our expense—see the coupon.

PALMOLIVE Shaving Cream

10
Shaves
Free

In The Palmolive Co. (of England) Ltd., Dept. S.C.,
25 Abchurch Lane, London, E.C. 4.

Please send me FREE a ten-shave tube of
Palmolive Shaving Cream.

Name _____

Address _____

Radio Times, Mar. 21.

P. 5336



If you have a Fellows Set you know its value—only a Fellows Loud Speaker is wanted.

The Fellows Junior Loud Speaker, shown below, provides a really sound instrument at a popular price.

PRICE:

£1:17:6

Stock model wound to 2,000 ohms; other resistances made to order.

FELLOWS MAGNETO Co., Ltd.
Park Royal, London, N.W.10.

Telephone:
Windsor 1500-1.

Telegrams:
"Glenwood, Phone,"
London.



FELLOWS Loud Speakers

R.P.S. 48

WATES BIJOUPHONE

READ WHAT USERS SAY:

Hartingay.

"Gentlemen,

I wish to thank you for the Bijouphone, and to state that I am delighted with results. It is as good, if not better, than a much more expensive set I have. I think it a wonderful little instrument."

Sheffield.

"I have been trying the Bijouphone . . . and have found it extremely satisfactory. I can get a fine concert on my indoor aerial. Last Saturday the complete opera . . . was relayed . . . The music seemed so near that it was possible to shut one's eyes and imagine one's self sitting on the stage."

Glasgow.

"Some wireless! . . . As good as one that cost me three times the amount . . . The speakers and singers very distinct, and as for the Bands, a veritable cyclone of sound."

EXCLUSIVE FEATURES

VARIOMETER TUNING.

SPECIAL AUXILIARY CONDENSER FOR LONG WAVES.

ENCLOSED DETECTOR WITH GOLD CAT'S WHISKER.

EBONITE TOP AND BASE.

NICKEL PLATED FITTINGS.

RANGE—30 MILES.

(More under favourable conditions)

Complete

7/6

B.B.C. Tax
1/- extra.



WATES BROS., LTD.,

12, 13, 14, Great Queen Street, Kingsway, W.C.2

Phone: GERRARD 575-576.

Grams: ZYNOWESTING, Walsent

Southern Depot (Wholesale): 101 Old Christchurch Rd., Bournemouth. Phone Bournemouth 3573.

South Western Depot (Wholesale): Central Mill, Raleigh St., Plymouth. Phone Plymouth 3481.



"Abbiphone" brings in Continental and American Stations on a Loud Speaker.

The latest "Abbiphone" product—the Super-4—provides endless and varied entertainment at a minimum cost. A turn of a condenser control, a slight adjustment of the coil slider, gives you Loud Speaker reception of any of the B.B.C. Stations, or if the fancy takes you, one of the more distant Continental Stations. As a matter of fact, with a little careful tuning, it is not a difficult matter to get Loud Speaker reception of America. Write to-day for details of this super instrument.

THE "ABBIPHONE" SUPER-4.

Price (Receiver only) 21 Guineas
 (Complete, with accessories) 131.19.6
 Also supplied in Jacobean Cabinet (accessories extra) 38 Guineas
 Sheraton Model (accessories extra) 41 "

B.B.C. Tax 25/- in each case.

Send a Postcard to-day for Illustrated Catalogue describing the range of "Abbiphone" Sets and Parts. Sets from 10/6.

ABBEY INDUSTRIES LIMITED,
 Abbey Wood, London, S.E.2.

"Grand"
 "Abbiphone"
 Abbey Wood, London.

WIRELESS
 West End Depot:
 50A, Strand, W.C.2.



"Phone"
 Woodhouse 528.
PRODUCTS
 The City Road (31), Mark
 Lane, in connection
 with our agent giving
 up business.

BUY BRITISH "ABBIPHONE" **GOODS ONLY.**



THE NEW FELLOWS LIGHTWEIGHT PHONES

weigh under 8 ozs. and are extremely comfortable. With the special spring adjustment, the earpieces may be moved into any desired position, or separated without the use of adjusting nuts. This fitting is specially designed not to tear the hair. Wound to 4,000 ohms, they are very sensitive and are well made with durable head bands, sturdy diaphragms, etc.

Adm. The Fallowes Mfg. Co., Ltd.,
 London, N.W. 10.

FELLOWS

LISTEN IN AND LEARN TO SPEAK FRENCH

WITH LINGUAPHONE LANGUAGE-
 TEACHING RECORDS ON YOUR OWN
 GRAMOPHONE IN YOUR OWN HOME

Perfectly Simple. Wonderfully Fascinating.
 Entertainment and Instruction Combined.

A French professor gives you personal tuition in French by your own fireside. You hear his voice, get the correct accent, the proper pronunciation, and learn to speak fluently in the shortest possible time.

Every member of your family can receive instruction at the same time without any extra rental and under the simplest conditions. Undoubtedly the shortest and most interesting route to a complete mastery of French. Even if you are studying at present with a teacher, or by correspondence, the Linguaphone Language Records will help you considerably, especially to think in French, to speak in French, and to understand French.

FREE Write for booklet and full information, which costs you nothing, to Dept. 11.

German, Spanish and Italian. We have a special proposition for those interested. Write for full particulars.

THE LINGUAPHONE INSTITUTE,
 34 & 35, High Holborn, London, W.C.1,
 ENGLAND.

Demonstrators Required.



YOU CAN PLAY THE PIANO TO-DAY

By
**Naunton's National Music
 System**
**FAILURE IS
 IMPOSSIBLE**

You cannot fail. All you have to do is to sit down to the piano with our music and play it at once—HYMNS, DANCE MUSIC.

58,800 NAUNTON STUDENTS NOW PLAY PERFECTLY. SO CAN YOU.

It makes no difference whether you have had previous lessons or not, whether you are eighty years of age or only eight, we guarantee that you can play the piano to-day by this wonderful and simple system. There are no sharps, flats, or theoretical difficulties to worry you, and no tiresome or wearisome exercises or scales to be learnt. You play correctly with both hands at once. No difficulty or dexterity whatever.

NO FLATS, SHARPS, SCALES, OR EXERCISES.

Take advantage of the offer we make on the Coupon, and by return of post, you will receive eight tapes which we guarantee you can play; thus you can prove for yourself the simplicity of our system and the accuracy of our statements. This small outlay will open up the delights of the vast realm of music to you, and give you many years of purest pleasure.

A Pupil writes:

"I think your system is splendid. Before I began on the course I had not any knowledge of music, now I can play anything. It is the quickest and easiest way anyone could try."

SPECIAL TRIAL OFFER COUPON.

Valid from March 21st, 1931.

To the Manager, Naunton's National Music System,
 37, High Street, Oxford Street, London, W.C.1

I send herewith postal order for One Shilling and Sixpence, to return to which please send me your "Special 8-tape" containing eight tapes, published at 10/-, also permission to use the Naunton's National Music System.

NOTE:—Please fill in postal order payable to Naunton's National Music System.

To Colonial and Foreign readers: British money and postal orders only accepted.

Name.....

Address.....

Date.....

WORDS FAIL—



to mend; words never mended Jack's unfortunate crown no matter how much he was provoked—and words will not mend any mishap that may befall your perfect little wireless installation. One's feelings are sometimes stirred after dismembering an instrument in an endeavour to discover the cause of 'dead' earphones to find a loosened connection. Words simply fail—but there's something that won't fail and that's Fluxite and solder. Solder solves the problem—it makes a connection whole, like a continuous wire, therefore ensuring continuity of current.

So make a point of soldering the vital connections of your instrument without delay. Soldering is as simple as A.B.C. when there's Fluxite at hand to help you.

ASK YOUR IRONMONGER OR HARDWARE DEALER TO SHOW YOU THE NEAT LITTLE

FLUXITE SOLDERING SET.

It is perfectly simple to use, and will last for years in constant use. It contains a special "small-space" Soldering Iron, with non-heating metal handle, a Pocket Blow-lamp, FLUXITE Solder, etc., and full instructions. Price 7/6. Write to us should you be unable to obtain it.

FLUXITE SIMPLIFIES SOLDERING

All Hardware and Ironmongery Stores sell FLUXITE in 100g, 250g, 500g, 1/4, and 1/2 lb.

Buy a tin to-day.



Use the tool-kit of your car or motor cycle or any soldering job about the house.

FLUXITE LTD., 328, Bevington Street, Bermondsey, England.



Ethovox^{REGD}

The Perfected Loud Speaker.

YOU are a music lover. You can always enjoy perfect reproduction of music, speech and song with even tones, correct values and absolute clarity from an Ethovox Loud Speaker, provided your Receiver is a good one. Remember when you buy your Loud Speaker that you require a musical instrument. Many of the Loud Speakers now on the market cannot be classed as such.

The Ethovox is easy to listen to and equally easy to look at. Its beautiful curves and handsome base are a never

ending source of pleasure to those who like nice things around them—and who doesn't?

It is not black, but is finished with a rich mahogany colour.

You don't want to worry about the technical details. The Burndept Printed Guarantee goes with each instrument; the quality and tone of the reproduction can be judged by yourself at any of our Branches or agents.

Full-size table pattern, over-all height 26 in.,
Cat. No. 203. Low Resistance (20 ohms). Price £5 10 0.
Cat. No. 204. High Resistance (2,000 ohms). Price £5 10 0.

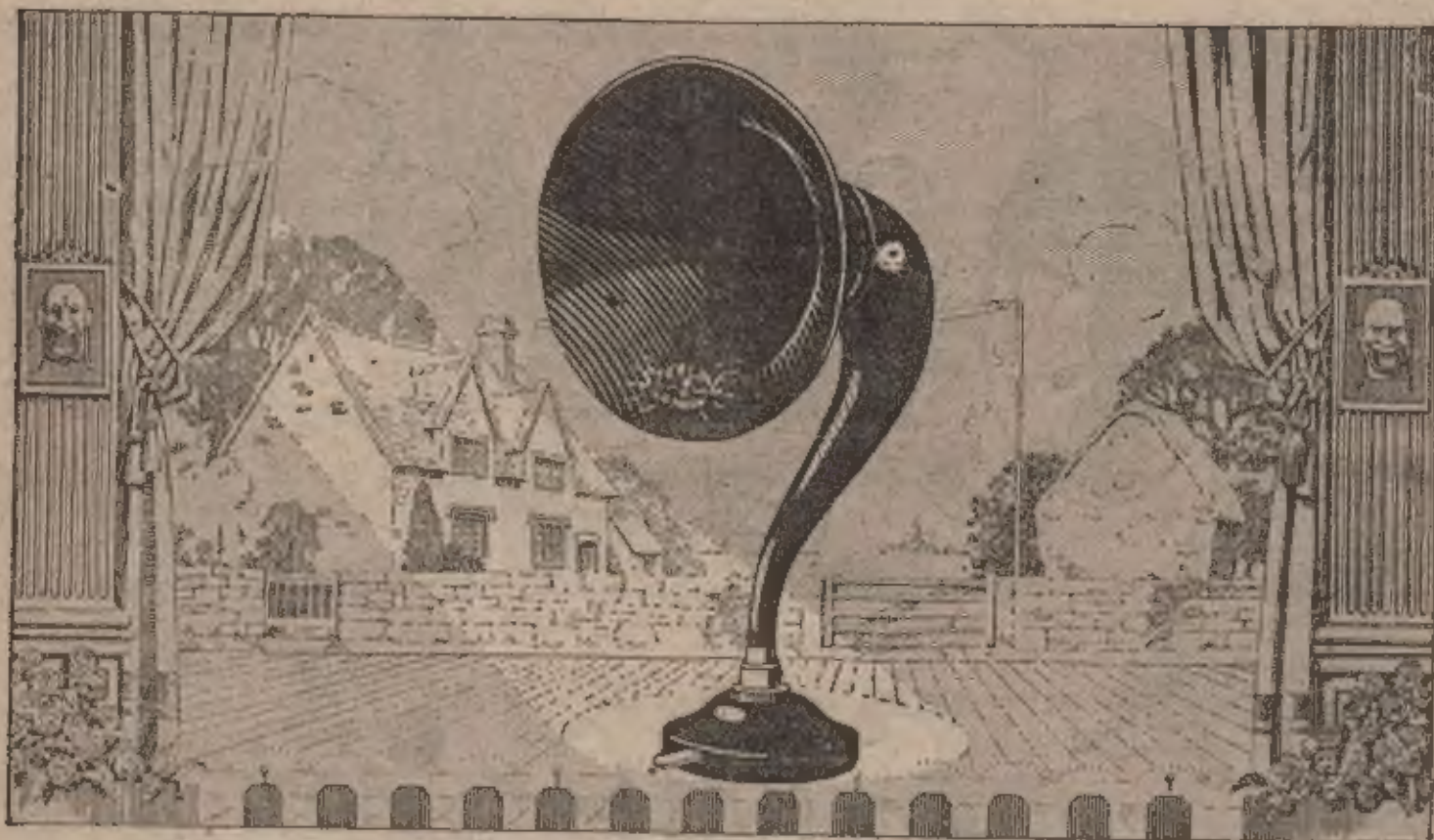
BURNDEPT LTD., Aldine House, Bedford St., Strand, W.C.2. Phone, Gerrard 9072.

LEEDS: London Assurance House, Broad Flaps.
CARDIFF: 47, Queen Street.

NORTHAMPTON: & The Drapery.
NEWCASTLE: St. Andrew's Buildings, W. Gallowgate.

BURNDEPT

WIRELESS APPARATUS



The most popular Entertainer in the World.

No entertainer ever had a bigger or more appreciative public than the Sterling Baby Loud Speaker. In thousands upon thousands of homes throughout the length and breadth of the country, this amazing little instrument daily renders a programme that brings absolute delight to musicians, perfect pleasure to dancers, endless amusement to kiddies, and ever varied interest to all.

The Sterling Baby Loud Speaker is flawless in reproduction, natural in tone, distortionless, and wonderfully loud for its size. It is supplied in the following finishes and in two resistances: 120 or 2,000 ohms. Height overall, 19 ins.; diameter of flare, 10½ ins.; diameter of base, 5½ ins.

In Black Enamel	£2 15 0
In Brown Floral Design	£2 17 6
In Black and Gold Floral Design	£3 0 0

Ask your dealer to demonstrate the

Sterling Baby Loud Speaker

Advt. of **STERLING TELEPHONE & ELECTRIC CO. LTD.**

Manufacturers of Telephones and Radio Apparatus, etc.

210-212 TOTTENHAM COURT ROAD, LONDON, W.1

Works: DAGENHAM, ESSEX

