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Imagination and the Listener

THE experiment has recently been made in New Zealand of transmitting "over the air" radio plays. This innovation has generally been received by listeners with appreciation, but there have been a few who have made some criticism of such plays as being unsuitable for broadcasting. The following article from a Home magazine shows that, to the successful transmission of such plays, the listener must bring some imagination. Evidently those who have made the criticism mentioned must be regarded as lacking in imagination! How can the alleged deficiency be corrected? The author of the article indicates that to overcome our "sophistication" a conscious effort must be made by listeners!



THE importance of the part played by the imagination of the listener in the production of broadcast drama is emphasised by Mr. Norman Edwards in "Modern Wireless."

COMPARISONS are not always odious, nor invidious, if they are made in a spirit of constructive criticism. Criticism is essentially intelligent analysis and intelligent comparison, and when we examine the relative appeal of the broadcast play, the stage play, and the kinema play, it becomes obvious that the critical faculty must be dominant because of the very diversity of appeal apparent between these three forms of artistic expression.

GREAT DIFFICULTIES.

AND at the very outset of any critical comparison between these three media, it must be obvious that the broadcast play labours under great difficulties, and that, of the three media we have mentioned, there is ample evidence to show that the kinema is to-day the most popular because it makes an appeal to the eye and, in doing so, makes no very great demand upon the intelligence. The legitimate stage would come second in order of popularity for equally obvious reasons; and the broadcast play, although potentially the most intelligent and difficult media, third.

It has been written somewhere that when our judgment "pens our imagination decays; and if we add "sophistication" to the judgment, this dicta offers a very good explanation for the difference between the appeal of the Kinema and the stage and the appeal of the broadcast play. Perhaps it may be more adequately expressed if we say that if the progress of civilisation is inevitable it is equally and inevitably at the expense of imagination.

TOO STOLID.

IT is recorded that in the early days of the Athenian drama, imaginative spectators were furious because Aeschylus frightened them out of their wits with his Furies; and Herodotus tells us that when Phrynichus produced his tragedy on the fall of Miletus, he was fined a thousand drachmas for torturing the feelings of his audience!

Can we imagine a modern audience being tortured to such an extent, even by such a fine actress as Miss Sybil Thorndike, that a fine be imposed upon her because of her genius for harrowing the feelings of her audience? And can we imagine the Postmaster-General, as Guardian of the Rights of Listeners and all License Payers, fining the R.B.C. for "emotional damage" to the listening audience of to-day?

If we could sit in a theatre in such a position that we could see the actors upon the stage, and at the same time watch the machinery of the limelight, of the scene-shifting process, and the many mechanical devices employed for the delusion of the audience, we should be intelligently interested, but it is doubtful whether the actors would produce any imaginative reaction in us. A child at a party may watch a grown-up of the Olympian world put on an ugly, grotesque mask. It knows that the mask is only a

mask, but the child's imagination is too much for its reason, and sometimes it will scream in sheer terror.

The analogy may be used in connection with the broadcast listener. He knows that the thrill, like the child's mask, is artificial, but, unlike the child, his reason completely subordinates his imagination, so much so, in fact, that it is very rarely indeed that his imagination can give him that sensation which, whether pleasant or harrowing, is essential for an aesthetic and emotional appreciation of a work of art.

But if the listener is caught unprepared, when his armour of sophistication is unbuckled, then the result is often different.

CRUDE METHODS.

In our theatres to-day we find imagination run riot—but a raving, ranting imagination, born of an effort designed legitimately, but executed, because of its extreme necessity, in an illegitimate and crude way. Imaginative effort, as made to-day in the London theatres to pierce the stolid, blasé envelope of sophistication which wraps the average London playgoer as completely as the linen bandages swaths an ancient Egyptian mummy.

We find that in many of these plays the appeal to the artistic imagination is nil; but just as the imagination of a child may be so acute that a crude mask worn at a party may stimulate its imagination to the detriment of its reason, so, in many of the crude plays and thrillers of to-day, the sophistication of the audience is so acute that the crudest methods have to be adopted in order to produce the desired effect, namely, the stirring and stimulation of sluggish and atrophied imaginations.

This is a difficulty which might well intimidate less adventurous spirits, because broadcasting necessitates a sound knowledge of psychology; and without it no adequate appeal to the most undeveloped of the five senses—that of the sense of hearing—can satisfactorily be made. It is easier, far easier, to stir the imagination by vision than by sound; and when, as in the case of broadcasting, sound only may be utilised, the handicap is accentuated a thousandfold.

"ARTISTIC PURITY."

IT is legitimate to create an atmosphere for the public enjoyment of art. There are certain members of the so-called intelligentsia who maintain and insist that the plays of Shakespeare, for example, should be presented without scenery, and that at the most only black-drapery, etc., etc., should be used for scenery and background effects; and they maintain also that the characters interpreting the roles in any of Shakespeare's plays need not necessarily be dressed in the costumes of the period dealt with by the play.

This form of "artistic purity" may be very good theoretically, but it is not, on the whole efficacious in practice. This has been proved more than once, and only quite recently by the production of "Macbeth" in modern clothes, but, unfortunately, "Macbeth" produced in modern clothes and modern settings made an appeal only to a very limited audience.

"MERELY RIDICULOUS."

PRIMARILY, the contrast merely tickled one's sense of the ridiculous. It would have been more satisfactory to test Sir Barry Jackson's theory by broadcasting "Macbeth." That would have been a truer test of the poetic and intellectual appeal of the beauty of Shakespeare's language than the rather abnormal experiment of dressing the characters in the play in modern clothes.

A natural atmosphere is, for the normal man, only natural when he goes to a theatre, and when he listens to broadcasting it is not to be expected that he will enjoy even a thrilling melodrama by wireless if he is sitting in a drawing-room, in the full glare of electric light, with possibly the tea things surrounding him, a blazing fire in the hearth, and his wife and children scattered round him.

WRONG ATMOSPHERE.

HAVE you ever read a ghost story on a fine summer's afternoon, lying in a hammock in the garden, and have you ever read a ghost story late at night by the light of a flickering candle, with the wind moaning and wailing outside, and sometimes whistling down the chimney? If you have read, for example, "The Monkey's Paw," by Jacobs, or one of Poe's "thrillers," or even that wonderful unfinished poem of Coleridge's "Christabel," you will know full well the emotional difference between your experience of reading such a story or such a poem in broad daylight and in reading it late at night.

THE SPELL IS BROKEN.

READING such a story in the daytime you perceive, perhaps intelligently, the skill of the author, but in perceiving that skill the spell is broken. Pleasure in reading a book, says Lord Macaulay, may be the effect of ideas which some unmeaning expression, striking a train of associations, may have called up in one's own mind as they have furnished to the author, the beauties one admires.

So with broadcasting. It would perhaps naturally enhance the listener's perception of the artistry of a broadcast play, dealing, let us say, with a tragedy in a coal mine, if one could take the loud-speaker down into the coal cellar and there, painfully reposing upon jagged lumps of coal, listen in semi obscurity (certainly with no more illumination than that afforded by a guttering candle), to the vocal appeal of the play as reproduced by the loud-speaker!

THE BEST "ATMOSPHERE."

BUT, seriously, we suggest that a play should always be prefaced with hints as to the atmosphere in which the listener will find it most conducive to enjoy that play. Advice, we are well aware, has often been given to listen to a broadcast play in darkness. That is excellent advice, for in darkness the imagination awakens. Milton suffered from the great affliction of blindness, but would he ever have written such a magnificent masterpiece as "Paradise Lost" if blessed with sight while living in an age of depravity, licentiousness, and bankrupt artistry?

The example is an extreme one, but legitimate. The artistic appeal of broadcasting is still so much in its youth that we have not yet had time to train ourselves to a finer perception of an appreciation of its artistic possibilities, and until that training has been accomplished and more experience gained in apprehending this new form of art, we must, within legitimate bounds, adopt artificial means for stimulating our imagination when listening to broadcasting, and especially broadcast plays.

AND, therefore, by attempting to create an atmosphere in our own homes when we are listening to a broadcast play or a poetic recitation, or even a fine symphony, we shall merely be adopting an expedient which, although it may offend the purist, would at least enable us more enjoyably to train ourselves to an appreciation of what, after all, is theoretically the most intelligent and the most satisfying medium of artistic entertainment.

Children's Sessions

AT 2YA.
MONDAY, JUNE 25.—Auntie Gwen and Uncle Jeff embark to the "Land of Somewhere." Special radio stunt for the children. Greetings and stories by the roadside.
TUESDAY.—Hurrah! Yet another radio trip on the "Puff-Puff." Conductor Stewart has a story to tell, and Big Brother Jack will be the merry companion of all.
THURSDAY.—Members of the Junior Red Cross, from Miramar South School. This young band of helpers will make you feel sorry when Mr. Announcer appears to tuck us away for the night at 7 o'clock.
FRIDAY.—Uncle Ernest and his train of followers who wish to join him in his trips to many lands. Great Joy and fun for all. Greetings—stories—songs.
SATURDAY.—Something mysterious to-night, but it's not an aeroplane this time, nor a barrel organ, its— Well wait and see, little curiosity!

AT 3YA.
MONDAY, JUNE 25.—To-night Uncle Jack is bidding "Farewell" to all his little radio neices and nephews—so listen-in to be ready to sing "For He's a Jolly Good Fellow," and give three rousing cheers. Cousins Rona, Joan and Phyllis are singing, and the uncles and aunts are all gathering around to help in the "send off."
WEDNESDAY.—Uncle Peter and Mother Hubbard, with stories, songs and greetings—and the

little baby orchestra playing their tunes for you.
THURSDAY.—Chuckie and Aunt Pat in song and story. You will hear all about the "Toy" Symphony and more about "Alice in Wonderland." Cousin Doris will sing "The Poodle" and "The Fairy King's party," and cousin Bernie will recite.
FRIDAY.—Big Brother's night and "The Captain" at the helm. Songs and choruses by the scholars from Spreydon School.
SATURDAY.—Uncle Sam and Aunt May in the merriest of moods will make this bed-time hour fly past.
SUNDAY.—Children's Song Service, when the hymns will be sung by scholars from St. David's Presbyterian Sunday School.
AT 4YA.
TUESDAY, JUNE 26.—Cornet solos, songs, and the piano of course. Mr. E. Hunter, the bandmaster of Moray Place School Band will be on the air with his pupils. This ought to be splendid. Listen in and see. Radio Postie's bell will ring at somebody's front door, and Brother Bill will be telling tales as usual.
FRIDAY.—Here is something to make you open your eyes: The Caversham School Choir. "Pooh," says someone, "just another choir." Certainly not. This is the Dunedin School Choir that gives an annual concert to hundreds of people. They CAN sing. Brother Bill and Aunt Sheila, the Radio Postie, and everything to make a happy hour, will all be there.

A. W. A. Patents

A MELBOURNE JUDGMENT

COMPANY'S TWO CLAIMS ENDORSED

A CABLE message from Australia reports that the Supreme Court of Victoria, sitting in Melbourne, gave a verdict in favour of Amalgamated Wireless, Ltd., against the Myers Emporium Co. for infringement of patents rights held by the former company. Costs and damages were awarded Amalgamated Wireless, Ltd., and that company's rights over two patents were confirmed by the Court.

Until details of the patents referred to are available the effect of the Court's decision with respect to New Zealand cannot be determined. Some rather alarming and pessimistic Press statements have been made on the strength of the cable message, but it remains to be seen whether such an attitude is justified by the facts. In the meantime an understanding of the position may be helped by extracts from the Australian Royal Commission on wireless.

The Patent Position.

THE report of the Royal Commission on Wireless set up by the Commonwealth Government stated that the evidence disclosed that the operations of Amalgamated Wireless, Ltd., extended over every field of radio. "The company has become legally entitled to a large number of patents concerned with wireless, and it has been

claimed for it that no valve receiving set can be manufactured without utilising one or more of the company's patents, and likewise no broadcasting transmitting station can be lawfully operated without a license from the company.

Conflict with Dealers.

"Under these circumstances the company has been brought into conflict with the dealers throughout the Commonwealth who are engaged in the sale of radio goods, and with several of the broadcasting companies.

In the meantime, the Parliament of the Dominion of New Zealand has passed legislation which was apparently intended to invite Amalgamated Wireless (Australasia), Limited, to a contest on the question of the validity of the patents used in broadcasting stations. Evidence has been given that radio dealers in New Zealand are in some instances carrying on the sale of goods employing patents of which Amalgamated Wireless (Australasia), Limited, claims to be the owner without any attempt on the part of that company to protect its rights. If Amalgamated Wireless (Australasia), Limited, were in a position to commence litigation against residents of the Commonwealth in respect of infringements of its patents rights, it is difficult to understand why it was not equally prepared to defend its rights in New Zealand.

"As a result of the company's acts and omissions, the company is regarded with suspicion, and its business methods disapproved throughout Australia. Its own selling agent in Western Australia said: 'I know that Amalgamated Wireless (Australasia), Limited, is undoubtedly the worst hated firm in Australia.'

"Not only has the company made demands on radio dealers, which, in the opinion of the commission, are excessive, but they have sought to impose terms and conditions in their licenses which are oppressive and unfair.

"The managing director of the company has described the proposals of his company as being merely bases for discussion, and stated that it was open to the proposing licensee to suggest and negotiate for better terms.

High-Handed Methods.

"This attitude is better appreciated when it is realised that the license form is a stereotyped printed document and that the licensee is aware when asked to sign it that in effect if Amalgamated Wireless (Australasia), Limited, chooses, it can prevent him from carrying on his business.

"Moreover, the printed license form includes a list of about 150 patents, the existence and validity of which the licensee is asked to bind himself not to challenge. The evidence before the commission shows that at least twenty of these patents have expired, and a considerable number of them have no relation to wireless receiving sets.

"There is no doubt in the opinion of the commissioners that the conduct of the company in relation to its patent rights has been high handed and overbearing.

Must Establish Validity.

"It seems of first importance, therefore, that the Commonwealth should see that the validity of the patents claimed by Amalgamated Wireless (Australasia), Limited, in which company it is the largest shareholder, should be established at the earliest possible moment."

The Commonwealth Government, after considering the commission's report, agreed that it would pay Amalgamated Wireless (Australasia), Limited, the sum of 3s. on each receiving set providing that the company established the validity of its claims for such patents involved in the receiving sets, such validity to be established not only in the Commonwealth, but also in New Zealand. The Commonwealth Government also agreed to the payment of royalties on transmitting stations in which certain patents claimed by the company were involved, but the company was required to establish the validity of such patents in Australia and New Zealand.

N.Z. Government to the Rescue.

A FEW years ago prior to the formation of the Radio Broadcasting Company of New Zealand, when broadcasting in the Dominion was carried out by individual companies, these companies were threatened with legal proceedings by Amalgamated Wireless, Ltd., for alleged infringement of patents claimed as the property of Amalgamated Wireless, Ltd. As a result of this threatened litigation the proprietors of the New Zealand stations ceased transmission sooner than he engaged in costly legal proceedings. New Zealand listeners were then in the position of having no broadcasting in New Zealand to listen to. The New Zealand Government, however, came to their rescue by passing legislation appointing the broadcasting proprietors the Government's agents so that any legal proceedings contemplated by Amalgamated Wireless Ltd would necessarily have to be directed against the Dominion Government, as representatives of the people. Following this step by the Government, no action was taken by Amalgamated Wireless Ltd., and no further mention of legal proceedings in New Zealand has been heard from the company.

Royalties Paid in U.S.A.

IT is of interest to mention that royalties have already been paid in America by the manufacturers of the many thousands of American sets owned by listeners in New Zealand. Many of the "key" patents of these American sets are held by the Radio Corporation of America, which is associated with the Marconi Company of Great Britain,

with which, in turn, Amalgamated Wireless Limited is said to be associated.

Further Details Awaited.

In conclusion, it may be emphasised that the cable message from Australia states that the Supreme Court of Victoria confirmed the validity of only two patents claimed by Amalgamated Wireless Ltd. Whether more than two patent rights were involved in the action and the nature of the two patents referred to remains to be seen.

CHILDREN'S SESSIONS

AN ADVISORY COMMITTEE.

The IYA Children's Advisory Committee met at the Auckland studio of the Radio Broadcasting Company of New Zealand Limited, France Street, on Tuesday of June 12, 1928, at 4 p.m. Present: Miss Jean Begg, Miss C. J. Flatt, Captain Burgin, Mrs. A. R. Hall, Miss R. Palmer, the Rev. F. Thompson, Mr. V. Drew, Mr. R. G. Grigsby, Mr. T. J. Hook, the Rev. L. B. Fletcher, the Rev. R. G. Coats, Mr. T. T. Garland, Mr. L. S. Abbott, Mr. S. J. Hayden, Mr. Culford Bell.

In continuation of its public relation scheme, the Radio Broadcasting Company invited representatives of societies interested in child welfare to attend a conference to discuss the formation of a Children's Sessions Advisory Committee in connection with IYA.

The Rev. L. B. Fletcher was elected to the chair.

The meeting was also attended by the company's organiser of children's sessions, Mrs. A. R. Hall, who explained in detail the company's present activities in relation to children's sessions, and outlined the work that similar committees in southern centres were at present carrying out.

Members were enthusiastic that the committee would prove of great benefit in connection with children's waters, and it was felt that the suggested committee would afford the various "Uncles" and others interested opportunity for expression of ideas and discussion of any difficulties which might occur in the conducting of these sessions.

A number of questions concerning this part of the company's work were asked, and it was finally decided, on the motion of Mr. V. Drew, "That this conference of representatives of societies interested in child welfare form themselves into the IYA Children's Sessions Advisory Committee."

List of constitutions and rules was then dealt with and adopted by the committee.

The committee decided to hold its initial meeting, at which the chairman for the ensuing year will be elected, on Tuesday, June 26, 1928, at 4 p.m.

WIRELESS GLOSSARY

OWING TO A LAST-MINUTE PRESSURE ON SPACE, WE ARE REGRETFULLY COMPELLED TO HOLD OVER THIS WEEK'S INSTALLMENT OF THE WIRELESS GLOSSARY.

CAPPING CEREMONY

AN APPRECIATIVE BROADCAST.

A New Plymouth listener writes in reference to the broadcast of the Victoria College capping carnival last week:—

"The speeches came through most excellently indeed, especially Mr. Troup.

"You may be pleased to learn that a few who had friends and relatives at the capping were able to join in the college songs, although it was curious to note that the piano, which was, I suppose, close to the 'mike,' came to us a full beat ahead of the singers. We came to the conclusion, therefore, that we in New Plymouth were actually hearing the notes of the piano before those at the back of the Wellington Town Hall."

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Between Nations

BROADCASTS POSTPONED

PUZZLE OF WAVE-LENGTHS

ALL hope for an international exchange of radio programmes between the United States and Europe has been abandoned until the American autumn, Dr. A. N. Goldsmith, chief broadcast engineer of the National Broadcasting Company of U.S.A., said recently. The experiments that have been conducted for the last five months, however, will be continued throughout the summer.

"We do not contemplate international broadcasting now until autumn," said Dr. Goldsmith. "We can listen to any amount of foreign broadcasting, but the quality must be right before we put it on the air for the American public. We must conduct our observations throughout a year before we have a complete picture of the obstacles that confront international broadcasts. We may be able to reproduce the foreign programmes in the fall. However, we cannot say today that we will. Much will depend upon the results of the summer tests."

Many Channels Needed.

"WE have learned so far with no uncertainty that a single wave-length cannot be depended upon for trans-Atlantic broadcast service. At least four or five channels are needed. A wave satisfactory for talking with England at 4 p.m. to-day is not likely to be suited for the same work three months from now, or even seven hours later. At a given time we must use a different wave for day and night and from season to season. As yet we have not decided exactly what waves are best for the international work."

"FURTHERMORE, the wave to be utilised depends upon the distance to be covered. A wave that travels across the sea in the afternoon may go only 500 miles at night. Therefore, it can be understood that international broadcasting is not merely the selection of a wavelength and then talking across it. An elaborate traffic planning arrangement is necessary, and until we are fully aware of conditions that exist in the ether between here and Europe we cannot establish a reliable exchange of programmes across the sea."

Dr. Goldsmith said that the warm weather would not stop the tests on the American side of the ocean nor would the British Broadcasting Company suspend its experimental work, much of which has been on the 24-meter wave. The objects of the observations are to explore channels which are likely to lead to a regular and reliable exchange of programmes.

Echo Rooms

APPLAUSE PRODUCED TO ORDER

HOW A SOUND IS MULTIPLIED

IF the films made at Hollywood can show action that never takes place, the B.B.C. can broadcast sounds that are never made. Both can create illusions.

The illusions of broadcasting are produced by echoes. In a valley in Sinai, as in valleys in Switzerland, a single shot fired from a rifle sounds like a Lewis machine-gun in action as the report echoes from side to side of the rocky chasm. A bugle call sounds like a Boy Scout band.

A Simple Process.

THE B.B.C. in the same way can find or create enough echoes of the sound made by a few people clapping their hands to produce the illusion that Madame Clara Butt is being encored at a benefit performance. The tattoo on one kettledrum can be multiplied till it sounds like the massed drums of the Guards when the Dead March is played.

It is as simple as clever. A pair of wires leads from the sound-receiving microphone to a loud-speaker in an empty room, the walls of which are made of materials that readily echo any sound made within their compass. The room begins to reverberate with multiplied sounds, the original ones and the echoes. These are in their turn communicated to another microphone placed in the room.

Varying the Original Sound.

THE multiplied and magnified sounds this microphone now receives are carried away in their turn to a second echo room, where in the same way they are further multiplied and magnified.

This magnification can be extended almost without limit, depending on the number of echo rooms. Now that the method is under control, all sorts of variations of the original sound can be produced to create effects such as could never be heard in any other way.

It used to be said that a photograph could never lie, till the photographers showed that it could tell all sorts of stories. The same is becoming true of broadcasting, which will some day make us hear sounds never before heard on land or sea.

POPULARITY of the alternating current receiver is shown by a survey completed by the United States National Electric Manufacturers' Association. It was found that there are at least 1,000,000 such sets in daily use. The survey also noted a slight decrease in battery-operated receivers, dry cells and direct current tubes.

Education by Air

SPECIAL ADULT TRAINING

BRITISH INVESTIGATION

HOW broadcasting may be developed from a medium to provide entertainment into a service which will enlighten the nation and vastly increase the people's range of knowledge, was explained in the report of a special committee, issued recently, which has been examining the problems of wireless and adult education.

THE report calls for the creation of a New Central Council for Adult Education, and a series of Area Councils to interpret local opinion. The main body would be composed of representatives from important educational sources, and a proportion of nominated members; and a member from each Area Council would have a place on the Central Council. It is laid down that both in matter and presentation the broadcast programme requires the greatest freedom of experiment, and "controversial subjects should not be cut out." Strict care, however, must be taken that speakers have "a proper sense of their responsibility."

IN their conclusions, the Committee emphatically dissent from the prophecies of those who hold, like Mr H. G. Wells, that as soon as the novelty has worn off, interest in broadcasting will be spent. Unless its place is taken by some new invention, they maintain that broadcasting "is likely to become one of the most powerful forces in the modern world."

Special Wave-Length.

"THE most satisfactory method of providing a regular educational service would be to set aside the whole or the main part of one wave-length capable of covering the country for a special service of lectures, music, etc." Until then, a definite proportion of the time in general programmes should be allotted to general talks, and appropriate periods in the day reserved for more formal education. The fact that broadcasting is a public service is held to strengthen the case for using it in the interests of national education.

IT is acknowledged that a general raising of the standard of reception is of the highest importance, and a service of visiting and advisory engineers should, it is claimed, assist those responsible for sets which have an educational purpose. Advice should be made available to secure the efficient construction of apparatus. The Committee suggest that the "follow-up" policy inaugurated by the B.B.C. should be developed by increased publicity, by a weekly illustrated educational journal, and by a closely organised advisory system.

The cost of the developments outlined, can and ought, it is declared, to be met out of that part of the revenue for licences which is at present retained by the Postmaster-General, over and above the costs of collection and administration.

THE PIRATES' PARADISE

BROADCASTING IN INDIA.

NOT long ago the noble Hottentot could affirm that his country sheltered more broadcast pirates than any other. Not so to-day. The palm goes to India.

The "grand" total of licenses issued in India from January to October last was 1692!

Income £500; Expenditure ?

Quite naturally the Indian Broadcasting Company is beginning to feel the draught. The company gets eight rupees, or about 10s. 8d., per license per annum, so its income during the ten months under review came to little more than £500. Thus it is unable to afford Sir Harry Lauder.

No Rush for Licenses.

In the December "Indian Radio Times" some astounding figures are published showing how receiving licenses have been issued in various districts. In the whole of the Punjab during the period of review licenses were taken out by seven persons, i.e., 0.7 person per month; precisely the same number found their way to the license counter in the province of Assam. The United Provinces showed a more go-ahead spirit, producing one licensed soul a month.

A Significant Point.

Among the cities Shillong cut a poor figure with two holders of licenses (not much oscillation here!), and even Delhi could only muster seven. Bombay led the way with 1108 licensed listeners, Calcutta following with 550.

In the opinion of the Indian Broadcasting Company, "piracy" exists on a considerable scale, to judge only from the sale of the "Indian Radio Times," which far exceeds the total number of licenses! "Why," asks the company, "should anyone buy the 'Radio Times' unless he has a receiving set?"

America's Needs

HIGH POWER AND NETWORKS

BETTER ECONOMY IN 100,000 WATTS

HIGH-POWER broadcasting is an absolute necessity for efficient public service to the radio public, said Dr. A. N. Goldsmith, president of the United States Institute of Radio Engineers, recently, in commenting on his remarks on the radio situation quoted in "The New York Times." He said he feared "any erroneous impression that I am an advocate of low-power broadcasting, while I firmly believe in high power."

"The plan for the reallocation of waves as submitted to the Federal Radio Commission by the Institute of Radio Engineers does not advocate low power but is in favour of high-power broadcasters," Dr. Goldsmith continued. "The plan is the result of an unbiased and technically sound analysis of current broadcasting needs and possibilities."

"Network broadcasting is also necessary, because no single station can cover the country or any considerable fraction of it. All the great nations are planning their radio service along the same forward-looking lines—namely, the establishment of national programme service to all the people through extensive networks of as many high-power transmitters as is feasible, each on a cleared channel."

"THE public interest demands that radio stations occupying exclusive waves be required to have high power, instead of medium power, which 'ruins a whole channel with interference and yet cannot be heard for many miles.' Government Radio Commissioner O. H. Caldwell, of New York, said recently, on an application to the Radio Board by one of the New England stations to have its power raised to 2500 watts."

Economy in Size.

"In this respect," the Commissioner continued, "a 50,000-watt station is far more efficient in utilising this public resource than is a 5000-watt. A 100,000-watt station would give even better economy and public service, as experiments in New York State last summer clearly showed."

MR CALDWELL said that the Government authorities in the public interest "should actually require these high powers, were it not for the tremendous expense and investment involved, which prevents many stations from using such power."

The Commissioner said that when station owners are willing to make the investment for the service of the public high power should not be refused, "nor millions of listeners denied the service and satisfaction which it brings."

"To limit or cut the wattage of a broadcaster on a clear channel," said Mr. Caldwell, "is clearly as outrageous a waste of a precious public resource as it would be to permit only water-wheels capable of utilising ten feet or twenty feet out of the total drop of a 200ft. waterfall, while the remaining 180 or 190 feet of fall thundered away, wasted and unusable by anyone else."

Cleared Channels Necessary.

HE emphasised the need of a number of clear or exclusive channels to bring radio programmes to the 50,000,000 of population who live more than 100 miles from any broadcasting station, on the farms, the plains, the mountains, and in the villages.

"Without cleared channels," he said, "these remote listeners will be deprived of hearing anything but a spectrum of squeals and howls, as they have mostly had for the past two years."

VIENNA ZOO BROADCAST

"Ravag" recently broadcast the noises of animals in the Tiergarten at Schonbrunn, Vienna. The difficulties which stood in the way of such a broadcast were not only of a technical character (the cages of the different separate animals are often far apart), but there was the uncertainty of getting the animals to co-operate at the right moment.

A pavilion in a central position between the cages was fitted up into a temporary studio with the necessary amplifying and listening equipment, and from here the noises of the animals were broadcast. There were nine microphone lines, all complete, running to the pavilion for connecting up the cages of tigers, polar bears, hippopotami, elephants, giraffes, the bird house, duck ponds and the cages for birds of prey. Inside the cages, the microphone line ran via the amplifier, to the Johannesburg, where the noises of the animals were again amplified and passed on to the transmitter.

Immediately before the broadcast, a message was sent out from the pavilion that all was ready, and at a given signal the keeper persuaded the individual animal to "talk," the corresponding microphone being connected up to the amplifier in the pavilion.

Dialing Stations

RADIOPHONE INVENTION

FOR SHIPS, 'PLANE OR TRAIN

A SYSTEM by which large radio telephone stations can establish contact with each other by "dialing" a number, which, if linked with wire telephone exchanges of large cities, will enable users to "dial" a ship at sea, an aeroplane in flight, or a person on a radio-equipped train travelling across the country, was revealed recently by Lewis M. Clement, chief engineer of F. A. D. Andrea, Inc., radio set makers of Long Island City, U.S.A. Mr. Clement is a joint patentee of the new radio system with S. B. Williams, automatic telephone expert of the Bell Telephone Laboratories, New York.

How the System Will Work.

"THE radio dialing device can never be expected to supplant present-day telephone wire systems, but some day subscribers in their homes may be able to dial a number and be automatically connected with telephone exchanges on ships or isolated places, to which wires cannot be run," said Mr. Clement. "The two systems, wire and radio, could be easily used together, and operated by the user just as the ordinary dial 'phone is used to-day."

The Fada engineers described the operation of the device as follows:—

"Suppose we have three channels or toll links to cities A, B, and C, which operate on separate frequencies. From a series of contacts on a dial the user would be able to select one of the waves to the city wanted by dialing the proper first letter or number. This would automatically start up a transmitter in the local system, and affect the apparatus at the receiving end. If the line was being used, the busy signal only would result, but if not, the next letter or figure dialed at the calling telephone would select the exchange in the distant city. The third letter would make further selection, and so on, until the telephone subscriber's number is obtained and the bell rings, announcing the call."

Possibilities of Use.

MR. CLEMENT said the number of different exchanges or telephones which could be called would be very great if a sufficient number of letters in the dialing number were used. He predicts that his device, which is similar to apparatus used at present in automatic wire exchanges, will have its earliest application in ship and aircraft communication work, where wire lines are impossible. Trouble on the line or radio circuit is to be indicated in the same fashion as now revealed on the wire circuits of the country. There is no immediate field of application for the system outside of its possible use for aircraft communication work, but the future may find it applied even to inter-city service, he said.

The first man to find a reliable method of forecasting reception conditions, particularly with regard to the shorter waves, will be doing what is probably the greatest service since De Forest added the grid to the valve.

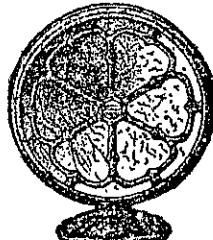
ATWATER KENT RADIO

Tone, Reliability and Simplicity are the three biggest words in radio.

When you combine all three in one make, you've got something exceptionally good.

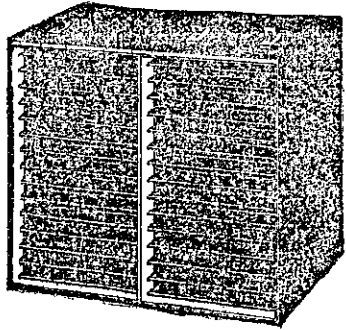
All three are combined in Atwater Kent Receivers and Radio Speakers.

That's why we sell so many and are so sure you, too, will be pleased. We gladly demonstrate.



Model B Radio Speaker

C. & A. ODIN & CO., LTD., New Zealand Distributors, WELLINGTON.



Here is the Most Popular Radio Battery in the World

—The Columbia Layerbilt

NEVER before has it been possible to utilize every cubic inch of battery to produce power. The new Columbia Layerbilt "B" Battery has accomplished this.

Made of flat layers of current-producing material instead of the usual round cells, not a cubic inch of space is wasted. You get more battery for your money, far more energy, greater clarity, volume and distance from your receiving set. There is not another battery like the Columbia Layerbilt—Insist upon it.

Columbia
RADIO BATTERIES
GREATEST CLARITY—
VOLUME—DISTANCE

Factory Representatives
ELLIS & COMPANY, LTD.
Chancery Chambers, O'Connell St.
Auckland

THE NEW ZEALAND Radio Record

PUBLISHED WEEKLY.

Printed Tuesdays to permit of effective distribution before the week-end, with full copyrighted programmes for the succeeding week. Nominal date of publication Friday.

SUBSCRIPTION RATES.

Rate of Subscription: Single copies, 3d.; Annual Subscription (if booked), 12/6, post free; normal rate, cash in advance, 10/6, post free.

ADVERTISING RATES.

Schedule of Advertising Rates available from all advertising agents in New Zealand, or write: "Advertising Manager," Box 1032, Wellington.

Advertisements requiring setting should be in hand not later than Friday of each week to ensure publication in succeeding issue. Stereos and blocks, providing space has been arranged beforehand, can be accepted up to midnight Monday. Contract advertisements not changed will be repeated.

No responsibility is accepted for blocks, stereos, etc., remaining unclaimed after last use, beyond a period of three months.

A. J. HEIGHWAY,
Managing Editor,
"The N.Z. Radio Record,"

P.O. Box 1032.

Dominion Buildings, Mercer Street, Wellington.

WELLINGTON, FRIDAY, JUNE 22, 1928.

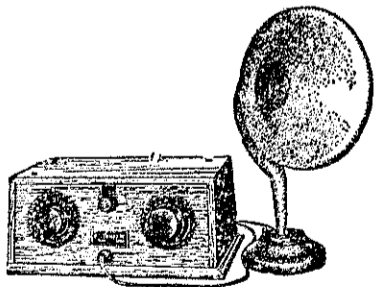
EDITORIAL NOTES.

THE Suggestion has been made by some short-wave enthusiasts that it would be good publicity for New Zealand for the Broadcasting Company to establish a short-wave station for the benefit of overseas listeners. It is argued that such a move would have the effect of winning for the country a form of publicity that would be highly desirable and beneficial. That some value would attach to such a station and such a line of effort may be conceded, even though it be doubted that the benefit to be gained is as great as is represented by the enthusiasts concerned. But when it comes to the question as to whether the moneys subscribed in the Dominion for the maintenance of programmes for New Zealand listeners on the broadcast band should be diverted for such a purpose, there can, of course, be only one answer. It is no part of the function of the Company at this stage even to contemplate such a venture under its present contract. Such benefit as is obtainable from New Zealand publicity in the nearby Pacific is secured on the broadcast band by the high power of 2YA, which, there is abundant evidence to show, is effectively heard throughout New South Wales, Victoria and parts of Queensland, as well as in the Pacific Islands.

Short-wave developments are certainly full of possibilities, and New Zealand is anxious to receive all the benefit possible from the growing efficiency of this form of world-communication. It may seem a parsimonious policy to suggest receiving all and giving nothing, but, apart from our goodwill in the matter, what have we to give the world or to what message of our doings would the world deign to listen?

The efficiency of short-wave transmission and reception is steadily improving, and it is to be hoped that there will be occasions in the near future when the successful re-broadcast of overseas short-wave transmissions may be repeated such as that attendant on the conclusion of the Trans-Pacific flight. An account which we give in this issue of the successful reception of the proceedings of the Republican Convention which nominated Mr. Hoover for the presidency, suggests that there will be occasional opportunities when ordinary listeners in this country may be given the thrill of hearing re-broadcasts of proceedings overseas. If the first of such future successful re-broadcasts should chance to be the description of the Heeney-Tunney fight all our sporting listeners will be delighted.

**High or Low
by the flick
of a switch!**



**Gets England and Australia
with 3-Valve "Courier"**

"On the low wave we get regularly 5SW Chelmsford, England," writes Mr. F. A. Clarke, of Wairoa, Waikato, of his three-valve "Courier" set.

"On the high wave, Sydney, Melbourne and Brisbane on the loud speaker . . . I have heard four and five-valve sets and am quite contented with my Courier three."

No Troubl some: Plug in Coils!

If you want to change over from broadcast wave length to low wave reception you simply press a switch—that's the marvel of "The Courier," the only set of its kind in New Zealand—possibly in the world. (Prov. Patent No. 59508 N.Z.)

The "Courier" 3-Valve employs no plug-in coils. It is the simplest of sets to manipulate and is in every way a thoroughly reliable and efficient set. The "Courier" 3-Valve, like all "Courier" sets, is fully guaranteed. Price £19 5s. complete. If your local dealer cannot supply you, write to us and we will see that you are immediately supplied.

The
"Courier"
"Trains tidings from afar"

J. WISEMAN & SONS, LTD.,

Albert Street, Auckland.

SPORTING

BOXING BROADCASTS

ANOTHER FIGHT FROM 4YA

PROBABLY on Saturday, June 30, there will be another boxing match broadcast from 4YA. At the time of going to press, the match has not been definitely arranged, but it is very probably that Archie Hughes, whom Jack Kilmartin has brought from Australia, will meet Johnnie Leckie on that date. Enthusiasts should watch the papers for an announcement as to the date of the contest, which 4YA will broadcast.

Barbour and Radford are also coming over from Australia under contract to the Otago Boxing Association, so that should be six or more contests broadcast from 4YA on alternate Saturdays.

CANTERBURY CHAMPIONSHIPS

The amateur championships of Canterbury will be decided on Tuesday, July 3, and 3YA will be on the air to describe the events.

HEAVY PENALTY

IMPOSED FOR NO LICENSE

A FINE of £3 and costs was imposed on a wireless listener in Wellington last week by Mr. E. Page, S.M., for being in possession of a wireless set without having renewed his license. The listener, Garlie Bitossi, sought the sympathy of the Bench by explaining that he was not an expert operator, and could not "even get Christchurch." This plea, however, failed to move the Magistrate, whose dictum, "If you have your set you must pay your license fee," heralded the imposition of a £3 fine, plus the usual costs.

Two other offenders were also before the Court, one being fined 10s., and the other £1.

It is understood that there has been quite a little rush of belated listeners in Wellington lately, and this is attributed to the attractiveness of the 2YA orchestra, plus the unseen pressure of the "trouble-finding" ear, and its sleuth-like tendencies.

RADIO LICENSES

OLD TOTAL REACHED IN CHRISTCHURCH

The total of licenses for the Christchurch district has now reached practically last year's total.

On April 30, 1927, there were 300 in arrears, but on June 15 last, there were only 300 in arrears. This arrears had, also, been practically equalled by the new licenses which had been issued.

TARANAKI RECEPTION

In connection with the distortion and fading of 2YA, Wellington, as received in New Plymouth, mentioned in last week's "Radio Record," Mr. G. W. Morgan, official representative of the North Taranaki Radio Society, desires to qualify his first report. He does not wish to describe the reception of 2YA two miles out from New Plymouth, as "good," but it was better than in the town itself. At Waitara, 13 miles out of New Plymouth, reception of 2YA was good, but not as good as at the Mountain House, on Mount Egmont.

LISTEN!

AND SOMETHING ABOUT LISTENERS.

"MY abode is a boarding-house, and my listeners are many and varied. They vary in number from two to ten; some are permanent, and others casual; some are prejudiced against radio; some ask me why all the fizzling and crackling is not to be heard in my set, proving they have heard only poor demonstrations, or have been unlucky with the static bug. Some are musical, some are not; some are dumbfounded, and some are confounded—!!! I will talk about sausages while 2YA orchestra plays a Beethoven sonata—but probably you know more about your listeners than I do.

"I am one of the thousands of listeners—well satisfied—who never bother to write either to give praise or throw dirt (I'm generally too busy), and by satisfied, I mean satisfied with the progress your company is making in improving the programmes, for I find myself listening more and more to New Zealand stations, instead of longing for 9.30 p.m., to get overseas."—Extract from a letter.

**Exide
BATTERIES**

MEAN DEPENDABILITY.
Installed at 2YA Wellington.

All sizes. From 9/- each.

EXIDE SERVICE STATION
79 Kent Terrace, WELLINGTON.

Heard Hoover's Nomination

Republican Convention on Short Wave

WELLINGTON LISTENERS ENJOY PERFECT RECEPTION

AFTER the thrill given the shortwave listeners by the trans-Pacific flight and their ability to enjoy a front seat, as it were, in that venture through their contact with the morse messages of the Southern Cross, it is interesting to record an even greater feat on the part of a Wellington listener. This is the performance of Mr. Olaf E. Stout, of hearing and enjoying the whole of the proceedings of the Republican Convention in Kansas City when Herbert Hoover was chosen as the party's nominee for President. Proceedings were broadcast by station 2XAF on relay through a land line from Kansas City. Reception was secured on a shortwave adapter to a popular four-valve circuit. An indoor aerial only was used and reception was perfect throughout, with no oscillation.

IT may be taken as certain that the Tunney-Heeney fight next month will be broadcast and beyond doubt numerous efforts at reception will be made.

MR. Stout describes his experience on Friday last as follows:—"As one whose first acquaintance with wireless dates back to the days of the 'coherer' I have followed with interest the progress of 'broadcasting' in New Zealand and other countries, especially in connection with the great strides that have lately been made by the use of waves between 20 and 40 metres. I have read 'The Record' since the first number and appreciate it fully with the exception of the shortwave corner. This, in my opinion, is—to use a Yankee expression—"the bunk." It appears to be merely a personal record of the trials and tribulations and heroic devotion to dial twiddling of one or two individuals who may or may not be the champion shortwave listeners in New Zealand. The attitude of these individuals reminds me of that of certain religious fakirs who mutilate their bodies in the name of religion and then attempt to elicit the sympathy of the community by exposing their abominations. It leaves me quite cold to read in your paper some such paragraph as the following:—"Wednesday, 5.30 a.m. Tuned in PCJJ very faint—somebody talking in Dutch—later what appeared to be a gramophone record—5SW. Testing with 2XAF. Distorted and subject to heavy fading.—Signed off 7.30 a.m." However—

"MR. Editor, have you ever attended a convention of the great Republican party of the United States of America! Kansas City is a long way from Wellington but yesterday afternoon I had a seat in the microphone on the platform of the great convention hall there on the occasion of the choosing of the republican nominee for President of the Great Republic. It is true I was dumb and had only one of our usual senses—the sense of hearing—granted to me; but oh, boy, what a day! I was confined to the house by an attack of flu and after dragging the electric heater close to my chair I thought that it would be a good opportunity to couple up my short-wave adapter and try for 2XAF. I tuned them in with good volume at 2.30 p.m. and immediately found myself transported by the magic carpet of radio to the platform of the convention hall in Kansas City. I heard, with great clarity, the speeches made seconding the nomination of the various candidates and could hear the cheering and the 'rah, rah, rahs' of the rooters. A reference to the great work done by Herbert Hoover in feeding the starving millions of Europe brought forth torrents of applause. The speakers were putting plenty of ginger into their work, and one or two almost shouted themselves hoarse. Two of the best speeches were made by delegates from West Virginia and Oklahoma respectively.

"AFTER the speeches the voting commenced, and the States voted in alphabetical order, the last delegation to vote, however, being from Porto Rico. The chairman would call out the name of the state, e.g., Alabama, 11 votes, and then announce the number of votes recorded for each candidate. It was soon seen that Hoover was going to be elected, as quite a number of states plumped for him. There was little delay while the official figures were being checked, and then the announcer informed us that Hoover had received 870 votes and had been elected on the first ballot. This, he said, was unusual, as only one other Republican nominee—McKinley—has been elected on the first ballot. After the result of this ballot a further motion was put to the convention and Hoover was declared elected unanimously.

"THE convention then adjourned until noon of the next day and we were then given a relay from Chicago on the occasion of the annual meeting of the Radio Manufacturers' Association. The speeches and music there were of sufficient volume to be put on the 'speaker,' the singing of 'Down in the Forest,' and the sextette from 'Lucia Di Lammermoor' being especially good. WYG closed down at 6.50 p.m., our time, and 2XAF a few seconds later after wishing everyone good morning.

"ONE feature that I especially noticed was the absence of any overpowering Yankee twang in the voices of the various speakers. Only two of them, one a woman delegate, and the other the announcer from 2XAF, betrayed their country of origin plainly.

"Reception was so good and clear that I fully expected the Broadcasting Company to seize a golden opportunity and put 2XAF on the air after the close of the afternoon session.

"Listeners should now be on the lookout for the Convention of the Democratic party."

Hellesen Radio Batteries

THE BEST IN THE WORLD

DOES THIS NAME MEAN ANYTHING TO YOU?

HELLESEN STANDS FOR BETTER RESULTS, LONGER LIFE, AND GREATER EFFICIENCY IN YOUR SET.

Large Stocks Carried by

SOLE N.Z. AGENTS.

John Chambers & Son, Ltd.

AUCKLAND, WELLINGTON, CHRISTCHURCH, DUNEDIN, AND
INVERCARGILL.

B.B.C.'s Engineer

CAPTAIN ECKERSLEY UNHAPPY

DISSATISFIED WITH B.B.C.

A WRITER in a London exchange states:—

"I understand that Captain Eckersley, the popular Chief Engineer of the British Broadcasting Corporation, is cumulatively unhappy about the preposterous delay of the Post Office in sanctioning the whole new regional scheme of distribution. Unless a more accommodating attitude is shown in official circles I should not be surprised to see Captain Eckersley leave the B.B.C. and join some concern in the trade, or start a commercial show on his own."

"He is known to have received a number of most tempting offers in the past three years; but up to the present his hopes of the regional scheme were strong enough to resist the lure of rapid wealth. But even Captain Eckersley's patience is not unlimited, and if he receives many more buffets from officialdom, I would not be at all surprised to discover him in the trade, where he would be royally welcomed. It would be an intriguing situation. The first set marketed with Captain Eckersley's name and authority behind it might well reap a considerable fortune for all concerned."

THE partly Government-controlled British Broadcasting Corporation has been the butt of a considerable amount of criticism in the Home journals. Instead of displaying virility and enterprise, the corporation has, it is urged, put the brake on the remarkable progress of broadcasting which was so characteristic of the company who formerly controlled broadcasting in Great Britain. To Captain Eckersley is due great praise not only for the summit reached by the technical perfection of broadcasting in Great Britain, but the general organisation of the service. American radio men who visit Great Britain from time to time freely admit that the transmission by the British stations is unequalled in the United States. Seeing that Captain Eckersley has been in charge of the technical side of broadcasting from its inception in Great Britain, and that he is still improving the service, it would be a severe loss to the listening public if he severed his connection with the British Broadcasting Corporation. This is another instance of the disadvantage of Government interference with private enterprise, and the British Press has published many letters condemning the taking over of the original broadcasting company by the Government.

Television

CHALLENGE TO BAIRD

£1000 OFFERED FOR SUCCESSFUL PROOF

THE English radio magazine, "Popular Wireless," is not convinced that the methods of television adopted by Baird are likely to be completely successful, and has issued a challenge, offering to pay £1000 for a successful demonstration over a distance of 25 yards. It is pointed out that television is vastly different from photo transmission, which is now in successful operation. Sir Oliver Lodge backs up the paper in a warning to amateurs not to expect too much.

"POPULAR WIRELESS" says: "Wireless television during the last few months has received an extraordinary amount of publicity, and there can be no question that the majority of people are under the impression that the television problem has at last been solved, and that before very long a wireless television service will be inaugurated."

"Component parts for television models have, in fact, already been advertised, and Mr Baird himself, at a recent luncheon given in his honour, has stated that amateurs with wireless television receivers may listen in after midnight to his station working at Long Acre, London, on a wavelength of 45 metres, and will hear a peculiar humming noise, which, with the necessary apparatus, they may transform into pictorial images."

"The question of what constitutes pictorial images is one which has not been clearly explained, and for that reason alone it is clear, from the correspondence we have received, and from the remarks we have heard expressed by members of the general public, that there is a prevalent impression that with a wireless television receiving apparatus to-day it is possible to receive in one's home moving pictures by wireless. And although

that is tempered by the belief that these pictures are crude, it is equally obvious that the public do not realise how crude these pictures are.

There is a Difference.

FURTHERMORE, instructions have been published elsewhere regarding the construction of home television receiving sets, and, as we pointed out in a recent issue of this journal, advice has been offered to the effect that when working these machines a high-tension supply of six or seven hundred volts should be used.

Mr. Kendall, the chief of our Research and Construction Department, has rightly pointed out that the use of such a voltage by people unaccustomed to electrical work may prove serious in the extreme, for even six 100-volt E.T. batteries wired up in series may give a fatal shock.

In view of all this, and in particular in view of the optimism expressed in connection with the Baird Television System, we are making a friendly challenge to Mr. Baird to televise by radio, before a select and impartial investigatory committee, a series of objects, and if Mr. Baird can do this over a distance of twenty-five yards (using any power he likes providing the power at the receiving and at the transmitting ends is not taken from the same source), we will willingly accept the verdict of the committee, and, if favourable to Mr. Baird, pay him £1000.

In our opinion, and in the opinion of Sir Oliver Lodge, our scientific adviser-in-chief, and in the opinion of one of our scientific consultants, Dr. J. H. T. Roberts—and furthermore in the opinion of many other scientific men whom we have privately consulted—a strong public warning is necessary with regard to television. And we feel that some means should be adopted in order to demonstrate that, although wireless television is scientifically not an impossibility, it has not yet by any means reached a stage whereby it can be termed or regarded as a public utility service.

Nor, in the opinion of our scientific advisers, is it scientifically correct to assume that certain known systems are capable of development to an extent or likely to mature in such a way as

to provide a public television service in the near future.

There are other systems of wireless television, in particular a system which makes use of cathode rays, which suggest possibilities, but Mr. Baird, for example, still clings to a system which was demonstrated in this country some time ago; and an official of the Baird Wireless Television Development Co. has made statements, which have appeared in the daily Press, to the effect that further improvement as regards detail are in themselves details.

More Than Details Ahead.

ON scientific grounds we contest such statements and, as a result, make public this friendly challenge to Mr. Baird. We sincerely hope that Mr. Baird will accept this challenge, and nothing would give us greater pleasure than to be proved wrong in our belief that his system has definite limitations.

It would be a matter of great gratification to us to find that Mr. Baird, on accepting our challenge, could successfully carry out the details of the contest we suggest elsewhere in this issue, and thus win the £1000. We ourselves should be the first to congratulate him.

Wireless television will undoubtedly become a practical proposition in the future. Whether it will be in the near future or whether many, many years will have to pass before the enormous difficulties which now confront the problem have been obviated, remains to be seen. In the words of our scientific adviser: "It is foolish these days to say that anything is impossible." And we at least claim that we have never taken up such an attitude with regard to wireless television as a whole.

But in the interests of our readers and in the interests of those who are inclined to feel unduly optimistic because of certain recent experiments in television we have issued this challenge to Mr. Baird in the hope that it will help clearly to indicate what we consider to be, and what our scientific consultants consider to be, the exact position of television to-day; and that it will have the effect of dispelling many erroneous impressions which have been so current of late.

Scientist's Warning.

SIR OLIVER LODGE in concluding an article writes:—"I think it advisable and perhaps necessary to issue a caution to the public, and incidentally to the Press, reiterating my assertion that the subject of television is quite in its infancy, that it is not as yet possible to purchase any apparatus likely to be successful, and that no amateur is likely to be able to adapt apparatus working in connection with a wireless receiver for the purpose of seeing moving objects at a distance."

"If television is in its infancy, home reception of its results by wireless aid is still more in the future, and in all probability in the somewhat distant future."

"I would not say anything to dissuade amateurs from experimenting, but it seems only fair to issue this caution, in order to minimise over-

enthusiastic rumours and prevent disappointment. If this attitude is considered over-conservative, then I must be content to plead guilty to that accusation, so far as my present knowledge extends."

"No one can say that anything is finally impossible; but it is fairly safe to say that a given development has not yet been achieved. As far as I know about the attitude of other scientific men I think I am in agreement with them. I shall rejoice if the labours of Mr. Baird and other workers, in this country and in America, are able to falsify this caution within what remains of my own lifetime."

THE PACIFIC FLIGHT

VALUE OF RADIO

From a Press report of the reception of the trans-Pacific aviators in Sydney we take the following tribute to the value of radio in aerial navigation and as a means of communication. Describing the arrival, the account says:

"It was a wonderful scene, and thousands who did not witness it heard it described in detail over the wireless. And when one comes to think of it, what a wonderful part wireless has played right throughout the flight. Never for more than a quarter of an hour was the 'plane out of touch with land. This is regarded as the most spectacular success for wireless in an era when the world is marvelling at radio achievements. Mr. Warner was able to keep his apparatus going the whole time, even as the aeroplane battled its way through pitch-dark nights and was buffeted hither and thither by terrific wind and rainstorms. Never in the history of aviation or of radio has there been such a romantic achievement. It mattered not whether the aeroplane, in dodging the storms and almost impenetrable clouds, was forced to within a few hundred feet of the water, or compelled to rise to great altitudes, turning sharply to right or to left, Darnley let the world know what was happening. Trained radio receivers knew instinctively, by the tone of the messages and the manner of their transmissions, almost every movement of the 'plane. And even listeners comfortably seated in their own homes heard the Morse signals as they were relayed by a Sydney station. They heard, too, the constant roar of the engine as the 'plane was coming from Suva to Brisbane. Thousands of people sat up all night so as not to miss the progress reports."

As a result of the flight, too, the world has probably entered upon a new era in aerial navigation. Through the agency of Lyon, Kingsford Smith was aware of his true position at all stages of the long flight of 6326 nautical miles, except for two brief intervals. This has probably revolutionised flying by increasing the margin of safety, as wireless has increased the safety of sea travel in the last decade."

IYA'S ALL-NIGHT SESSION

THE manner in which IYA handled the flight of the Southern Cross from Suva to Brisbane has received well merited praise from all quarters. This station was on the air all night.

The following is an extract from one of the many letters forwarded to the station:—

"Please accept from a listener-in great appreciation and many thanks for the very thorough arrangements by which the 'Trisco to Brisbane flight could be radioed throughout the vigil of the night and up to the moment of the airmen's triumph. Every listener-in will be feeling the same, and proud of our IYA station for the completeness of its undertakings for the benefit of all who are on the wireless."

A RECENT visitor to Wellington was Mr. Eric Dare, sales promotion director for Philips Lamps, Ltd., Australasia. Mr. Dare states that business in Australia is good. The company's Sydney branch employs a staff of ninety.



BRITAIN'S BEST BATTERY

THE ADICO

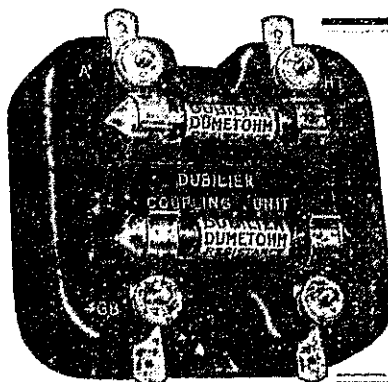
*Will Outlast
any other Battery
of similar size*

Sub - Agents Re-
quired throughout
New Zealand.

Sole N.Z. Agents:

LEVIN & CO. LTD.

(Machinery Dept.),
WELLINGTON.



The DUBILIER

RESISTANCE
CAPACITY
COUPLING
UNIT

7/-

This method of Amplification gives
purest music—Ask for Price List.

A. E. STRANGE

404 Worcester St., Christchurch

'Repeat' Coupon

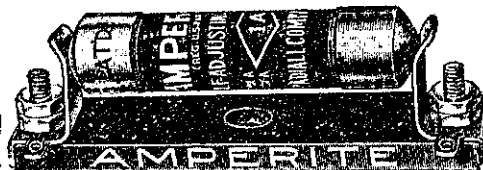
Address: 2YA/0, Radio Record, P.O. Box 1032, Wellington.

I desire to nominate the following items for "repeats" next week:—

Monday (Classic)
Tuesday (Operatic)
Friday (Popular)
Saturday (Vaudeville)

Signed

Votes may be recorded for one or for all of the nights mentioned. This selection is made at mid-day for the evening affected. Voting papers receivable till noon. Distant listeners may send forward their Monday and Tuesday's votes if desired, in order to be in time, and follow later with Friday's and Saturday's wishes. The coupon is inserted for convenience, and may be supplemented in writing.



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TO-DAY AND TO-MORROW

The Evening Mode.

OWING to the very exacting demands of the fashionable life to-day, frocks must be representative of the ever-changing manner of the mode. These demands have resulted in a generous array of new lines, subtly modified and given a fresh importance by the use of especially-designed materials, new colours, beads, and flowers. Precious stones and metals are seen everywhere woven into the evening mode, adding the glamour of the opera, the dinner, the ball, and the functions that turn winter nights into a blaze of glory. Gold and silver threads gleam through fabrics in floral and geometrical patterns, and sheer crepes brocaded with small delicate metal designs are used for formal gowns as well as the richer brocades. Jewelled buckles of pearls and brilliants are used on the narrow tailored belt or placed at the hip to mark the end of the surplice closing line. Such a buckle to accent such a line is as important a part of the whole, as the flower arrangement of a beautifully appointed dinner table, making a cluster of brilliant light and colour on the expanse between the accent of one's necklace or earrings, or the jewelled buckles or straps of one's shoes.

Faces that Match the Mode.

WINTER is the very season when good looks are most important. Society is always smartest and gayest in winter, and more formal in its demands. The most distinguished parties always come in winter, when you simply must be lovely—now is certainly the time when you should pamper your skin as it has never been before—be lavish with your face-creams, cold creams, cleansing creams, and vanishing creams. If your puritan background has made you consistent in the use of soap and water, cut loose this once and see what a cleansing cream does in its place. Use soap and water, too, if you wish, but use a cleansing cream first. If you haven't a favourite one, try the new ones to convince yourselves. And don't forget your hands are an important part of the picture. Use lots of cream during the winter: these long-suffering appendages have to have frequent baptism in soap and water, but do it gently, and use the best soap; also be sure to dry your hands thoroughly so that no moisture remains to chap the skin. Your hair needs careful attention in this season; in summer it lives a splendidly free natural life, with the wind blowing through it and the sun vitalising the scalp and hair-roots. Many a head never sees the sun in winter, what a change—close air-tight felt hats keep away the very air from its roots. Whenever a warm, sunny day makes it possible, give your hair a sun bath, and brush thoroughly so as to reach the scalp and dust off the hair as well. There are so many aids to beauty—lovely simple things that make your good looks stronger, surer, and safer for all the next winters to come.—Mrs. M. Thomas, 2YA.

The Pearls of a Queen.

A RETURN to more feminine fashions is due in some measure to the good taste of Royalty, which has set the example of wearing the right clothes for different occasions: sport clothes in the morning, simple silk frocks and ensembles in the afternoon, and longer, flowing skirts made of beautiful materials for the evening. With the same good taste, Royalty has never given way to masses of imitation jewellery. The pearls of a Queen, the emeralds of a Princess may be famous, and these ladies would rather wear no jewels at all than wear false stones, unless in a case of diplomatic security.

Royal Simplicity.

NO one could be more simply dressed in the morning than the British Royal Family, the Queen of Spain and her daughters, the Queen of Rumania and hers. In pleated skirts, jumpers, cardigan coats, and long coats, with small felt or straw hats, fur at the neck, and a bunch of flowers to match the ensemble, they may be seen doing their shopping in the Rue de la Paix and its neighbourhood. They are never extravagant, they know what they want, and they realise that dressing well and suitably is part of their job. This attitude alone has its influence on dress.

The Professional Awakener.

WIRELESS is fast completing the extinction of a trade whose decline started years ago on the appearance of the American alarm clock. Lancashire workers, whose watches and clocks could not be relied upon, engaged a man with a long pole who clattered along the streets in wooden clogs knocking at workers' windows to get them up in time for work. This became a regular trade. Then the American alarm clock saved the expense of the professional awakener. Many of the old-fashioned folk, however, preferred to rely on the human clock, but now that the time is "broadcast" everybody's clock can be adjusted several times a day, and the "man with the pole" is becoming extinct.

A COUNTRYMAN'S SONG.

*This is the weather the cuckoo likes,
And so do I;
When showers betumble the chestnut
spikes,
And nestlings fly:
And the little brown nightingale bills his
nest,
And they sit outside the "Travellers'
Rest,"
And maids come forth sprig-mustin drest,
And citizens dream of the south and west,
And so do I.*

*This is the weather the shepherd shuns;
And so do I;
When beeches drip in browns and duns,
And thresh, and ply;
And hill-hid tides thro' throe on throe.
And meadow-riculets oversow,
And droops on gate-bars hang in a row,
And rooks in families homeward go,
And so do I.*

—THOMAS HARDY.

TO-DAY AND TO-MORROW

Influence of Royalty.

THE longer skirt is certainly due in part to the influence of Royalty. It is difficult to look Royal in a short, narrow skirt. On the links and the tennis courts short skirts are right for everyone, even Royalty can lay down its ceremonial manners when playing games, but for "opening things," as Christopher Robin would say, for going to balls and banquets, a short, tight skirt does take away from the dignity of the most Royal personage.

Improving Pastry.

When next you are making pastry try this improvement, which is also an economy. Melt the butter or lard a little, and whip it into a cream before mixing with the flour. Only half the quantity is then required, and the pastry is mixed in far less time.

The Joy of Living.

IT requires very moderate intelligence to realise that happiness is greatly dependent upon mental health. We have only to observe people, to listen for one day to the women who come into one's lives, and what do we find?

Some women appear to have everything that should make for happiness, and are yet discontented, dissatisfied. Others, in an environment far from "perfect," with more than their share of worries and difficulties, manage to live happily and harmoniously.

What is the matter with women who are always a little depressed, self-pitying, without interest and joy in life?

So the sensible woman determines to be physically fit. Indeed, the widespread interest in health and hygiene accounts largely for the increase of beauty and the more youthful appearance of modern women.

Psychology and Happiness.

IF, in spite of a hygienic life and good physical health, a woman is still dissatisfied, full of grievances and fears, what then? The cause may be physical. Misery is sometimes the result of inability to adjust oneself to life, sometimes it is due to unsolved conflicts.

The people who are always misunderstood, the women who are self-centred and complaining, will never be well in spring or at any time of year without self knowledge and a new adjustment to life.

Every human being must, to win health and happiness, develop psychologically as well as physically from the infant to the adult. How few of us do! Some remain "fixed" in the infantile phase, completely selfish and self-loving. Others are really children, boasting, quarrelling, bullying, antagonistic to the other sex. Most of us never pass the phase of adolescence, characterised by irresponsibility and a love of philandering.

It would be an easier, happier world if people really "grew up" in their minds as they do in brains and body.

Well, the next generation should be happier because women, the mothers and teachers, are interesting themselves in psychology, the science of the mind or soul.—Dr. Elizabeth Sloane Chesser.

Our Potent Weapon.

WOMEN are rediscovering the immortal truth that their most potent weapon lies in their own grace and charm.

Four notable comments upon the revolution—two by Lord Birkenhead, one by a very distinguished German woman, and one by a prominent American business woman—are interesting. The sentiments expressed are all closely alike.

"We women should stay in woman's sphere," said Miss Louise Luckenbill, when declining the post of vice-president of a great American advertising corporation. "Some day," she added, "women will have an even chance in the business world. But it will come slowly and of its own accord, helped by tact. It will not be hastened by fussing and fuming."

The "Uncrowned Queen."

FRAU VON KARDORFF-OHEIMB is one of the three outstanding women personalities in the Germany of to-day. A great and successful worker in politics and business organisation, she has been hailed as the "uncrowned queen" of Germany. But, before all else, she is, most intensely, a woman, with all a woman's sympathy and charm.

She, too, believes that women are "eligible for any and every career," but she never fails to warn her sex against the wrong line of attack. "I always make friends with the men," she says. "The old method is the best one after all. Femininity always has been, and ever must remain, woman's only invincible weapon."

The Man's Angle.

LORD BIRKENHEAD naturally takes the man's angle. And men, needless to remark, agree wholeheartedly with Frau von Kardorff-Oheimb. They may, as a race, be absurdly self-conscious about women, and very shy in our relationship with them, but no man who is a man fails to react to the charm of genuine womanhood. They might, certainly, learn to react more gracefully than they do. And here is something upon which women may well increasingly exercise their wit and tact.

"FAVOURITE NOVELS" COMPETITION

MONTHLY PRIZES FOR WOMEN READERS

TO most women there is some book of especial attraction. It may be they find the story of enthralling interest, or perhaps the country in which the scenes are laid holds peculiar fascination. Again, the literary style may have a unique appeal, or some picturesque period in a historical romance.

For our Competition this month we invite readers to send the name of their "Favourite Novel," with the author's name, and a short summary, not exceeding 200 words, of the reason, or reasons, that it holds first place in the affections. A brief and interesting paragraph should be aimed at, conveying as far as possible the charm the book holds for you.

"The Radio Record" offers a prize of half-a-guinea for the best paragraph. The right is reserved to publish the whole or any part of any entry sufficiently original or striking (apart from the prizewinner) on payment of space rates. Entries must be written in ink, on one side of the paper only, and the name and address of the competitor should be written on the back of each entry.

The decision of the editor is final. A non-de-plume may be used if desired.

The "Favourite Novels" competition closes July 20, and the result will be announced on the women's page on July 27.

All entries to be addressed "Verity," C/o "Radio Record," Box 1032, Wellington.

The Letters of Annabel Lee

MY dear Elisabeth:

In Dublin's fair city.

Where the girls are so pretty,

applies with equal truth and point to Dunedin; and wo'd and married and a' quite lately was one of the most engaging members of the Scottish city's delightful Younger Set. The marriage of Miss Betty Reid to Mr. Mason aroused much interest, for her own and her mother's sake, and also because her father, the late Mr. Charles Stuart Reid, is held in affectionate remembrance by many friends. The golden-haired bride's wedding garment was fashioned of vellum-tinted georgette, flared skirt revealing gleaming glimpses of silvery sheen, long veil of tulle falling softly in pointed draperies. Bridesmaids clad in sunset-coloured frocks of that taffeta which holds such charm for the beholder—though not invariably to the wearer, as it is liable to dire disaster of the splitting variety—with insets of golden tulle, hats of rose-colour and slippers of gold, added colour to a beautiful group. Four radiant girls were conspicuous at this happy gathering: Miss Gracia Finch in rose-pink, black hat picturesque with pink rose; Miss Nancy Barr very lovely in beauteous shawl of mother-o'-pearl tissue; Miss Marjorie Statham, as always, extremely distinctive in oyster satin frock, one slender shoulder revealed by slipping shawl; and Miss Mary Blomfield in shawl and hat of dreamy-tinted pastel tones. Fullness of skirt was noted in many gowns, some dipping ever so gracefully, and quite a few were longer at the back, a more fascinating mode of the moment than it sounds.

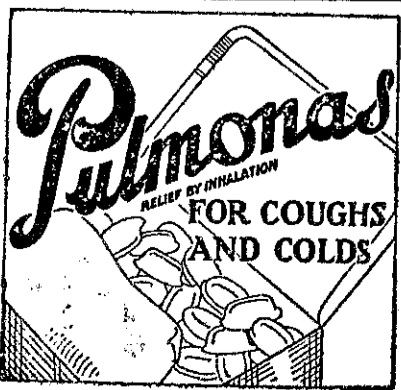
THE Muse of Poetry and the Drama smiled upon the Otago Women's Club on a recent evening, when a talk was given on "Glimpses of Literary London," by New Zealand's poetic playwright, Mr. C. R. Allen. Of an

interest beguiling was the tale that was told of impressions of personalities etched on a mind so plastic and savoured with an alert and far-reaching intelligence. Ingrained in the heart of the hero-worshipper is a simple delight in daily details of the lives of the illustrious. "What porridge had John Keats?" held perennial interest. Mr. Allen's witty chat, however, did not concern itself with matters so mundane, although he did mention Rudyard Kipling's present preoccupation with farming, somehow a surprising pursuit for the author of "Plain Tales." Anecdotes of Beloe, Masfield and Chesterton held much interest in this unusual and delightful dissertation, which was rarely illuminating concerning thronging modern Intelligentsia, from one who is himself a star in the sparkling firmament. We are intrigued to know that Mr. Allen's play, "The Singing Heart," with its captivating central motive and melodious phrasing, is to be put on the market by Basil Blackwell, together with three others, in which is included "When Mr. Punch Was Young," which many people consider the best of the plays.

APATHETIC have we shown ourselves of late towards the political situation, all the talk 'twixt me and thee being concentrated on matters of present urgency, such as the scrimmage over the War Memorial, hideous street noises that fret the nerves, the June sales, the best way to make toheroa soup, and so on. Collectively we have held our breath over that exploit miraculous of Capt. Kingsford-Smith and his giants of the ether, and listened to some quite excellent programmes over the wireless. But we have not bothered about the looming Election until last Thursday night, when we went to the Town Hall to hear the speech of our own J.G., the darling of the Reform Party, its bonnie Prince Charlie, its Young Hopeful. Very early we had

to go, for the crowd was immense, and all innocent and gay, while waiting for the conquering hero, we chanted lilting community songs with enthusiasm, keeping a watchful eye on the door while blissfully warbling how Annie Laurie gie'd her promise true. To the skirl of the pipes—than which there is no more inspiring marching music or more desolate lament—entered the Prime Minister, all smiles, accompanied by adherents and satellites and Wise Men of the east and the north and the south. Excellent was the address of the evening, homely, heartening, and relating to great and good deeds accomplished; covering finance and farming, pigs and property, all the lay of the land and the fun of the fair. And listened to with deep respect by an audience as polite and prim as a party in a parlour: no heckling, no prodding, no eggs! When the turn came for the Minister of Education, he proved amusing and told some good stories; while Mr. Rolleston won hearts by his modesty in comparing, to his own detriment, his speech with one that might have been delivered by the Finance Minister, and going on to give a few short, too short, comments on war and peace. An appealing speaker, with a diction that pleases, and an attractive personality. But I tire of statistics, and we had a good many of them, and gazing at the Olympians, wondered if they could possibly be as good as they looked. Are they the same at home, in fact? Opportunely I remembered:

"Pluto, Pluto, William Tell
Used to yell, and yell, and yell!
Little John Sebastian Bach
Refused to go to bed in the dark;
And the infant G. F. Handel
Couldn't sleep without a candle:
While William Shakespeare used
to bawl,
And wouldn't go to bed at all!"
Your
ANNABEL LEE.



Dried Celery.

When trimming celery for table use, do not throw away any outside leaves or roots that are sound; wash them, and when well drained, place upright in a colander and keep it on the rack. A paper may be placed over it to keep out dust, as it takes some time to dry. When quite crisp, put into an airtight tin, and it will keep for a year or two. It is excellent for flavouring any kind of stock, soup, or stew.

Cooking of Grains.

To test when cornflour or any grain is sufficiently cooked, tip saucepan when the mixture is thick and boiling. If it leaves the sides of the saucepan clear the mixture is cooked. To prevent a lumpy cornflour mixture, add a little hot milk to cornflour paste before cooking. Rice should be cooked in cold milk. Cooking should be slow for about two hours.

Tonking's Linseed Emulsion
is a Certain Cure for Coughs and Colds

Some Features of Next Week's Programmes

"RIGOLETTO" AT 1YA

THE next opera from which excerpts will be sung by the Madame Ainsley Quartet will be "Rigoletto." Some of the finest arias from this famous opera by Verdi have been chosen for broadcasting on Tuesday, during the second half of the evening's programme.

The members of the quartet—Madame Irene Ainsley, Miss Nora Hulme, Mr. Walter Brough, and Mr. Robt. Peter—will also be heard in various solos, the items being interspersed by selections from the Majestic Orchestra, the Auckland Trio, piano and violin duets by Miss Ina Bosworth and Mr. Cyril Towsey, and selected gramophone records (electrically reproduced).

Vaudeville turns will be relayed from the Embassy Theatre.

There will also be on Monday's programme, Mr. A. B. Chappell's usual weekly talk on old New Zealand. Henry Williams is the theme next week.

THE Auckland Municipal Band will supply the entertainment on Wednesday evening, a splendid programme having been prepared. Vocal items by the Hazell-Sutherland Duo will also be given from the studio.

A PROGRAMME to suit all tastes will be presented on Thursday evening. Happy Abe and Dismal Mike, known as the Hebrew Two, have a wide appeal. So, too, have the Asquiths, in their thirty minutes' drawing room entertainment. A treat in vocal music will be provided by Miss Martha Williamson, Miss Dorothy Yound, Mr. G. C. Queen, and Mr. Barry Coney. Ingall's Hawaiian Orchestra, the Auckland Trio, Mr. Cyril Towsey, and several electrically produced records will provide the instrumental music, while, though last to be mentioned, but by no means the least, will be Mr. T. Harris, elocutionist.

There will also be on Thursday evening a relay from the Embassy Theatre.

EAGERLY looked forward to every Friday evening at 1YA is the voice of Mr. J. F. Montague. The sketches and playlets which he has produced have been very successful. Next Friday the one-act comedy, "Going Away," will be performed by the Auckland Comedy Players, under the direction of Mr. J. F. Montague.

The vocalists for Friday evening will be Miss Lola Solomon, Miss Phyllis Gribben, Mr. Robert Peter, and Mr. A. Colledge, who will present a varied programme of solos and quartettes. Instrumental items will be played by the Auckland Trio, by Miss Molly Wright, and by The Internationals.

The Wizard will make his second appearance on Friday evening in his novelty turn, "Word Wangles."

A VERY enjoyable studio concert is in store for listeners on Saturday evening, when the popular Lyric Four will hold the microphone for solos and concerted items, and the Bohemian Trio will dispense vocal and instrumental music. Mr. A. McElwain is on the programme for more humour.

2YA NOTES

THE Orpheus Quartet will, on Tuesday, June 26, present the quartets "O, Peaceful Night," "The Boat Song," and the old English number "The Bells of St. Michael's Tower." With Mr. Len Barnes as soloist, the quartet will sing, "Down by the River." Mrs. Alice Harris will sing "Pierce Plumes are Roaring" (from "Il Trovatore").

Local Composers' Works at 2YA

ON Monday next, June 25, the Ariel Singers will present an interesting programme of compositions by a Lower Hutt musician, Mr. Claude M. Haydon, Mus.Bac.

Born in Melbourne, Mr. Haydon came to New Zealand in 1921, and has given recitals of his own works in Wellington and Lower Hutt. His first important composition was the incidental music for a performance of "The Wasps" of Aristophanes, in connection with the Melbourne University Jubilee celebrations, in 1906. Mr. Haydon gained his degree at that University in 1911. Local listeners-in will remember that his opera, "Paola and Francesca" was successfully produced in Wellington by the Harmonic Society in 1926. In addition to many songs, etc., Mr. Haydon has written chamber music, violin solos, and 'cello solos, a string quartet of his having been performed in Vienna last year.

The programme of his works to be presented by the Ariel Singers on Monday, together with his "Phantasia Trio," played by the Symons-Ellwood-Short Trio, and his "Ballade in E Flat," for solo violin (Miss Ava Symons) and orchestra, will give a good idea of the style and characteristics of this capable musician, who is deservedly highly esteemed in local circles.

Mr. A. Stanley Warwick will contribute elocutionary numbers to the programme.

Miss Lily Mackie "Mountain Lovers," and Mr. Arthur Coe "The Sailor's Grave." Mr. Len Barnes is singing the famous aria from "Aida and Galatea" (by Handel), "O, Rudder Than the Cherry," in which the giant Polyphemus sings of his love for Galatea, "The Midnight Review," by Glinka (this poem is based on the legend that at midnight on the field of Waterloo the ghost of Napoleon arises and views his troops as they march past); and "Ethiopia Saluting the Colours," by Charles Wood, an incident in the American Civil War.

Mr. Cedric Gardner will supply the humorous element of a very attractive programme.

ON Thursday the Warblers' Male Voice Quartet will again broadcast from 2YA. Included in their numbers will be that evergreen song, "The Rosary," arranged as a quartet. A new march song, "When All the World's at Peace," should find immense favour with its stirring refrain. Mr. W. E. Elliott is soloist in this number. Another song which should prove equally popular is "Sweet Miss Mary," in which Mr. Stewart Nelson will take the solo part. Mr. Stewart Nelson, tenor, has chosen for his solo number "She is Far From the Land." With his sweet lyric tenor he should give a good account of himself in this beautiful song. Mr. Ernest Elliott, tenor, has chosen the new popular song, "My Maori Maiden," by Jack Lumsdaine, the radio artist. Mr. Elliott's voice invariably pleases in this type of song. Mr. Harry Matthew, baritone, will render Eric Coates's beautiful number, "I Heard You Singing." Mr. Thomas C. Wood (bass) will give Herman Lohr's new song, "Flower of the Desert," and Allitsen's "The Late Player." These are two really beautiful numbers, and Mr. Wood is sure to please with his interpretations.

TWO delightful quartets are scheduled by the Apollo Singers for their concert at 2YA on Friday. These are "As the Swallows Homeward Fly" and "Allan Water." Equal taste is manifested in the selection of their solo numbers. "After the Lonely Day" and "Silver Ring" will be sung by Miss H. Chadley; Miss M. Goodwill is singing "Believe Me if All Those Endearing Young Charms"; Mr. E. W. Robbins will be heard in Alfred Hill's ever-popular "Waikata Poi" and "O, the Month of May," by Quilter, and Mr. S. E. Rodger will contribute "The Sweetest Flower That Blooms" and "The Link Divine," with first and second violin accompaniment.

The Two Boiled Owls will supply their regular quota of humour, and, taken altogether, a delightful evening's entertainment is assured.

ON Saturday the Melodie Four Male Quartet will again provide the majority of the vocal items at 2YA. The concerted numbers will include a

harmonious arrangement of "Stars of the Summer Night," "In Absence," and the quartet's original arrangement of "Baby's Feet Go Pit-a-pat," the last-named number being repeated in response to numerous requests. Mr. W. W. Marshall (bass) will sing the stirring Scottish ballad "Wi' a Hundred Pipers and A'," a song which suits his resonant voice to perfection. Mr. F. Bryant (tenor) will be heard in "A Song and a Dream," and Messrs. Duncan and Allwright will each render a solo. Listeners-in may therefore expect an excellent assortment of vocal items on this occasion.

Mr. George Titchener, a breezy comedian with a style of his own, and Mr. Lad Haywood, an expert mandolinist, are also scheduled on Saturday evening.

ON Sunday, July 1, the recital of the Wellington Municipal Tramways' Band will be broadcast from His Majesty's Theatre.



MR. HIRAM DUNFORD.
Elocutionist, and one of 3YA's popular Entertainers.

—Steffano Webb, photo.

3YA NOTES

MR. E. J. BELL, City Librarian, will give his usual fortnightly talk on books at 3YA on Monday.

Numerous popular singers will be associated with the Christchurch Municipal Band on Monday evening. Solos will be sung by Miss Frances Hamerton, Miss Nora Nottingham, Mr. Russell Sumner, Mr. E. A. Dowell, duets by the Happy Duo, and there will be humorous recitations from Miss Lucy Cowan.

The items to be given by the band and by the vocalists on Monday evening will all be well known and popular, such as "Souvenirs," "John Peel," "The Minstrel Boy," "My Ain Folk," "Believe Me if All Those Endearing Young Charms," "Barcarolle" (from "Tales of Hoffman"), etc.

A PROGRAMME of miscellaneous musical items will be broadcast on Wednesday, the vocalists being the Dulcet Quartet. Mr. A. G. Thompson's solos will be "Grendon Fair" and "I Know of Two Bright Eyes." Mr. T. G. Rogers will sing, "Beloved, It is Morn," "Bombardier," and "To Daisies." Miss Nellie Lowe's items will be "The Lilac Cotton Gown" and "A Spirit Flower," while Miss Hilda Hutt has chosen "Spring's Awakening" and "Love the Pedlar" as her contributions to the programme. The concerted items will be "Come to the Fair" and Schumann's beautiful "Trau-merci."

Wednesday's programmes will include numerous instrumental pieces—violin solos by Miss Irene Morris, euphonium solos by Mr. S. N. Crisp, clarinet solos by Mr. S. E. Munday, and selections by the Studio Trio. Elocutionary items will be given on Wednesday evening by Miss K. O'Brien.

ON Thursday evening the Madame Gower-Burns' Grand Opera Quartet will present a miscellaneous programme of vocal items. These will be interspersed by instrumental items provided by Mr. W. Hay (flute), Miss Aileen Warren (piano), Mr. E. N. Trenberth (flugel horn), and the Bohemian Instrumental Quintet. Recitations will be given by Miss Winifred Smith.

THE fascinating "Floral Dance" will be one of the items to be sung by Mr. T. D. Williams on Friday evening. There will be an orchestral accompaniment to this gem of melody. Another song by Mr. Williams will be "The Gay Cavalier." Tenor solos will be sung by Mr. W. Bradshaw, "I'll Sing Thee Songs of Araby" and "Ailsa Mine." Miss Belle Renaut and Mrs. C. Du Lieu have chosen well in the songs they are singing.

Munroe's Orchestra and the Studio Trio will be supplying the instrumental music for Friday evening.

Included among the elocutionary items to be given by Mr. Hiram Dunford on Friday evening will be the exceedingly difficult piece by Edgar Allan Poe, "The Bells."

The vaudeville programme on Saturday evening will be up to 3YA's usual high standard in its popular appeal. There will be happy songs and hits by the Joyous Trio, and jazz piano novelities by Misses Johns and Johnson; Miss Mabel Thomas and Mr. Dave McGill will sing soprano and tenor solos and a duet; Mr. Bracey Wilson will sing two Harry Lauder songs; the Studio Trio will play; Mr. Sidney Comfort will dispense humour; mouth organ solos will be played by Mr. J. F. Peters, and banjo solos by Mr. George Dunn.

4YA ATTRACTIONS

"THE Powder Monkey," a rollicking old favourite and little known at the present time, will be one of Mr. E. G. Bond's bass solos for Tuesday evening. The programme that night will be of the popular type, and will be contributed by some of 4YA's excellent artists in conjunction with the Kaitake Band. The band itself has a splendid miscellaneous programme.

Besides Mr. Bond, Tuesday evening's artists will include Miss Dorothy Allen, Mr. R. B. Macdonald, and Mr. Charles Edwards. Elocutionary items will be given by Miss Madge Yates and Mr. Eric Hebdon, who will also stage a humorous sketch.

The popular Pastor W. D. More will give a humorous talk on Tuesday evening.

BRIGHT and lively will be Thursday evening's programme. The amusement element will be very prominent. Miss Billie Lorraine, Miss Jacqueline Burke, and Miss Vanda Duncan will be heard in light and popular songs. Miss Lorraine and Major Lampen will enact a humorous sketch. Mr. Keith Stronach will tickle listeners' risible faculties. Messrs. Heene and Dalziel, with piano-accompaniment and marimba respectively, Mr. T. V. Anson with his novelty piano solos, and Mr. Billy Gay in popular songs, are also on the programme.

FRIDAY is dance night at 4YA. The first hour of the evening's programme will consist of popular items, contributed by such vocalists as Miss Dorothy Skinner (contralto), Mr. Neil Black (bass), Mrs. Ernest Drake (piano), and Mr. Charles Gibbons (flute). Elocutionary items will be given by Miss Nancy Abernethy.

A STUDIO concert of high standard will be broadcast on Saturday. Contralto solos will be sung by Miss Irene Hornblow and soprano solos by Miss Agnes Guy. Two of Mr. Tom Cooper's items will be "The Company Sergeant-Major" and "The Floral Dance." Baritone solos will be sung by Mr. Arthur Langley. Elocutionary items will be rendered by Miss Molly Gallagher, and selections will be played by the trio.

NOTES AND COMMENTS

(By "Switch")

BY the way, those Wellington listeners who cannot get 4YA, Dunedin, owing to interference from 2YA, Wellington, should try to get the Dunedin station on its second harmonic (about 231 metres). I know of three or four local listeners who can pick up 4YA on 231 metres free from the interference.

If you buy a portable receiving set, do not be disappointed and blame the set if it will not function efficiently in a city building. I know of two instances in which it was impossible to receive 2YA, Wellington, inside a steel reinforced building only a mile from the station. When the sets were moved to a window facing 2YA reception was OK.

Due to proximity to 2YA.

"GIVE Us More" (Petone) writes: "The recent short-wave rebroadcast of 2YC, Sydney, by 2YA, Wellington, was in my opinion a great success. The land-line between Brisbane and Sydney was obviously faulty, or 2YC would not have gone to the trouble of explaining what was happening in Brisbane, nor would he have remarked, 'In case you have not been able to hear the Brisbane relay,' etc. When 2YA was rebroadcasting 2YC reception was perfect in Petone. I think the 2YA men should give us some more when opportunity offers." And so say all of us. It is these "stunts" that stimulate interest in broadcasting.

A COMPLAINT regarding distortion of 2YA, Wellington, was investigated last week by "Switch." The distortion was there right enough, and the correct "C" battery bias, detector voltage, etc., was in operation. Here was a puzzle which, however, solved itself, when the next door neighbour was found to be using a violet ray outfit every night in the week. He kindly consented to close down during broadcasting hours, and the distortion of 2YA disappeared.

BEWARE of so-called "static eliminators." So far, all devices of this nature which I have tested have reduced static at the expense of signal strength in about the same ratio. What is wanted is an invention which will reduce static more than it will reduce signal strength. The Radio Corporation of America is offering a mint of money for an invention of this nature which can be marketed at a cost sufficiently low as to be available to the average broadcast listener.

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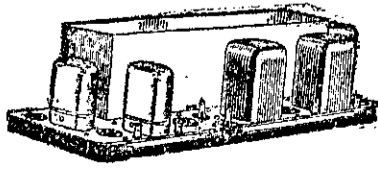
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Full Programmes for Next

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NOTES AND COMMENTS

By "Switch."

THOSE who have thought of buying a short-wave receiving set need not worry about the length of their aerials. The aerial used for receiving the ordinary broadcast transmission serves admirably for short-wave reception, without any shortening or other alteration.

ARE we all DX-chasers. I think the folk who go after the Japanese and Indian stations are only a microscopic proportion of the New Zealand listeners. If we can get two or three Australian stations tolerably well, the majority are quite satisfied with their multi-valve sets.

THE Wellington Radio Society's suggestion that a radio inspector should make a house to house inspection to ascertain whether the Brownie-Drake and neutrodre sets in use around Wellington are correctly neutralised. There is no lacking of evidence that many of these sets are the cause of the continuous howling which infests some city and suburban areas.

MANY listeners in the Wellington district fasten on to 1YA, Auckland, on Sunday evenings, on the conclusion of the relayed concert from 2YA, Wellington. There is no doubt that 1YA comes through with excellent volume, and good tone in the evenings.

WITH the development of the short-wave craze, some New Zealand listeners are put to it to keep the family entertained with music from the New Zealand stations, while they scour the air on their short-wave sets. This means two sets of batteries, and two separate aerials, yet a Wairarapa visitor to Wellington informs me that he has contrived to accomplish this, and everybody is happy.

WHO is the most solemn announcer heard by New Zealand DX broadcast listeners? was a theme of a discussion I heard the other day. The majority present considered that the Aussies were brighter in their style than the New Zealand announcers, but "Pa" Cochrane, of 2FC, Sydney, was considered about the most solemn announcer heard over here. The most cheerful announcer proved a difficult matter, and voting was even between the man at 2BL, Sydney, and George Saunders, at 2GB, Sydney. Then followed a discussion on the question of personality, of the various announcers, but no finality could be reached as opinions differed widely.

BEGINNERS are wondering whether we are obtaining the usual winter volume from the Australian stations. On comparing notes with several of the old-timers, I come to the conclusion that so far our reception this winter has been much below the average for volume in reception of the Australians.

WE were listening at a friend's home recently, and he was dismayed when a roaring sound came from his loudspeaker during a heavy rain squall. I must mention he was tuned in to 2FC, Sydney, at the time. He thought that the rain was causing a short-circuit to earth across his aerial insulators. The actual cause was the minute electrical discharges between the drops of rain on his aerial. When there is a heavy shower so many drops of rain strike his aerial that the electrical discharges set up a sort of roar. These discharges are so minute that as a rule they are not audible unless the receiving set is sensitively adjusted for long-distance reception.

A WRITER in London "Popular Wireless" says:—"Before I leave the U.S.A. permit me to remind readers who clamour for wave-traps, etc., that in America (U.S.A.) there are still 683 stations hard at it, or one station every 160,000 persons. Talk about 'background'; I should think it is all 'foreground', with no 'middle distance' or perspective. Let us thank our stars that we live in an island where there is an 'effete' sense of proportion, and where commerce plays second fiddle to commonsense." New Zealanders should be glad that there is not more than one big station in each centre.

SUNDAY night appears to be "band night" in Australia as well as in New Zealand. On a recent Sunday night I had band music from 2FC, Sydney, 3LO, Melbourne, 5CL, Adelaide, and 2BL, Sydney, as well as band music from 1YA, Auckland, and 2YA, Wellington. For a wonder, 4QG, Brisbane, had a big orchestra instead of the customary Greater Brisbane Municipal Band. Talking about bands, Joe Drew and his Port Nicholson Silver Band is now in superb form, and its Sunday nights' programmes are a delight, but I must not forget the Wellington Tramways Band, which puts its music across splendidly also on Sunday nights.

Sunday, June 24

1YA, AUCKLAND (333 METRES), SUNDAY, JUNE 24.

3 p.m.: Afternoon session—Selected studio items.
4.0: Literary selection by the Announcer.
4.8: Selected studio items.
4.30: Close down.
6.0: Children's song service, conducted by Uncle Leo, assisted by cousins from the Grange Road Baptist Sunday School.
6.55: Relay of service from Baptist Tabernacle. Preacher, Rev. Joseph Kemp. Organist and choirmaster, Mr. Arthur E. Wilson.
8.30: Relay of band recital by the Auckland Municipal Band, under the conductorship of Mr. Christopher Smith.
9.30: Close down.

2YA, WELLINGTON (420 METRES), SUNDAY, JUNE 24.

3 p.m.: Afternoon session—Selected studio items.
4.30: Close down.
6.0: Children's song service, conducted by Uncle Ernest.
6.55: Relay of evening service, from St. Andrew's Presbyterian Church. Preacher, Rev. E. Howie. Organist and choirmaster, Mr. Frank Thomas.
8.15 (approx.): Relay of band recital of the Port Nicholson Silver Band from the Grand Opera House. (Conductor, Mr. J. H. Drew.)
Close down.

3YA, CHRISTCHURCH (306 METRES), SUNDAY, JUNE 24.

3 p.m.: Afternoon session—Selected studio items.
4.30: Close down.
5.30: Children's song service, conducted by Uncle Sam, who will be assisted by scholars from St. Luke's Anglican Sunday School.
6.30: Relay of evening service from St. Mary's (Church of England), Merivale. Preacher, Rev. Archdeacon P. B. Haggitt; choirmaster, Mr. Alfred Worsley.
After-church music will be given from 3YA studio.
8.15 (approx.): Rebroadcast of 2YA, Wellington; relay concert by the Port Nicholson Band from Grand Opera House, Wellington.
Close down.

4YA, DUNEDIN (463 METRES), SUNDAY, JUNE 24.

5.30 p.m.: Results to hand of All Blacks tour.
5.31: Children's song service, conducted by Big Brother Bill, assisted by Cathedral Choristers.
6.30: Relay of service from Hanover Street Baptist Church. Preacher, Rev. E. S. Tuckwell. Choirmaster, Mr. H. P. Desmoulins.
8.0: Relay from His Majesty's Theatre of band concert by the Kaikora Band, under the conductorship of Mr. E. Franklin.
9.15: Close down.

Monday, June 25

1YA, AUCKLAND (333 METRES), MONDAY, JUNE 25.

SILENT DAY.

2YA, WELLINGTON (420 METRES), MONDAY, JUNE 25.

3 p.m.: Chimes of the G.P.O. clock.
3.1: Selected gramophone items.
4.30 and 4.55: Sports results to hand.
5.0: Close down.
6.0: Children's session—Aunt Gwen and Uncle Jeff, special radio trip. Greetings. Puzzles and stories.
7.0: News session, market reports and sports results.
8.0: Chimes of the G.P.O. clock.
(With the exception of two numbers, the vocal items presented by the Ariel Singers will be compositions of the local composer, Mr. Claude Haydon. The "Phantasy Trio," played by the Symons-Ellwood-Short Trio is also a composition of Mr. Claude Haydon.)
8.1: Overture—Orchestra, "May Day" (Wood).
8.11: Mezzo-contralto solo—Miss Ngaire Coster, "Lullaby" (Haydon).
8.15: Tenor solos—Mr. Roy Hill, (a) "Youth" (Haydon); (b) "Paradise Lane" (Haydon).
8.22: Instrumental trio—Symons-Ellwood-Short Trio, "Phantasy Trio" (Haydon).
8.32: Sketch for two characters—Mr. A. Stanley Warwick, "Mr. Bumble's Courtship" (Dickens, arr. A. S. Warwick).
8.41: Vocal quartet—Ariel Singers, "The Message" (Haydon).
8.46: Bass solos—Mr. J. M. Caldwell, (a) "Dolorosa" (Haydon); (b) "Gloaming Song" (Haydon).
8.53: Selection—The Orchestra, "Joseph and His Brethren" (Schmidt); (1) "Prelude"; (2) "Caravan Dance"; (3) "Bacchanalian Dance."
9.5: Weather forecast.

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9.7: Soprano solo—Miss Jeanette Briggs, L.A.B., "Pierrot at Fifty" (Haydon).
9.12: Request numbers—The Orchestra.
9.20: Vocal duet—Miss N. Coster and Mr. J. M. Caldwell, "Before Summer" (Haydon).
9.25: Violin solo, with orchestral accompaniment—Miss Ava Symons, "Ballade" (Haydon).
9.32: Sketch for two characters—Mr. A. Stanley Warwick, "The Parting" (Peach).
9.40: Soprano solo—Miss Jeanette Briggs, L.A.B., "If I Were a Lark" (Clutsam).
9.45: Vocal quartet—Ariel Singers, "Sleep, Gentle Lady" (Bishop).
9.50: Suite—The Orchestra, "Monsieur Beaucaire" (Rosse); (1) "Intermezzo"; (2) "The Leading Theme"; (3) "Gavotte"; (4) "Song of the Travellers"; (5) "Music of the Love Scene" (Act III); (6) "The March Theme."
10.0: Close down.

3YA, CHRISTCHURCH (306 METRES), MONDAY, JUNE 25.

3 p.m.: Afternoon session—Selected studio items.
4.25: Sports results.
6.0: Children's session—"Farewell" to Uncle Jack. Songs by Cousins Rona, Joan, and Phyllis.
7.15: News session.
7.30: Talk on "Books," by Mr. E. J. Bell.
8.0: Chimes. Concert by Christchurch Municipal Band (under the conductorship of Mr. A. J. Schnack) and assisting artists. Relay of orchestral overture from Strand Theatre Orchestra, under the direction of Mr. Harry Elwood.
8.5: Baritone solo—Mr. E. A. Dowell, "I'm Drifting Back to Dreamland" (Charlesworth and Harrison).
8.10: March—Band, "Cossack" (Rimmer).
8.25: Soprano solo—Miss Frances Hamerton, "Waltz Song," from "Romeo and Juliet" (Gounod).
8.29: Selection—Band, "Diamond Cross" (Greenwood).
8.37: Contralto solos—Miss Nora Nottingham, (a) "Sympathy" (Marshall); (b) "My Ain Folk" (Lemon).
8.44: Hymn—Band, "Rock of Ages" (Hymns, A. & M.).
8.48: Tenor solo—Mr. Russell Sumner, "Believe Me if all Those Endearing Young Charms" (traditional, Irish).
8.52: March—Band, "Conqueror" (Moorhouse).
8.48: Soprano and tenor duet—The Happy Duo, "Barcarolle," from "Tales of Hoffmann" (Offenbach).
9.2: Humorous recitals—Miss Lucy Cowan, (a) "Physical Culture" (Milne); (b) "The Art of Conversation" (Poultny).
9.6: Weather forecast.
9.7: Relay of orchestral music from the Strand Theatre.
9.12: Baritone solo—Mr. E. A. Dowell, "Souvenirs" (Leslie).
9.16: Sketch—Band, "John Peel" (Greenwood).
9.22: Soprano solo—Miss Frances Hamerton, "Was Ever Nymph Like Rosamund" (Arne).
9.26: Waltz—Band, "Flights of Fancy" (Greenwood).
9.32: Contralto solo—Miss Nora Nottingham, "O, Dry Those Tears" (Del Riego).
9.36: Sketch—Band, "Whose dat a-calling?" (Truman).
9.44: Tenor solos—Mr. Russell Sumner, (a) "The Minstrel Boy" (Irish, arr. Rimbault); (b) "I Hear a Thrush at Eve" (Cadman).
9.51: Humorous recital—Miss Lucy Cowan, "Mrs. 'Arris'" (Poultny).
9.57: Soprano and tenor duet—The Happy Duo, "Colonial Song" (Grainger).
10.1: March—Band, "Loyal Hearts" (Greenwood).
Close down.

4YA, DUNEDIN (463 METRES), MONDAY, JUNE 25.

SILENT DAY.

Tuesday, June 26

1YA, AUCKLAND (333 METRES), TUESDAY, JUNE 26.

3 p.m.: Afternoon session—Selected studio items.
3.30: Lecturette on "Electric Cooking."
3.45: Selected studio items.
4.0: Literary selection by the Announcer.
4.8: Selected studio items.
4.25: Sports results.
4.30: Close down.
6.0: Children's session—Uncle George. Song, Farmer's Boy, "The Rest of the Day's Your Own"; pianoforte solo, Cousin Myrtle, "On the Ice" (Crawford). Letters and birthdays. Record. Recitation, Uncle George, selected. Song, Farmer's Boy, "The Fireman." Bedtime stories.
7.15: Lecturette—Mr. Geo. H. Ambler, "Talk on Poultry—Ducks."
7.30: News and reports.
8.0: Chimes.
8.1: Relay of orchestral overture from Majestic Theatre Orchestra, under the conductorship of Mr. J. Whitford Waugh.
8.11: Contralto solo—Madame Irene Ainsley, "Ah, Se Tu Dormi" (from "Romeo and Juliet"), (Vaccari).
8.16: Instrumental trio—Auckland Trio, "Finale" from "Trio in D Minor" (Mendelssohn).
8.24: Baritone solo—Mr. Walter Brough, "Will o' the Wisp" (Spross).
8.28: Organ selection—Record, "Ballet Egyptian," Parts 1 and 2 (Luigini).
8.34: Soprano solo—Miss Nora Hulme, "O, Ship of My Delight" (Phillips).
8.38: Piano and violin—Miss Ina Bosworth and Mr. Cyril Towsey, "Finale," from "Kreutzer Sonata" (Beethoven).
8.45: Lecturette—Mr. A. B. Chappell, M.A., "Talks on Old New Zealand," No. 15, "Henry Williams."
9.0: Weather forecast.
9.1: Relay of orchestral entr'acte from Majestic Theatre.
9.6: Tenor solo—Mr. Robert Peter, "Kirkonell Lea" (traditional).
9.10: Organ selection—Record, "Ballet Egyptian," Parts 3 and 4 (Luigini).
9.16: Contralto solo—Madame Irene Ainsley, "Abide With Me" (Liddell).
9.20: Instrumental trio—Auckland Trio, "Little Concert Suite" (Rosse).
9.27: Excerpts from the opera, "Rigoletto" (Verdi), produced under the direction of Madame Irene Ainsley.
In "Rigoletto" Verdi reached the zenith of his career. Only in "Aida," written twenty years later, and in "Falstaff," written in his eightieth year, did he reach the high standard of "Rigoletto."
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Gilda Miss Nora Hulme
Maddalena Madame Irene Ainsley
Rigoletto Mr. Walter Brough
Duke of Mantua Mr. Robert Peter
"Questa O Quella"—The Duke.
"Caro Nome"—Gilda.
"No, Lord Illustrious"—Gilda and Duke.
"On Every Festal Morning"—Gilda and Rigoletto.
"La Donna e Mobile"—The Duke.
"Un De, Si Ben"—Finale.
10.0: God Save the King.
N.B.—Special Vaudeville Numbers from the Embassy Theatre will be broadcast during the above programme.

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2YA, WELLINGTON (420 METRES), TUESDAY, JUNE 26.

- 3 p.m.: Chimes of the General Post Office clock, Wellington.
 3.1: Selected gramophone items.
 4.30: Sporting results.
 5.0: Close down.
 6.0: Children's hour—Radio Train Trip, Big Brother Jack and Conductor Stewart.
 7.0: News session, market reports, and sports results.
 7.40: Lecturette—Representative of Agricultural Department, "For the Man on the Land."
 8.0: Chimes of the General Post Office clock, Wellington.
 8.1: Overture—The Orchestra, "Rakoczy" (Keler Bela).
 8.11: Quartet—The Orpheus Quartet, "O. Peaceful Night" (German).
 8.15: Contralto solo—Miss Lily Mackie, "Mountain Lovers" (Squire).
 8.19: Piano solo—Mr. Gordon Short, "First Movement, B Flat Minor, Sonata" (Chopin).
 8.27: Quartet—The Orpheus Quartet, "Boat Song" (Cowan).
 8.31: Humour—Mr. Cedric Gardiner, "Having it Out" (Kent).
 8.36: Selection—The Orchestra, "Madame Butterfly" (Puccini).
 8.46: Soprano solo—Mrs. Alice Harris, "Fierce Flames are Roaring" (Verdi).
 8.50: Relay of organ solos—Mr. H. Temple White, (a) "Pastorale in D" (St. Clair); (b) "Melody" (Parry); (c) "March" (Petrilli).
 9.0: Weather forecast.
 9.2: Baritone solos—Mr. Len. Barnes, (a) "The Midnight Review" (Glinka); (b) "Ethiopia Saluting the Colours" (Wood); (c) "O. Rudder than the Cherry" (Handel).
 9.12: Request numbers—The Orchestra.
 9.20: Quartet—The Orpheus Quartet, "Bells of St. Michael's Tower" (Knyvett).
 9.25: Humour—Mr. Cedric Gardiner, (a) "Sea Bathing" (Jerome); (b) "After Marriage" (Anon.).
 9.30: Instrumental—The Orchestra, "Ascanio Ballet Music." Part 1 (Saint-Saens): (1) "The Entry of the Master of the Games"; (2) "Venus, Juno, and Pallas"; (3) "Diana, Wood-nymphs, and water-nymphs"; (4) "Bacchus and the Bacchantes"; (5) "A Vision of Phoebus, Apollo, and the Nine Muses"; (6) "Phoebus and the Harp and Cupid." (Saint-Saens makes great use of the woodwind in this ballet of the gods, and the second number is particularly notable for the brilliant flute solo.)
 9.40: Tenor solo—Mr. Arthur Coe, "The Sailor's Grave" (Sullivan).
 9.45: Baritone solo and quartet—Mr. Len. Barnes and the Orpheus Quartet, "Down by the River" (Scott-Gatty).
 9.49: Musical comedy selection—The Orchestra, "The Blue Mazurka" (Lehar).
 9.59: National Anthem.

3YA, CHRISTCHURCH (306 METRES), TUESDAY, JUNE 26.

SILENT DAY.

4YA, DUNEDIN (463 METRES), TUESDAY, JUNE 26.

- 3 p.m.: Town Hall chimes.
 3.2: Gramophone recital.
 3.30: Social notes and news.
 3.40: Studio items.
 4.15: Gramophone recital.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Town Hall chimes.
 6.1: Children's session—Big Brother Bill. Letters and birthdays. Musical items by the pupils of Mr. E. Hunter.
 7.15: News session.
 8.0: Town Hall chimes. Concert by the Kaikorai Band, under the conductorship of Mr. E. Franklin, and items by assisting artists.
 8.1: March—Band, "Roaring Lions" (Allen).
 8.5: Bass solos—Mr. E. G. Bond, (a) "The Powder Monkey" (Watson); (b) "Old Clothes and Fine Clothes" (Shaw).
 8.10: Overture—Band, "The Magic Flute" (Mozart).
 8.18: Contralto solo—Miss Dorothy Allen, "O, Lord Whose Mercies" (Handel).
 8.21: Recital—Mr. Eric Hebden, "The Storming Party" (Doyle).
 8.25: Intermezzo—Band, "Cavalleria Rusticana" (Mascagni).
 8.31: Baritone solos—Mr. R. B. Macdonald, (a) "Four Jolly Sailors" (German); (b) "In Sheltered Vale" (d'Alquen).
 8.36: Recital—Miss Madge Yates, "The Rider at the Gate" (Kipling).
 8.40: Fox-trots—Band, selected.
 8.45: Humorous address—Pastor W. D. More.
 9.0: Weather forecast.
 9.2: Tenor and baritone duet—Messrs. Edwards and Macdonald, "The Garden of Your Heart."
 9.5: Selection—Band, "Belle of New York" (Kerker).
 9.20: Humorous sketch—Miss Madge Yates and Mr. Eric Hebden, selected.
 9.27: Tenor solos—Mr. Chas. Edwards, (a) "Until" (Sanderson); (b) "A Song of Sleep" (Somerset).
 9.32: Waltz—Band, "Destiny."
 9.37: Recital—Miss Madge Yates, "Comfort."
 9.41: Bass solo—Mr. E. G. Bond, "The Glory of the Sea" (Sanderson).
 9.44: Patrol—Band, "Jamie's Patrol."
 9.49: Contralto solos—Miss Dorothy Allen, (a) "Wind of the Western Sea"; (b) "Gloria" (Buzzi-Pecchi).
 9.53: Tenor solo—Mr. Chas. Edwards, "The Great Awakening" (Kramer).
 9.55: March—Band, "The Conqueror" (Hume).
 10.0: God Save the King.

Wednesday, June 27

1YA, AUCKLAND (333 METRES), WEDNESDAY, JUNE 27.

- 11.30 a.m.: Relay description of Auckland Trotting Club's winter meeting (second day).
 6 p.m.: Children's session—Uncle Tom. Opening Chorus. Song, Cousin Patti, "A Little Cingalese" (Sterndale Bennett). Story for tiny tots. Letters and birthdays. Song, Uncle Tom, selected. Recitation, Cousin Patti, "Mental Arithmetic." Story-time. Closing Chorus.
 7.15: Lecturette, by "Gargoyle," "New Car Treatment."
 7.30: News and market reports.
 8.0: Chimes.
 8.1: Relay of Auckland Municipal Band concert from Town Hall (conductor, Mr. Christopher Smith), assisted by the Hazell-Sutherland Duo, who will perform the following items from the studio:—
 Contralto solos—Miss Phyllis Hazell, (a) "The Lord Is My Light" (Alfonsi); (b) "Keep Marchin' Along" (Burleigh).
 Baritone solos—Mr. Frank Sutherland, (a) "Requiem" (Homer); (b) "Chorus, Gentlemen" (Lohr).
 Vocal duet—Hazell-Sutherland Duo, "Delilah and High Priest" (from "Samson and Delilah"), (Saint-Saens).
 10.0: Close down.

2YA, WELLINGTON (420 METRES), WEDNESDAY, JUNE 27.

SILENT DAY.

3YA, CHRISTCHURCH (306 METRES), WEDNESDAY, JUNE 27.

- 3 p.m.: Afternoon session—Selected studio items.
 4.25: Sports results.
 4.30: Close down.
 6.0: Children's session—Mother Hubbard and Uncle Peter, with songs, stories, and birthday greetings. Tunes by the little baby orchestra.
 7.15: Addington stock market reports.
 8.0: Chimes and overture. Miscellaneous programme.
 8.5: Baritone solo—Mr. A. G. Thompson, "Grendon Fair" (Marie).
 8.9: Violin solo—Miss Irene Morris, "Gondaliera" (Bridge).
 8.14: Soprano solo—Miss Hilda Hutt, "Spring's Awakening" (Sanderson).
 8.18: Clarinet solo—Mr. S. E. Munday, "On the Sea Shore" (Mendelssohn).
 8.23: Vocal quartet—Dulcet Quartet, "Come to the Fair" (Martin).
 8.27: Instrumental trio—Christchurch Broadcasting Trio, "Allegro," from "Horn Trio" (Brahms).
 8.36: Tenor solo—Mr. T. G. Rogers, "Beloved, It Is Morn" (Aylward).
 8.42: Euphonium solo—Mr. S. N. Crisp, "Broken Dreams" (Ricordi).
 8.47: Contralto solo—Miss Nellie Lowe, "The Lilac Cotton Gown" (Hill).
 8.51: Sentimental recital—Miss K. O'Brien, "Patchwork Philosophy" (MS.).
 8.57: Weather forecast.
 8.59: Overture.
 9.5: Baritone solo—Mr. A. G. Thompson, "I Know of Two Bright Eyes" (Clutnam).
 9.9: Violin solo—Miss Irene Morris, "Scherzo" (Dittersdorf-Kreisler).
 9.14: Soprano solo—Miss Hilda Hutt, "Love the Pedlar" (German).
 9.18: Clarinet solo—Mr. S. E. Munday, "Nuit d'Ete" (Pillivestre).
 9.25: Tenor and contralto duet—Miss Nellie Lowe and Mr. T. G. Rogers, "The Spider and the Fly" (Smith).
 9.27: Instrumental trio—Christchurch Broadcasting Trio, (a) "Romance" (Sibelius); (b) "Gavotte" (Le Clair).
 9.37: Tenor solos—Mr. T. G. Rogers, (a) "Bombardier" (Rawlings); (b) "To Daisies" (Quilter).
 9.41: Euphonium solo—Mr. S. N. Crisp, "The Devout Lover" (White).
 9.46: Contralto solo—Miss Nellie Lowe, "A Spirit Flower" (Tipton).
 9.50: Humorous recital—Miss K. O'Brien, "The First Quarrel" (MS.).
 10.5: Vocal quartet—Dulcet Quartet, "Traumerie" (Schumann).
 Close down.

4YA, DUNEDIN (463 METRES), WEDNESDAY, JUNE 27.

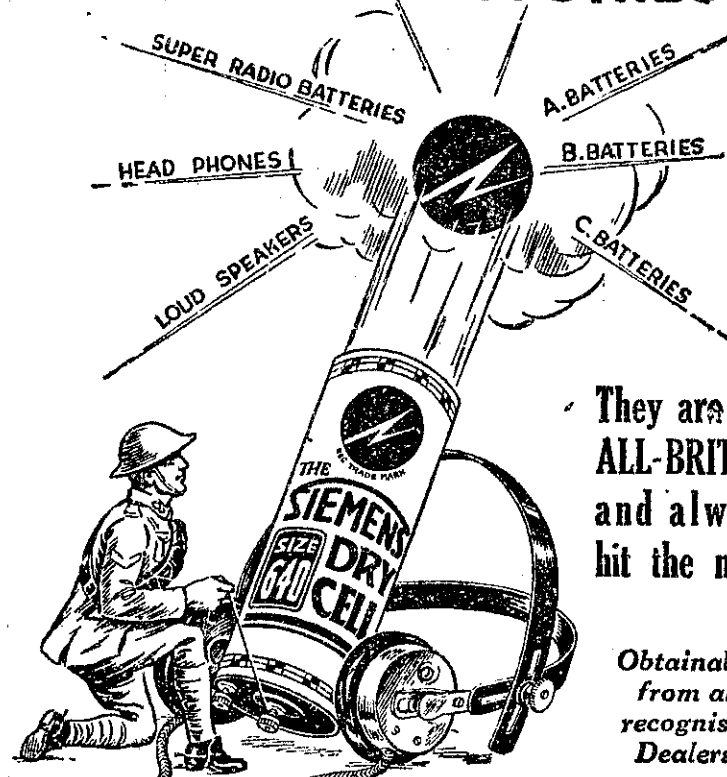
SILENT DAY.

Thursday, June 28

1YA, AUCKLAND (333 METRES), THURSDAY, JUNE 28.

- 3 p.m.: Afternoon session—Selected studio items.
 3.30: Lecturette on "Gas Cooking," by a representative of the Auckland Gas Company.
 3.45: Selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Selected studio items.
 4.25: Sports results.
 4.30: Close down.
 6.0: Children's session—Peter Pan, assisted by Bayfield School Choir, Choir, "Shepherd's Song" (Abb); recitation, Cousin Shirley, "Big Steamers" (Kipling); song, Cousin Jean, "The Gift" (Bertrand). Letters and birthdays. Choir, "The Boat Song" (Steel); song, Cousin Gladys, "My Task" (Harris). Choir, "Good Night" (Mozart). Story-time.
 7.15: News and reports. Book review.
 8.0: Chimes.
 8.1: Orchestral selection—Record, "Marche Slave" (Tchaikowsky).
 8.9: Vocal quartet—Mr. Barry Coney's Quartet, "Departure" (Mendelssohn).
 8.13: Instrumental trio—Auckland Trio, "Trio, Op. 56, Finale" (Reissiger).
 8.21: Contralto solo—Miss Martha Williamson, "Ships that Pass in the Night" (Stephenson).
 8.25: Saxophone selections—Record, (a) "Adorable" (Wynburn); (b) "Gloria" (King).
 8.31: Baritone solos—Mr. Barry Coney, (a) "The Carpet" (Sanderson); (b) "None but an Aching Heart" (Tchaikowsky).
 8.39: Instrumental selections—Ingall's Hawaiian Orchestra, (a) "Director March" (Read); (b) "Lament of the Southern Seas" (Field).
 8.47: Soprano solos—Miss Dorothy Yould, (a) "Death and Life" (Augener); (b) "Sweet, Early Violets" (Sherrington).
 8.54: Recital—Mr. Thomas Harris, scene from "As You Like It," "Touchstone and William" (Shakespeare).
 8.58: Pianoforte solo—Mr. Cyril Towse, "Rondo in E Flat Major" (Field).
 9.2: Vocal and humour—The Asquiths, thirty minutes' drawing-room entertainment.
 9.32: Orchestral selection—Record, "Finlandia" (Sibelius).
 9.36: Tenor solos—Mr. G. C. Queen, (a) "Pleading" (Elgar); (b) "A Dream" (Bartlet).
 9.43: Instrumental trio—Auckland Trio, selection from "Carmen" (Bizet).
 9.50: Contralto solo—Miss Martha Williamson, "I Heard You Go By" (Wood).

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IT has been a ding-dong contest between 2BL, Sydney, and 2FC, Sydney, for supremacy during the past couple of weeks, so far as reception goes in New Zealand. Some listeners report that on the average 2BL is the louder over here, while others give the palm to 2FC. This difference may be attributed to the receiving equipment. Some sets have a "peak" round about the wave-length of 2BL, and others get the best results on a longer wave-length.

WELLINGTON listeners enthuse over daylight reception of 3YA, Christchurch. In certain localities it is almost three-quarters the volume of 2YA, Wellington, and there is no fading in the day-time. Heard in Wellington at night-time, 3YA's fading is of exceptionally brief duration. 1YA, Auckland, is now heard fairly well in Wellington during daylight, with the aid of multi-valve set.

SPLENDID reports are coming to hand regarding the "earth" system successfully adopted by a Yankee listener, and which was described a few weeks ago in the "Radio Record." A Hataitai listener lately complained to "Switch" that although he operated a set similar to that of a neighbour, he was unable to get anything like the volume from the Australian stations obtained by "the man across the street." "Switch" examined the said listener's installation, and found that he had his earth wire merely wrapped around a dirty water-pipe. The water-pipe was promptly scraped clean and the "earth" wire soldered to it. The result was astonishing to the listener.

"WHAT next?" (Berhampore) writes: "I see there is still a difference of opinion as to whether the cone loudspeaker is better than the horn type. What is your opinion?" There are good horn speakers, better than cones and vice-versa. I think the future will show that the exponential horn loudspeaker and the moving-coil cone loudspeaker will become the vogue for those who can pay from £10 to £20 for a high-class loudspeaker.

WHY does the announcer at 4QG, Brisbane, almost chant his words? I see his assistants have imitated him. It is all so unnatural and forced that one gets the idea that the show is very amateurish. From a standard of real programme art 4QG lags a long way behind the Melbourne and Sydney stations. Certainly Brisbane is a smaller city, but what about Adelaide? The South Australian stations produce much better programmes than 4QG.

A COMPARATIVE novice asked me the other day whether I was in favour of the "silent day" observed by 2YA, Wellington. As I habitually reach out for the Australian stations, and as my aerial is within 100-150 of 2YA'S aerial, I appreciate the "silent day," because I can pick up the Aussies without any interference from 2YA.

FOR goodness sake use a "C" biasing battery. An indignant listener brought me to his home to listen to the "rotten distortion" of 2YA, Wellington. He was using 90 volts "B" battery on his last audio valve and had no "C" battery. Although surprised at my advice to get a "C" battery put in to his circuit he carried out, and was even more surprised when he found that distortion had disappeared.

A FRIEND recently spilt some acid out of his wet "A" battery on to an expensive carpet. He endeavoured to save the carpet by quickly wiping up the acid, but, alas, within a few days a large hole appeared in the carpet. Moral: Always have a bottle of liquid household ammonia on hand. By prompt application of the ammonia a carpet can be saved.

FADA Radio



No Fada customers except satisfied customers

Programmes Continued

— Copyright —
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- 9.53: Instrumental selections—Ingall's Hawaiian Orchestra, (a) "Hawaiian Nights" (Lea and Roberts); (b) "Waikake Medley" (arr. by Barry Ingall); (c) "Bright Moon" (Lea and Roberts).
10.0: Humour—The Hebrew Two, "Happy Abe and Dismal Ike."
10.4: Vocal quartet—Mr. Barry Coney's Quartet, "MacGregor's Gathering" (Lee).
God Save the King.
N.B.—Special Vaudeville Numbers from the Embassy Theatre will be broadcast during the above programme.

2YA, WELLINGTON (420 METRES), THURSDAY, JUNE 28.

- 3 p.m.: Chimes of the G.P.O. clock.
3.1: Selected gramophone items.
4.30 and 4.55: Sports results to hand.
5.0: Close down.
6.0: Children's hour—Programme by members of the Junior Red Cross from Chilton House School. Choruses, duets. Birthday greetings and stories.
7.0: News session, market reports, and sports results.
8.0: Chimes of the G.P.O. clock.
Studio concert by the Band of the First Battalion, Wellington Regiment, under the conductorship of Lieut. J. B. Shardlow, assisted by 2YA artists.
8.1: March—Band, "The Challenge" (Calvert).
8.5: Vocal quartet—The Warblers, "When all the World's at Peace" (Grant). (Soloist, Mr. W. E. Elliott).
8.9: Selection—Band, "Maid of the Mountains" (Fraser-Simson).
8.19: Baritone solo—Mr. Harry Matthew, "The Little Old Garden" (Hewitt).
8.23: Cornet solo, with band accompaniment—Sergt. W. Bark, "Where My Caravan Has Rested" (Lohr).
8.27: Tenor solo—Mr. Stewart Nelson, "She Is Far from the Land" (Lambert).
8.31: Selection—Band, gems from "William Tell" (Rossini).
8.41: Bass solo—Mr. Thomas C. Wood, "Flower of the Desert" (Lohr).
8.45: Fantasia—Band, "Nursery Ditties" (Raymond).
8.51: Tenor solo—Mr. W. E. Elliott, "My Maori Maiden" (Lumsdaine).
8.55: March—Band, "Nauru" (Richards), (by special request of the R.S.A.).
8.59: Weather forecast.
9.1: Lecturette—Mr. Johannes Andersen, "Native Birds."
9.13: Waltz—Band, "Beautiful Blue Danube" (Strauss).
9.19: Tenor solo—Mr. Stewart Nelson, "I Heard You Singing" (Coates).
9.23: Selection—Band, "Sailor Songs" (Rimmer).
9.33: Vocal quartet—The Warblers, "Sweet Miss Mary" (Neidlinger). (Soloist, Mr. Stewart Nelson).
9.37: Humoresque—Band, "Slidin' Thro' the Rye" (Truman).
9.43: Bass solo—Mr. Thomas C. Wood, "The Lute Player" (Allitsen).
9.47: Fox-trot—Band, "Blue Skies" (Berlin), (by special request).
9.51: Vocal quartet—The Warblers, "The Rosary" (Nevin).
9.55: March—Band, "Our Chaplain" (Rimmer).
10.0: Close down.

3YA, CHRISTCHURCH (306 METRES)—THURSDAY, JUNE 28.

- 3 p.m.: Afternoon session—Selected studio items.
4.25: Sports results.
4.30: Close down.
6.0: Children's session—Chuckie and Aunt Pat. Birthday greetings, songs and stories. "Alice in Wonderland" story. Songs by Cousin Doris. Recitations by Cousin Bernie.
7.15: News session.
7.30: Talk—Mr. G. H. Holford, of the Board of Agriculture, "Linsed Growing."
8.0: Chimes and overture. Miscellaneous programme.
8.5: Soprano solos—Madame Gower-Burns, (a) "Prelude" (Enoch); (b) "The Wood Pigeon" (Lehmann).
8.11: Flute solo—Mr. W. Hay, "Serenade" (Lemmon).
8.16: Contralto and tenor duet—Mrs. Ann Harper and Mr. Harold Prescott, "Once More Returning" (Verdi).
8.20: Pianoforte solo—Miss Aileen Warren, "Valse Caprice" (Maughan Barnett).
8.25: Tenor solos—Mr. Harold Prescott, (a) "Lorraine" (Sanderson); (b) "Mountain Lovers" (Squire).
8.32: Instrumental Quintet—Bohemian Instrumental Quintet, "Two Characteristic Waltzes" (Cokeridge-Taylor).
8.42: Soprano and contralto duet—Grand Opera Duo, selected.
8.46: Flugel horn solo—Mr. E. N. Trenberth, "Because" (d'Hardelot).
8.50: Recitals—Miss Winifred Smith, (a) "Castles in the Air" (MS.); (b) "The Pathway of Gold" (Greene).
8.56: Weather forecast.
8.58: Overture.
9.5: Soprano solos—Madame Gower-Burns, (a) "Nymphs and Fauns" (Bemberg); (b) "Lift Thine Eyes" (Logan).
9.11: Flute solo—Mr. W. Hay, "La Cygne" (Saint-Saens).
9.15: Vocal trio (soprano, contralto and tenor)—Grand Opera Trio, "Memory" (Leslie).
9.19: Pianoforte solos—Miss Aileen Warren, (a) "Fantasia" (Chopin); (b) "Impromptu" (Chopin).
9.24: Tenor solos—Mr. Harold Prescott, (a) "Lord Randall" (Scott); (b) "Song of Thanksgiving" (Allitsen).
9.32: Instrumental Quintet—Bohemian Instrumental Quintet, (a) "Morris Dance" (German); (b) "Shepherds' Dance" (German); (c) "Torch Dance" (German).
9.42: Soprano and tenor duet—Grand Opera Duo, selection from "Merrie England" (German).
9.46: Flugel horn solo—Mr. E. N. Trenberth, "Der Liebestraum" (Hock).
9.52: Humorous recital—Miss Winifred Smith, "Jones Minor's Recitation" (MS.).
Close down.

4YA, DUNEDIN (463 METRES)—THURSDAY, JUNE 28.

- 7 p.m.: Town Hall Chimes.
7.2: Request gramophone concert.
7.40: News session.
8.0: Town Hall chimes.
8.1: Relay of orchestral music from the Octagon Theatre Orchestra, under the direction of Monsieur De Rose, Mus. Bac.
8.11: Light soprano solos—Miss Billie Lorraine, (a) "That's a Good Girl" (Berlin); (b) "My Cutey's Due" (Von Tilzer).

GLASS is not so widely used as other panel materials because of the difficulty of working it. A glass panel certainly adds a note of novelty to the set and is very nearly as good an insulator as the best ebonite. With glass panels the difficulty of drilling holes in such a hard and brittle material is a stumbling block to many. However, special outfits for glass drilling are now sold, and these should go far to assist the enterprising amateur. The best raw material is English plate-glass, about 3-16 in. thick. This can be obtained cut to size with the edges smoothed down. Drilling holes in glass is not difficult with the proper tools, success depending on care and patience. The bit is usually a piece of very hard steel with a sharp triangular point, the use of a lubricant, such as camphor dissolved in turpentine, being a necessity.

OLD gramophone records make excellent insulating brackets and the like. They also have the advantage of being shaped to the desire of the experimenter, by soaking in warm water till soft. When shaped and cooled, the bracket or panel will be quite solid. The cylindrical records used on the old-fashioned Edison machine also make excellent formers for your coils. Holes may easily be pierced in them for wires by means of a hot piece of round bus-wire.

UNDOUBTEDLY the best material for baseboards is plywood in some form or other. A piece of plain wood is rightly unsatisfactory. Unless very well seasoned and dry, it is bound to curl, throwing the panel out of alignment and causing a bad fit in the cabinet. For practically all classes of receivers a piece of six-ply, which usually has a thickness of 3-8 in., is the ideal material. It is easy to work, extremely strong, remains perfectly flat, and does not split even if large screws are put into the edge. This material, it has been suggested, should be standardised for all baseboards in wireless receivers.

GOLD crayon rubbed into the engravings of your panel gives an excellent finish. Enough should be rubbed into the scratch to make a clear marking, the remainder being rubbed off carefully.

PROBABLY the simplest test of all to ascertain whether the current supply is direct or alternating is simply to take any bright, straight object such as a metal pencil, and, standing in the light of an electric lamp, to move the object to and fro fairly rapidly. If the current is alternating you will get a "kinema" effect, and will be conscious not of a single pencil but of a row of pencils side by side. This test requires just a little practice, but once you get the idea you can instantly distinguish A.C. from D.C. even by means of the light reflected in this way from your finger nails, moving the hand to and fro fairly rapidly. A further test is to connect a high-resistance loud-speaker across the mains and notice if there is a low hum or drone. This will be obtained with alternating current, whereas with direct current there may be a fairly high-pitch note, which is due to commutator ripple.

MR. F. A. PENNINGTON, representing the Radio Dealers' Association and the Broadcast Listeners' League of South Australia, went to Melbourne recently for the purpose of assuring 3LO Melbourne of the heartiest support and co-operation in the event of the license to erect a broadcasting station in Adelaide being granted by the Department. The application for such license, which was first made some six months ago, has recently been renewed. Mr. Pennington also waited upon Mr. J. Malone, Director of Wireless, and requested that the broadcasting rights in South Australia should be transferred from Central Broadcasters, Ltd. (5CL) to 3LO Melbourne. Mr. Malone promised to have the request brought before the department for consideration.

THE inhabitants of Greenland are better informed than they used to be concerning the doings of the outer world. The station at Godhavn now broadcasts a daily news bulletin at 5 o'clock in the evening, and is heard all over North Greenland and in most of South Greenland. According to a correspondent, the Eskimos are showing a marked interest in wireless apparatus.

A BROADCAST receiver cannot be used for short wave reception unless a special adapter is used. This adapter is plugged into the detector socket of the set, thus using audio stages only. If the receiver has one or more radio frequency stages, these valves must be removed.

TWO New York Y.M.C.A. radio scholarships have been created for administration by the Veteran Wireless Operators' Association, according to an announcement by J. E. J. Maher, president of the veteran organisation. Successful candidates will receive ten weeks of intensive training in the construction, repair and maintenance of radio apparatus at the East Side Y.M.C.A. radio school.

- 8.18: Humour—Mr. Keith Stronach, humour.
8.23: Piano-accordion solo—Mr. E. Heaney, "Villa Rosa" (Denza).
8.26: Light soprano solos—Miss Jacqueline Burke, (a) "Every Bit of Loving in the World" (Simpson); (b) "Bird of Blue" (Simpson).
8.33: Humorous sketch—Major F. H. Lampen and Miss Billie Lorraine, "Overheard in a Cabaret."
8.50: Marimba solo—Mr. H. Dalziel, "Black and White Rag" (Botsford).
8.54: Popular song—Mr. Billy Gay, "Baby Your Mother" (Burke).
8.58: Novelty piano solos—Mr. T. V. Anson, selected.
9.4: Weather forecast.
9.6: Popular song—Miss Vanda Duncan, "What Are You Waiting For, Mary?" (Donaldson).
9.10: Piano-accordion and Marimba duets—Messrs. Heaney and Dalziel, (a) "Repaz March" (Sweeley); (b) "Breeze" (Hanley).
9.17: Light soprano solo—Miss Jacqueline Burke, "Dark Grows the Sky."
9.21: Humorous recital—Major F. H. Lampen.
9.26: Marimba solo—Mr. H. Dalziel, "When It's Lovetime in Hawaii" (Heagney).
9.29: Popular songs—Mr. Billy Gay, (a) "Ukulele Dream Girl" (Low); (b) "Moonlit Waters" (Brown).
9.36: Humour—Mr. Keith Stronach, humour.
9.41: Novelty piano solo—Mr. T. V. Anson, selected.
9.44: Popular songs—Miss Vanda Duncan, (a) "Honeybunch" (Friend); (b) "Me and My Shadow" (Dreyer).
9.51: Piano-accordion solo—Mr. E. Heaney, selection of Irish Melodies.
10.0: Close down.

Friday, June 29

1YA, AUCKLAND (333 METRES)—FRIDAY, JUNE 29.

- 3 p.m.: Afternoon session—Selected studio items.
4.0: Literary selection by the announcer.
4.8: Selected studio items.
4.25: Sports results.
4.30: Close down.
6.0: Children's session—Nod. Vocal trio, Cousins Flora, June and Annie, "Sing a Song." Recitation, Cousin Moira, "Bride's First Call on the Butcher." Trio, Cousins Flora, June and Annie, selected. Talk, Rev. Chandler, "Children in Other Lands." Recitation, Cousin Claire, "Little Bell and the Captain." Story-time.
7.15: Talk on "Motoring," by Mr. Geo. Campbell.
7.30: News and market reports.
8.0: Chimes.
8.1: Orchestral selection—Record. Overture and selection from "Carmen" (Bizet).
8.8: Vocal quartet—St. Andrew's Quartet, "Queen of the Night" (Smart).
8.11: Contralto solo—Miss Phyllis Gribben, "For Every Day" (Kennedy-Russell).
8.14: Instrumental trio—Auckland Trio, "Trio in F Major—Finale" (Gade).
8.22: Tenor solo—Mr. Robert Peter, "Tramping Song" (Fraser).
8.26: Instrumental quartets—The Internationals, (a) "Are You Happy" (Ager); (b) "Whoo, You, Whoo?" (Ager).
8.32: Novelty—The Wizard, "Word Wangles."
8.59: Vocal quartet—St. Andrew's Quartet, "Now is the Month of Maying" (Morley).
8.53: Mandolin Band selection—Record. Prelude to Act 1 of "La Traviata" (Verdi).
8.56: Bass solo—Mr. Arthur Colledge, "Hybrias the Cretan" (Elliott).
8.59: Weather forecast.
9.0: Cello solo—Miss Molly Wright, "Sonata" (Sammartini).
9.5: Comedy sketch—Auckland Comedy Players, under the direction of Mr. J. F. Montague, "Going Away" (one-act comedy sketch).
9.25: Instrumental trio—Auckland Trio, "Dance of the Hours" from "La Gioconda" (Ponchielli).
9.33: Soprano solo—Miss Lola Solomon, "Blue Pidgeon" (Needham).
9.37: Mandolin Band selection—Record. Prelude to Act 3 of "La Traviata" (Verdi).
9.41: Humorous sketch—Mr. J. F. Montague, "Getting Engaged."
9.48: Contralto solo—Miss Phyllis Gribben, "When a Merry Maiden Marries" (Sullivan).
9.52: Instrumental quartets—The Internationals, (a) "If I Can't Have You" (Donaldson); (b) "Hallelujah" (Youman); (c) "Together We Two" (Berlin).
10.0: Vocal quartet—St. Andrew's Quartet, "A Regular Royal Queen" (Sullivan).
10.4: God Save the King.

2YA, WELLINGTON (420 METRES)—FRIDAY, JUNE 29.

- 3 p.m.: Chimes of the General Post Office Clock, Wellington.
3.1: Selected gramophone items.
4.30: Sporting results.
4.55: Sports results.
5.0: Close down.
6.0: Children's hour—Uncle Ernest and Party.
7.0: News session, market reports and sports results.
7.40: Lecturette—Miss Gladys Russell, "Poems of the People."
8.0: Chimes of the General Post Office Clock, Wellington.
8.1: Overture—The Orchestra, "Private Ortheris."
8.10: Quartet—The Apollo Singers, "When the Swallows Homeward Fly" (Abb).
8.14: Hawaiian Trio—Palmer's Hawaiian Trio, (a) "Kohala March" (MS.); (b) "Kailua Waltz" (Smith).
8.28: Baritone solos—Mr. S. E. Rodger, (a) "The Sweetest Flower That Blooms" (Hawley); (b) "The Link Divine" (Piccolomini), (with 1st and 2nd violin accompaniment).
8.35: Instrumental Trio—Symons-Ellwood-Short Trio, "Colonial Song" (Grainger).
8.45: Humour—The Two Boiled Owls, "2H.O.T." (original).
8.52: Cornet solo with orchestral accompaniment—Mr. H. Berry and orchestra, "Cleopatra."
8.58: Weather forecast.
9.0: Contralto solos—Miss Hilda Chudley, (a) "After the Lonely Day" (Ronald); (b) "The Little Silver Ring" (Chaminade).
9.7: Instrumental—The Orchestra, request numbers.
9.18: Tenor solos—Mr. E. W. Robbins, (a) "O the Month of May" (Quilter); (b) "Waiaata Poi" (Hill).
9.20: Hawaiian trios—Palmer's Hawaiian Trio, (a) "Dream Kisses" (Jerome); (b) "Yale Blues" (Ellis).

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Peppy jazz and queer quips from America.

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Choice of Valves for your Receiver

"AN increase in efficiency of as much as 75 per cent. can be brought about by the careful choice of the correct type of valve for each socket in a Broadcast Receiving Set."

THIS was the expressed opinion of a well-known Radio expert, in answer to the question: "Are there too many types of valves on to-day's market?" The expert further went on to say that the haphazard selection of valves either by home constructors of sets, or by special set manufacturers, was in a good measure responsible for much of the dissatisfaction one hears expressed in regard to the value of broadcast reception as a medium of entertainment. "Purity of reproduction—a most essential factor—can only be obtained if each valve is capable of performing all amplification duties assigned to it without overloading, and consequently producing distortion. It is quite easy to see that the last, or output valve in a receiving set is called upon to handle as much as three and four times the energy of the valve preceding it, and this state of affairs exists all the way back until we arrive at the first valve, which brings about the initial amplification of the signals received in the Broadcast Station. The motto should then be: 'Let each valve in each socket work in comfort.'"

POWER VALVES.

"It is a generally accepted fact that purity of reproduction in any Multi-valve Broadcast Receiver cannot be obtained unless a special valve is used in the last or output socket which feeds the loudspeaker. These valves are commonly called "Power Valves," which is perhaps a misnomer, because in actual operation, the substitution of a power valve for a general purpose type does not add to the volume of the reproduction, but sweetens the tone, and gives

increased clarity. Again, it is useless to attempt to use a Power Valve unless the makers' instructions are followed as regards correct values of plate and grid-bias potentials."

PHILIPS RADIO have for some time past specialised in the production of highly efficient Power Valves, designed to suit practically any type of receiver, and to handle, without distortion, sufficient energy to work a loudspeaker at comfortable or very great volume.

In the 6-volt series, there is the B605 for medium power and the C603 where larger energy is to be handled, while in the 4-volt series, there are three types, which, placed in the order of handling capacity, are B409, B405, and B403.

The B405 is the newest production, possessing the remarkably high slope (mutual conductance) of 2.4 mA/V!

MATCHING IMPEDANCE

TALKING of valves in general, the impedance of each valve, relative to the impedance of the circuit into which it is feeding energy, is also an important point, and has direct bearing upon the overall radio frequency gain particularly.

Philips Radio produces so many types of valves of different impedances and amplification factors, that a happy choice can be made, to give maximum efficiency in practically any type of circuit or receiver.

The general purpose types—A409 (4-volt) and A609 (6-volt)—suit the radio frequency detector and the first audio frequency stages of most American-built receivers (on account of the relatively low impedances of the primary windings of the radio frequency transformers usually fitted), while for some types of English receivers, as described in English journals, the higher impedance type of valve, such as Philips A425 (4-volt) and A630 (6-volt) are recommended. These are also very excellent for resistance capacity audio amplification.

SPECIAL DETECTORS.

SPECIALLY-BUILT valves, having a high degree of sensitivity, for use in the detector socket of any receiver—namely, Philips "Four-fifteen" (A415—4-volt) and "Six-fifteen" (A615—6-volt) bring about an improvement in gain, tone and volume, on account of the higher amplification obtainable during rectification, while the impedance is still kept very low. A very special process in manufacture, known only to the Philips Laboratories, enables the production of these remarkable valves.

SCREEN-GRID A.C. VALVES

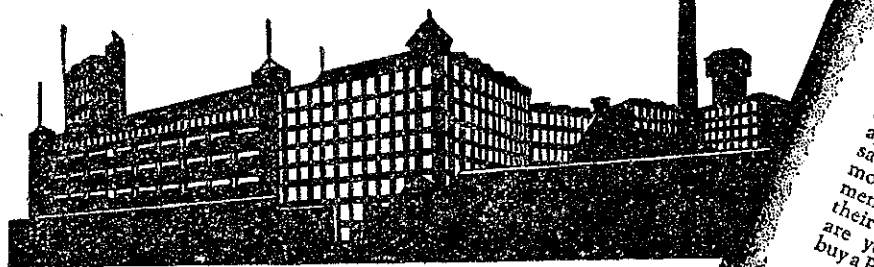
AS is only to be supposed,

Philips have not been behind in producing highly efficient screen-grid and A.C. types. They have even gone further than any other valve manufacturers, and samples have already arrived in this country of A.C. operated valves, working on the screen-grid principle. These are in addition to the ordinary battery operated screen-grid, which, from the characteristics given and tests made are probably superior to any other type.

In A.C. operated valves, Philips are producing several types, both with directly heated filament and indirectly heated cathode. The voltages at which they work are respectively 1 volt for the former, and 2 volts for the latter. A shipment of these valves is expected to arrive in N.Z. very shortly, and there are several other surprise valves on the Philips programme which will be available here this season.

Why most radio sets are equipped with

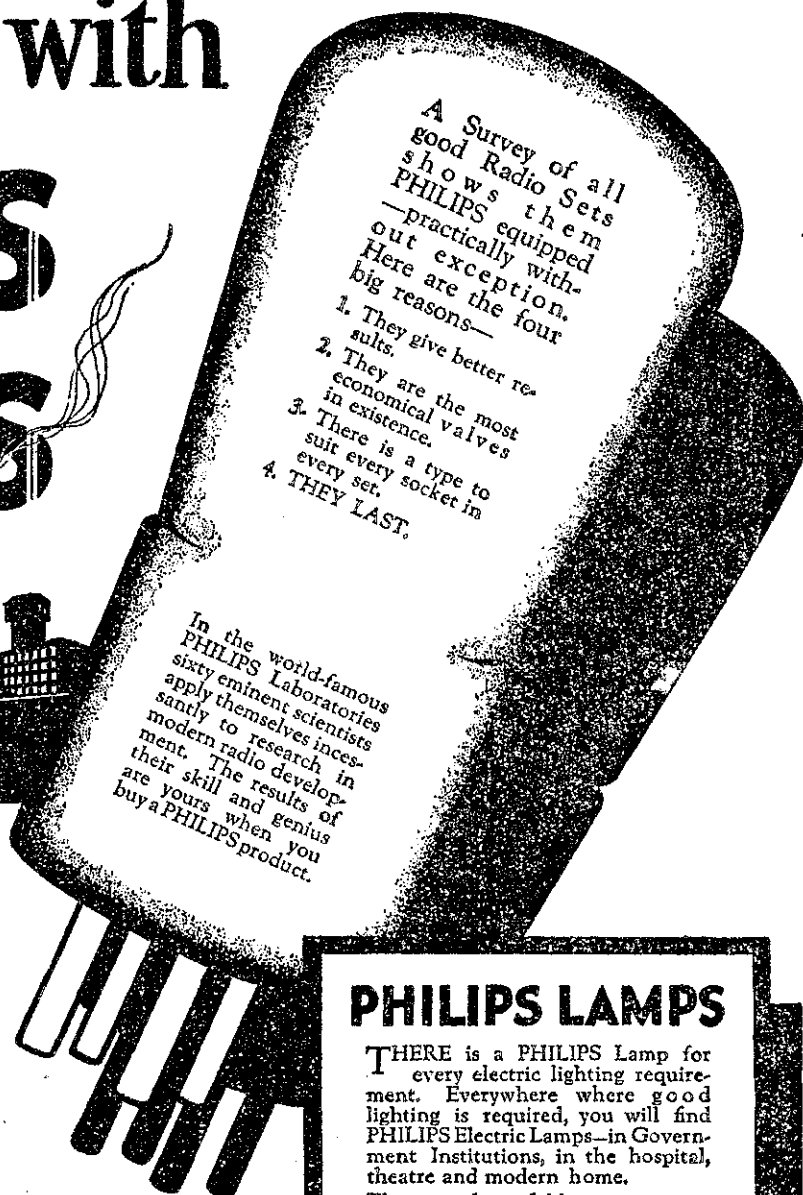
PHILIPS MIGHTY "MINIWATT" VALVES



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Programmes Continued

— Copyright —
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- 9.27: Soprano solo—Miss Moana Goodwill, "Believe Me If All Those Endearing Young Charms" (Moore).
9.31: Novelty—The Two Boiled Owls, (a) "Under the Clover Moon" (Bryan and Schwartz); (b) novelty.
9.38: Instrumental—The Orchestra, selection, "No, No, Nanette" (Youman).
9.48: Quartet—The Apollo Singers, "Allan Water" (Button).
9.52: Instrumental—The Orchestra, latest dance novelties.
10.2: National Anthem.

3YA, CHRISTCHURCH (306 METRES)—FRIDAY, JUNE 29.

- 3 p.m.: Afternoon session—Selected studio items.
4.25: Sports results.
4.30: Close down.
6.0: Children's session—Big Brother. Bedtime stories and birthday greetings. Songs and choruses by pupils of Spreydon School.
7.15: News session.
8.0: Chimes and overture. Popular concert.
8.5: Bass solo (with orchestral accompaniment)—Mr. T. D. Williams, "The Floral Dance" (Moss).
8.9: Cello solo—Mr. Harold Beck, "As It Fell on a Summer Day" (Popper).
8.14: Soprano solo—Mrs. C. Dulleu, "Life is a Caravan" (Del Riego).
8.18: Saxophone solos—Mr. Munro, (a) "Tyrolean" (Holmes); (b) "Fantasia".
8.23: Tenor solo—Mr. W. Bradshaw, "I'll Sing Three Songs of Araby" (Clay).
8.27: Instrumental trio—Christchurch Broadcasting Trio, "Trio" (Hummel).
8.37: Contralto solo—Miss Belle Renant, L.A.B., "My Heart is Singing" (Sans Souci).
8.41: Humorous recitals—Mr. Hiram Dunford, (a) "The Disappearing Family" (MS.); (b) "A Story of a Pet Lion" (MS.).
8.45: Cornet and saxophone duet—Messrs. Munroe, "Serenade" (Schubert).
8.50: Contralto and bass duet—The Dinkum Duo, "O That We Two Were Maying" (Monckton).
8.54: Popular jazz music—Munroe's Orchestra, "Yale Blues" (Ellis).
9.1: Weather forecast.
9.2: Overture.
9.7: Bass solo—Mr. T. D. Williams, "The Gay Cavalier" (Breville-Smith).
9.11: Cello solo—Mr. Harold Beck, selected.
9.13: Soprano solos—Mrs. C. Dulleu, (a) "Laugh and Sing" (Drummond); (b) "Waiaia Maori" (Hill).
9.23: Popular jazz orchestral music—Munroe's Orchestra, (a) "Somewhere in Naples" (Zamecnik); (b) "The Doll Dance" (Brown).
9.31: Tenor solo—Mr. W. Bradshaw, "Ailsa Mine" (Newton).
9.38: Instrumental Trio—Christchurch Broadcasting Trio, ballet music from "Faust" (Gounod).
9.46: Recital—Mr. Hiram Dunford, "The Bells" (E. A. Poe).
9.51: Contralto solo—Miss Belle Renant, L.A.B., "Now is the Time to Love" (Gounod).
9.54: Popular jazz orchestral music—Munroe's Orchestra, (a) "Fifty Million Frenchmen" (Fischer); (b) "Breeze" (Hanley).
10.2: Contralto and bass duet—The Dinkum Duo, "Nocturne" (Chaminade).
Close down.

4YA, DUNEDIN (463 METRES), FRIDAY, JUNE 29.

- 3 p.m.: Town Hall chimes.
3.1: Results to hand of All Blacks, tour.
3.2: Gramophone recital.
3.15: Talk on "Fashions" by a representative of the D.I.C., Ltd.
3.30: Relay of afternoon-tea music from the Savoy.
3.45: Studio music.
4.0: Relay of music from the Savoy.
4.15: Gramophone items.
4.25: Sports results to hand.
4.30: Close down.
6.0: Town Hall chimes.
6.1: Children's session—Aunt Sheila and Big Brother Bill. "Happy Folks' Anthem." Song, "The Yeomen of England" (Squire). Song, "Kentuck's Good Morning" (Van Alstyne). Song, "Before the Sun" (Coates). Song, "The Goslings" (Bridge). Letters and birthdays. Recital, Cousin James, selected. Song, "Merry are the Bells" (Shaw). Story for Older Members of the Family. Song, "A Catastrophe." Song with descant, "All Through the Night" (Welsh air).
7.15: News session.
7.30: Address by a member of the Otago Tramping Club, "A Walk Around Dunedin."
8.0: Town Hall chimes.
8.1: Orchestral selection.
8.10: Bass solos—Mr. Neil Black, (a) "Sleep and the Roses" (Tate); (b) "Mother MacInnes" (Ball).
8.17: Flute solo—Mr. Chas. Gibbons, "La Barbadienne" (Barwood).
8.23: Contralto solo—Miss Dorothy Skinner, "I Heard You Singing" (Coates).
8.26: Recital—Miss Nancy Abernethy, "Mrs. Pinkerton's Bonnet."
8.31: Pianoforte solo—Mrs. Ernest Drake, "Fantasia" (Bach).
8.36: Bass solo—Mr. Neil Black, "The Last Muster" (Pontet).
8.40: Flute solo—Mr. Chas. Gibbons, "Boccaccio" (Suppe).
8.46: Contralto solos—Miss Dorothy Skinner, (a) "Four Ducks on a Pond" (Needham); (b) "Four by the Clock" (Mallinson).
8.51: Recitals—Miss Nancy Abernethy, (a) "The Hero of the Commune" (Anon.); (b) "My Day Out" (Herbert).
9.0: Weather forecast.
9.3: Relay of dance music from the Savoy by Alf. Carey and his Orchestra.
10.3: Close down.

Saturday June 30

1YA, AUCKLAND (333 METRES), SATURDAY, JUNE 30.

- 2.45 p.m.: Relay description of representative Rugby football match from Eden Park, Auckland versus Waikato.
4.30: Close down.
6.0: Children's session—Cinderella. Pianoforte solo, Cousin Catherine, "Bagatelle" (Beethoven). Song, Cousin Dawn, "Peter Rabbit" (Roberts). Story for tiny tots. Letters and birthdays. Pianoforte solo, Cousin Catherine, "Allegro" (Schumann). Proverb puzzle, Cinderella and Sunny Jim. Song, Cousin Dawn, "Little Mary Fawcett." Story-time.
7.15: News and sports results.
8.0: Chimes.
8.1: Orchestral selection—Record, "Tangled Tunes" (arr. Ketelby).
8.3: Vocal one-step—Lyric Quartet, "The Wanderer" (arr. Lyric Four).
8.12: Vocal and instrumental—Bohemian Trio, "Louisiana" (Neat).
8.20: Tenor solo—Mr. Arthur H. Ripley, "Once Again" (Sullivan).
8.24: Wurlitzer organ selection—Record, "Charmaine" (Rapee).
8.28: Bass solo—Mr. Ernest Thomas, "A Chip of the Old Block" (Squire).
8.32: Humour—Mr. Alan McElwain, some humour.
8.37: Orchestral selection—Record, "Tangled Tunes" (arr. Ketelby).
8.44: Vocal quartet—Lyric Four, "Loch Lomond" (Aitken).
8.48: Vocal and instrumental—Bohemian Trio, (a) "Because I Love You" (Berlin); (b) "Hello, Bluebird" (Friend).

A WRITER in London "Popular Wireless" says:—"According to a report from Italy's most important newspaper, Signor d'Annunzio, the Italian poet and novelist, has become interested in broadcasting, and intends to propound a riddle to the world through the Milan microphone, and to give a prize to anyone who solves it. If life does not already hold enough riddles for you, here is your chance. Who first thought of making the holes in macaroni, and what is the use of them? In view of our climate, why did the Romans stay here (England) for several centuries? Signor d'Annunzio is welcome to those two."

PROGRESS towards the selection and adoption of a universal language was reported at the annual meeting of the International Auxiliary Language Association in New York. Speakers said that researches and experiments were being made in America and abroad, and that a larger group of consultants on linguistic research had been inaugurated. General James C. Harbord, President of the Radio Corporation of America, declared that international understanding and commerce would both be furthered by a neutral language for the world-wide exchange of ideas. Such a language, he said, would constitute a "yard stick" for communication, and would reduce the hesitancy with which many face the attempt to send or receive a message from a person speaking a foreign tongue. His views were supported by Dr. Alfred N. Goldsmith, Chief Broadcast Engineer of the Radio Corporation of America.

THE appearances are that the listening set of the future will become less like a scientific instrument than formerly; that it will be at once a pleasing article of furniture and a musical machine simple of operation, inexpensive of maintenance, and capable of reliability and readily reproducing the music and speech received by it. One of the certain signs is the disappearance of batteries; their place is being taken gradually by arrangements for obtaining power from the house lighting service. That desirable facility will of course be denied to persons who must use their sets in places where no electric light services are provided.

2FC LIMITED, Sydney, has changed its address. It is no longer situated on the roof of Farmer and Company at the north-western corner of Market and Pitt Streets, but has moved across Pitt Street to Her Majesty's Building. The change has been dictated by the considerable enlargement of the station's activities and the building alterations of Farmer and Co. In the new quarters 2FC occupies a large portion of two floors with special large studios specially constructed in the light of past experience for radio work. On the second floor of Her Majesty's Building are situated the filing room, general office, Mr. Anderson's (studio manager) office, Mr. Williams's (publicity manager) office, accountant's office, board room, and No. 3 studio. The rehearsal room, control room, and Nos. 1 and 2 studios are on the third floor.

THE aerial has two distinct functions to perform. It has to pick up the wireless radiation sent out from the broadcasting station and it has to do a certain amount of tuning. Only a portion of the radiation broadcast from a transmitting aerial can possibly reach the receiving aerial. This important function is best achieved when the aerial is arranged so that it is free from the screen effect of neighbouring objects, of which trees and metal-framed buildings are the most to be avoided.

A .001 fixed capacity shunted across the primary winding of the first stage A.F. transformer will improve tone considerably if you have not one there already. By employing a condenser in such a position as this, the radio frequency currents are by-passed and kept in their right path, and are not allowed to set up eddy currents in the windings of the transformers. Such arresting of radio frequency currents does much towards the improvement of tone.

PCJJ, the Dutch station at Eindhoven, Holland, is to broadcast on short waves a description of the Olympic Sports. In order that Australian listeners may follow their favourites, these transmissions will be picked up by 2BL, Sydney and re-broadcast on their usual wave-length. Incidentally, PCJJ was the first European station to be rebroadcast in Australia. This feat was accomplished fifteen months ago.

THE superiority of modern radio apparatus to the human ear, considered as a listening device, was demonstrated recently in England during an attempt to broadcast the song of that seldom-heard bird, the nightingale. A feathered songster far off in the distance burst into song while the experiment was going on. The engineers at the microphone heard nothing, but the song was picked up by the especially sensitive microphone that was being used and was broadcast, without the knowledge of the engineers.

- 8.55: Tenor solo—Mr. Herbert Richards, "I Know of Two Bright Eyes" (Clutsam).
8.59: Weather forecast.
9.0: Wurlitzer organ selection—Record, "The Doll Dance" (Brown).
9.4: Humour—Mr. A. McElwain, more humour.
9.9: Vocal quartet—Lyric Four, "Away to Rio" (sailors' chanty), (Bartholomew).
9.14: Relay of dance music by the Internationals from Dixieland Cabaret (under the direction of Mr. Clyde Howley).
11.0: God Save the King.

2YA, WELLINGTON (420 METRES), SATURDAY, JUNE 30.

- 3 p.m.: Chimes of the G.P.O. clock.
3.1: Relay description of football match from Athletic Park.
6.0: Children's session—Aunt Dot and Uncle Toby, songs, mouth-organ solos, stories, birthday greetings. Radio Dream Trip.
7.0: News session, market reports, and sports results.
7.40: Lecturette—Mr. Edwin Dennis, A.R.C.M., "The Value of Voice Culture in Every Walk of Life" (under the auspices of the Workers' Educational Association).
8.0: Chimes of the G.P.O. clock.
8.1: Overture—The Orchestra, "Wanderer's Ziel."
8.11: Vocal quartet—Melodie Four, "Stars of the Summer Night" (Johnson).
8.16: Italian mandolin solos—Mr. Lad Haywood, (a) "Fifty Million Frenchmen Can't Be Wrong" (Fischer); (b) "Nothin'" (Handman).
8.23: Light vocal solo—The Glad Idlers, "If You'll Let Me" (Whidden).
8.28: Jazz piano solos—(a) "If You're in Love You'll Waltz"; (b) "One o'clock Baby."
8.34: Humour—Mr. Geo. Titchener, "Now I Mean to Propose" (Reynolds).
8.39: Bass solo—Mr. W. W. Marshall, "Wi a Hundred Pipers" (traditional).
8.43: Vocal duet—Messrs. F. Bryant and R. S. Allwright, "The Well of St. Keyne" (Newton).
8.47: Selection—The Orchestra, "Hungarian Rhapsody" (Liszt).
8.54: Tenor solo—Mr. Sam. Duncan, "Love, Could I Only Tell Thee" (Capel).
8.58: Weather forecast.
9.0: Request items—The Orchestra.
9.8: Vocal quartet—Melodie Four, "Baby Feet Go Pitter, Patter" (arr. Melodie Four), (sung by request).
9.12: Baritone solo—Mr. R. S. Allwright, "The Old Black Mare" (Squire).
9.17: Italian mandolin solos—Mr. Lad Haywood, (a) "Miss Annabelle Lee" (Berlin); (b) "Put Your Arms Where They Belong" (Berlin).
9.25: Light vocal—The Glad Idlers, medley of popular hits.
9.32: Humour—Mr. Geo. Titchener, "In that Happy Land."
9.37: Song—The Orchestra, "Love's Old Sweet Song" (Molloy).
9.43: Tenor solo—Mr. F. Bryant, "A Song and a Dream" (Cadman).
9.47: Vocal quartet—Melodie Four, "In Absence" (Buck).
9.51: Selection—The Orchestra, "Queen High" (Gensler).
10.1: Dance programme, with vocal choruses by the Glad Idlers.
11.0: Close down.

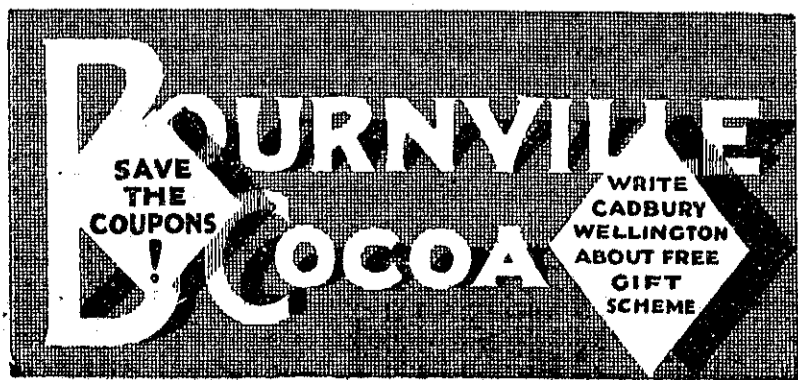
3YA, CHRISTCHURCH (306 METRES)—SATURDAY, JUNE 30.

- 2.45 p.m.: Relay description of Rugby football match from Lancaster Park.
6.0: Children's session—Uncle Sam and Aunt May. Bed-time stories, songs and birthday greetings.
7.15: News session.
7.30: Sports results.
8.0: Chimes and overture. Vaudeville programme.
8.5: Tenor solo—Mr. David McGill, "Little French Baby" (Grant).
8.9: Mouth-organ solos—Mr. J. F. Peters, (a) "Marche Militaire" (MS); (b) Popular melodies.
8.14: Happy songs at the piano (with ukulele)—The Joyous Trio, happy songs and hits (MS.).
8.22: Duet of jazz piano novelties—Misses Muriel Johns and Dorothy Johnson, popular and latest jazz numbers (MS.).
8.27: Soprano solo—Miss Mabel Thomas, "Tis the Harp in the Air" (from "Maritana") (Wallace).
8.31: Banjo solo—Mr. George Dunn, "Telling the Birds, Telling the Bees" (Brown and Friend).
8.36: Scottish song—Mr. Bracey Wilson, "Up in Scotland" (Lauder).
8.40: Instrumental trios—Christchurch Broadcasting Trio, (a) "Allegro" (Gade); (b) "Scherzo" (Gade).
8.48: Recital (an Aussie story)—Mr. Sidney Comfort, "A Tail of the Horse-stralian Bush" (own arr.).
8.54: Soprano and tenor duet—Miss Mabel Thomas and Mr. David McGill, "Charmaine" (Roper and Pollock).
8.58: Weather forecast.
9.0: Overture.
9.5: Tenor solo—Mr. David McGill, "Siciliana" (from "Cavalleria Rusticana") (Mascagni).
9.9: Mouth-organ solos—Mr. J. F. Peters, medley of old-time tunes (MS.).
9.14: Happy songs at the piano (with ukulele)—The Joyous Trio, "Brightest of Joyous Songs" (MS.).
9.22: Jazz piano novelty duets—Misses Muriel Johns and Dorothy Johnson, latest jazz (MS.).
9.27: Soprano solo—Miss Mabel Thomas, "The Dream Boat" (Novello).
9.31: Banjo solos—Mr. George Dunn, (a) "Drifting and Dreaming" (Alstyne); (b) "Don't Sing Aloha When I Go" (Moret).
9.38: Scottish song—Mr. Bracey Wilson, "Roamin' in the Gloamin'" (Lauder).
9.42: Instrumental trios—Christchurch Broadcasting Trio, (a) "Canzonetta" (Mathias); (b) "Dance" (Scharwanka).
9.50: Burlesque lecture—Mr. Sidney Comfort, "Never Look a Gift Horse in the Mouth" (own arr.).
9.53: Soprano and tenor duet—Miss Mabel Thomas and Mr. David McGill, "The Garden of Your Heart" (Dorel).
9.59: Dance music until 11 p.m.
11.0: Close down.

4YA, DUNEDIN (463 METRES), SATURDAY, JUNE 30.

- 2.45 p.m.: Relay description of Rugby football match from Carisbrook ground.
5.0: Close down.
7.15: News session.
7.30: Address on "The Industrialisation of the East" by Mr. W. Boroman, M.A. (under the auspices of the Workers' Educational Association).
8.0: Town Hall chimes.
8.1: Relay of orchestral music from the Empire Theatre Orchestra, under the direction of Mr. Chas. Parnell.
8.11: Soprano solos—Miss Agnes Guy, (a) "Amber and Amethyst" (Carse); (b) "June Rapture" (Lehmann).
8.17: Cello solo—Mr. P. J. Palmer, "Romance" (Saint-Saens).
8.22: Bass solo—Mr. Tom Cooper, "The Company Sergeant-Major" (Sanderson).
8.26: Instrumental trios (violin, cello, and piano), (a) "Gavotte" (Gautier); (b) "Serenade to the Moon" (Espino).
8.34: Contralto solos—Miss Irene Hornblow, L.R.A.M., (a) "Home, Little Maori, Home" (Hill); (b) "Maori Slumber Song" (Te Rangipai).
8.40: Recital—Miss Molly Gallagher, F.T.C.L., "The Rehearsal" (Wiggins).
8.45: Violin solos—Mr. Harold Riddle, L.T.C.L., (a) "Berceuse" (Sammous); (b) "Gavotte" (Gossec).
8.51: Baritone solo—Mr. Arthur Langley, "Can't Remember" (Goatley).
8.54: Pianoforte solos—Mrs. Ernest Drake, L.A.B., (a) "Bruyeres" (Debussy); (b) "La Piccola" (Leschetzsky).
8.59: Weather forecast.
9.3: Relay of orchestral selections from the Empire Theatre.
9.13: Soprano solo—Miss Agnes Guy, "I Know a Bank" (Shaw).
9.15: Cello solo—Mr. P. J. Palmer, "Arlequin" (Popper).
9.20: Bass solos—Mr. Tom Cooper, (a) "The Floral Dance" (Moss); (b) "Youth" (Allitsen).
9.27: Instrumental trio (violin, cello, and piano)—"Andante" (Reissiger).
9.34: Contralto solo—Miss Irene Hornblow, "Little Coon's Prayer."
9.37: Recitals—Miss Molly Gallagher, (a) "Portia and Her Suitors," from "The Merchant of Venice" (Shakespeare); (b) "Of Course" (humorous monologue).
9.45: Violin solo—Mr. Harold Riddle, "Cavatina" (Henry).
9.50: Baritone solos—Mr. Arthur Langley, (a) "So Fair a Flower" (Lohr); (b) "World Was Once a Garden" (Lohr).
9.55: Relay of orchestral music from the Empire Theatre.
10.0: Close down.

Continued on page 14.)



Programmes Continued

Sunday, July 1

1YA AUCKLAND (333 METRES)—SUNDAY, JULY 1.

3 p.m.: Afternoon session—selected studio items.
4.0: Literary selection by the Announcer.
4.8: Selected studio items.
4.30: Close down.
6.0: Children's song service, conducted by Uncle Leo, assisted by Cousins from Beresford Street Sunday School.
6.55: Relay of service from St. Matthew's Church—preacher, Rev. Canon C. H. Grant-Cowen; organist, Mr. J. H. Phillipot.
8.30: Relay of Municipal Organ Recital from Town Hall—grand organ selections; organist, Mr. Maughan Barnett.
9.30: God Save the King.

2YA WELLINGTON (420 METRES)—SUNDAY, JULY 1.

9 a.m.: Results of "All Blacks" tour to hand—selected gramophone items.
9.15: Close down.
6 p.m.: Children's song service, conducted by Uncle Ernest, assisted by St. Aidan's Sunday School Choir, Miramar.
6.55: Relay of evening service from Church of Christ, Vivian Street; preacher, Pastor W. G. Carpenter; organist, Miss Iris Mason; choirmaster, Mr. W. J. Mason.
8.15 (approx.): Relay of hand recital of the Wellington Municipal Tramways Band from His Majesty's Theatre; conductor, Mr. T. Goodall.
Close down.

3YA CHRISTCHURCH (306 METRES)—SUNDAY, JULY 1.

11 a.m.: Relay of Service from Church of the Holy Trinity (Anglican), Avon-side—Preacher, Rev. O. Fitzgerald.
3 p.m.: Afternoon session—selected studio items.
4.30: Close down.
4.30: Children's song service—Uncle Sam—hymns will be sung by the scholars of the Presbyterian Sunday School.
6.30: Relay of service from St. Andrew's Presbyterian Church—preacher, Rev. George Gibb (locum tenens); choirmaster, Mr. J. Maclean; organist, Mr. Robt. E. Lake.
7.45: After-church concert from 3YA studio.
8.15 (approx.): Rebroadcast of 2YA Wellington (relay of concert of Municipal Tramways Band, in His Majesty's Theatre, Wellington).
Close down.

4YA DUNEDIN (463 METRES)—SUNDAY, JULY 1.

5.30 p.m.: Results to hand of All Blacks' tour.
5.31: Children's song service, conducted by Big Brother Bill, assisted by children from Knox Church Sunday School.
6.30: Relay of service from St. Andrew's Street Church of Christ—preacher, Pastor W. D. More; choirmaster, Mr. W. Hickey.
8.0: Studio concert.
9.15: Close down.

Our Mail Bag

ANSWERS TO CORRESPONDENTS.

Joseph F. (Mokaniti): We would like proof of the disinterestedness of your letter. It seems to have a trade inspiration.

Several Questions.

COULD any of your readers please inform me as to the identity of the following stations:—One midway between 2BL and 3LO, heard about 7 o'clock on the evening of Friday, June 8. Another about 2 degrees below 1YA (about 340 metres), heard on the same evening, at the same time. On several occasions, mainly about 7 o'clock, I have heard a station on 2YA's wave-length. Where could this be? Then, again, I heard, at the same time, a station about 236 metres. Another stranger was heard mid-way between 3DB and 4ZB. Has anyone else heard these stations? I also heard a station on dial setting 95.—"Youthful Enthusiast."

The Flight Relay.

AS one keenly interested in the recent transpacific flight of Captain Kingsford Smith and his companions, I feel I cannot let the occasion pass without writing to express the appreciation of at least one listener of the rebroadcast of Station 2FC, Sydney, by Station 2YA, of the description of the arrival of the Southern Cross at Brisbane. Judging by the enthusiasm displayed here in connection with this rebroadcast, the writer ventures the opinion that there are several thousand other listeners in New Zealand who are in accord with him in compli-

menting the Broadcasting Co. on their policy of progressiveness. It is occasions such as this that demonstrate forcibly that the possessor of a radio set is the owner, not of a mere "musical box," but of something which enables him to learn of events all over the world, either as they are taking place, or shortly afterwards. In this connection, may we expect an attempt to be made to rebroadcast a description of the Heeney-Tunney contest, to take place on July 26? This fight is naturally of especial interest to New Zealand listeners. The thanks of listeners is also due the Broadcasting Co., who are now announcing at 9 a.m. on Sundays the result of the previous day's match between the All Blacks and the Springboks.—G.C.H.

The Position Reviewed.

MIGHT I through the medium of your paper voice my tribute of appreciation of the progress being made by the Broadcasting Company? Though somewhat dubious as to the intentions of the company at its inception, I now do not think that anyone could possibly but agree that considering the income of the company in comparison to some of the Australian stations, listeners are getting all they could expect, and more. There seem to be a few who bear in mind that a contract was drawn up setting out certain conditions which the company had to fulfil, and there is now no doubt that these conditions have been complied with, and not only that, but we have got more than the contract demanded.

Of course, the success of broadcasting to a very great extent depends on listeners themselves, and it is up to them to see that there are no "pirates" and to enlist as many new listeners as possible. That the company will do its share has, I think, been amply demonstrated by the rapid progress made.

I first bought a one valve set in 1923, and since then have made a few sets, and used a few factory ones, and I still think that the old three-coil set with one stage of "tuned-anode" was the best for distance, though possibly not for quality. KGO was my first American station, which I picked up on January 3, 1924, when using 6XG as an experimental call-sign. Since then I have heard sixty odd American stations, and with a shortwave set have heard most of the more important short-wave stations.

I have not yet noticed in your paper any recognition of some of the earlier stations in New Zealand such as 4YO, 4YA, 3AC, 2YB, 2YK, 2AH, 2AQ, 2YM, 1YA, 1YB, and several others, and such names as Messrs. O'Neill, White, Stevens, Coutts, etc. That they sacrificed much time and money in carrying on broadcasting under initial trying conditions there is no doubt. Of course there are the amateur transmitters who early made a name for New Zealand for long-distance work.

The Radio Depot

165 Manchester St., Christchurch.

E. G. SHIPLEY.
RADIO SPECIALIST.
Phone 4770.

2YA is not received at all well in this district, and this applies to a fair number of localities, according to some of the reports in the "Record." Of course it is well known that 2YA is received very well in the majority of places, but it seems possible that some experimenting might be done at the station relative to the wavelength of 2YA.

It appears to me strange that so many people expect to get far better reception in the winter than in the summer. So far as I have been able to see, there is very little difference between the summer and winter as regards fading, distortion, statics, and volume, and long-distance reception, but that there are disjointed periods of good and bad reception is, of course, obvious. Recently I visited the 2YA studio, and was much struck with the comfort and surroundings provided for performers, and the courteousness of the station staff.—"Gum-tree," Herbertville.

Rebroadcasts of Racing.

AS a reader of the "Radio Record" since its inception, I wish to congratulate you on the high standard of your paper. It certainly "delivers the goods." Also I have no doubt that the N.Z.B.C. are doing their best to improve the standard of programmes. One thing that might be done to improve the popularity of radio is this: We all know how popular racing broadcasts are, and we would all like to hear the broadcast of the winter meeting of the Auckland Trotting Club. The meeting is being broadcast all right, but as you know, it is very hard to pick up Auckland in the daytime here, even with a 5-valve, which I have. Could the meeting not be rebroadcast from Wellington? Hoping that the suggestion will be noted.—Cathedral City.

Taranaki Reception.

SEEING in the "Radio Record" of June 15, page 4, that Mr. G. W. Morgan had been in New Plymouth investigating fading of 2YA in certain areas of Taranaki, I would like to say I used to live in New Plymouth years ago, and I remember seeing in the papers there that copper ore had been found in the ranges or hills behind Oakura, about 9 miles from New Plymouth, towards Cape Egmont. Do you think that the copper ore would cause fading? I remember the paper saying that there was plenty of ore there, but it was in a rough place, and would not pay to mine.

I have a 3-valve radio set with an outside aerial 100ft. long and 40ft. high. We get 2YA very clear, but it fades at times. 1YA is clear, but fades at times. 3YA is good at certain times; some nights it is hard to get, other nights quite good. I must congratulate 2YA on their programme. Remember it is hard to satisfy everyone. Nobody has done it yet. So it is no good 1YA, 2YA, 3YA, or 4YA trying to do it. Give us the best you can, and satisfy some.—J.W.

Appreciation of Opera.

JUST a line in appreciation of the fine service extended to the listeners by the Broadcasting Company. The special feature of 1YA's programme of last (Tuesday) night, the opera presented by Madam Ainsley, was delightful, it being the best to date. Especially fine was the singing of Madam Ainsley herself, and we have been delighted to hear her again to-night (Wednesday) on relay from the Town Hall. Judging by the applause the audience have enjoyed her solos as much as we have. A much appreciated innovation is the introduction of the "Hebrew Two," who are, I believe, the best duo of its kind on the air, in either Australia or New Zealand, their local hits being greatly appreciated.

I should also like to congratulate 1YA and 2YA on their enterprise with regard to the transpacific flight. The reports and rebroadcast were eagerly followed by listeners all over the country. May I also congratulate 2YA on its very fine orchestra, and I hope that similar orchestras will be introduced to 1YA and 3YA in the near future. By the way, may I ask what has become of the Beckenham Male Quartet of 3YA? I always looked forward to them on Monday nights. Wishing the Broadcasting Company, and also your greatly valued paper, every success.—A. Papesch (Pukekohe).

Fun With the Amateurs.

I DON'T agree with "Switch" about crystal set owners wanting the silent night cut out. The wife and I got quite a lot of fun on a Wednesday night listening to amateurs. Last night we held some chap from 8 until 9.30 p.m. His call was 2AW—something. Who is he? I have also heard 2BL conversing with 2BY or R. Replies just too weak to understand. 2ZE with a little concentration just audible. I am going to add an R.R. 2-valve amplifier to my set at the end of the month to see if that will bring them in any better. Just here I would like to say how much we enjoy 2YA's orchestra. What wonderful music they give us, especially the descriptive selections. We would like to hear more of them. I have just purchased the "Listener's Guide" and am anxious to get buried in it. Wishing the "Radio Record" and 2YA every success.—I am, yours to a cat's whisker. H. McLennan (Wellington).

Honorary Listeners.

THIS is the way I interpret the Broadcasting Company's scheme: When the Broadcasting Company has

completed its network of listening posts throughout New Zealand, each one a fully accredited official listener, the company will have an advisory council, which will speak for the whole of New Zealand. Hitherto listeners' leagues have been purely local organisations, in which a few men (in one or two cases not even licensed listeners) have been the moving spirits, and professed to speak for the great inarticulate body of listeners. The result has been the absolute failure of listeners' leagues in New Zealand, just as they have failed in America and elsewhere.

"But the Broadcasting Company's scheme opens the way for a large number of listeners throughout New Zealand, from Bluff to the North Cape, to write to the company describing how the transmission reaches them, and expressing an opinion on the quality and nature of the programmes. The gentlemen appointed as official listeners will all be radio enthusiasts, and their views on broadcasting will, I presume, be given careful attention by the company. Such views as they express, too, will be expressed independently of each other.

"One has only to consider the nature of some listeners' league meetings to realise how useless they are as an indication of listeners' real opinions. One has only to refer back to the history of the Auckland Radio Society, from which the Broadcasting Company received numerous communications over the signature of Mr. G. McR. Salt, Mr. Salt long afterwards candidly admitting that the society had been practically defunct for two years—during which it was made to appear to be a real live organisation, meeting and passing resolutions in an orthodox manner. Is it any wonder that very little faith was placed in the subsequent transactions of Auckland and other Listeners' Leagues?

"It has to be remembered, too, that a very false atmosphere was often created—and probably will be created again by Press correspondents and others—perhaps, for instance, gentlemen 'with hobbies.'

"The company's new scheme will not in any way debar the ordinary Listeners' Leagues from carrying on their operations, but the company will know from a hundred or more different sources throughout New Zealand, what is the general opinion of the 'average listener,' and this consensus of opinion throughout New Zealand will carry more weight than will a purely parochial resolution. It might happen that a local Listeners' League's opinion is endorsed by the majority of the honorary listeners, in which case the company will make haste, to the best of its ability, to give effect to the expressed wish.

"The Broadcasting Company's desire is obviously to satisfy the great majority of listeners most of the time, and it is evidently of the opinion that if it can secure and analyse regular reports from a small army of 'ordinary listeners' scattered throughout the length and breadth of New Zealand, it will be able to size up fairly accurately how the programmes are received, what listeners think of them, and what listeners really do want."—Khyber Pass.

Gisborne Station at Work.

I HAVE noticed in your columns lately that a South Australian writes to Melbourne "Listener-in" as regards a station operating in the Wellington district using the call sign of 2ZM, on 278 metres, approximately. This station is not 2ZF as announced, but the old Gisborne station 2YM, started up again. I located him myself one Sun-

day night putting over several gramophone items, and another night during the week at about 5 p.m. I located him. He was playing a gramophone item, "Fifty Million Frenchmen," and after the item announced 2ZM, and then said to someone else in an undertone "We'll repeat that one," and did so, closing down without any announcement. Has anyone had the same experience?

While I have the opportunity, I will take it in saying how much the rebroadcast of 2ME, Sydney, was appreciated here. It was received at good strength, and came in at unexpected clearness for such a rebroadcast. A little more of these rebroadcasting short-wavers would be also appreciated, especially from 2YA, if not other stations. In ending I would like to ask the Editor what is all this we are hearing about relay stations?

[We learn that 2ZM, Gisborne, has recently had new equipment installed and will shortly be on the air regularly. Recently that station has been testing. With regard to relay stations, our impression is that idle rumour has been busy.—Ed.]

Moa Lecture Appreciated.

WE have just been listening to Mr. Andersen's lecture on the moa, which was exceedingly interesting. May I suggest that Mr. Andersen give his lectures earlier in the evening, as I find that the children enjoy them so much, and they are generally after they have gone to bed. Both our children and our neighbours' children always beg to be allowed to get out of bed again to listen to them. They all belong to the Society for the Protection of Native Birds.

I would also like to tell you how very much we enjoy the Sunday afternoon gramophone records. They are indeed a great joy and well chosen. Some of the items that we have enjoyed very much lately are those contributed by Miss J. Briggs and Miss N. Coster, who both have beautiful voices, and Mr. Stanley Warwick's recitation, "The Secret of the Machines" (Kipling), we very much enjoyed. The orchestra is, of course, a never-ending source of pleasure.—C. M. Boyer.


[The suggestion is being referred to the company.—Ed.]

ENGLISH, NOT ESPERANTO

Evidence from Europe is proving that the operation of many different broadcasting stations using different languages in adjacent countries is leading to a wider knowledge of languages. This process of education, however, is much slower than most people expected, and the full value of broadcasting for breaking down language barriers will probably not be realised until real international services are established. Rather striking work has been done by amateurs in this field, and English has become the only language of international amateur wireless. This is due to a large extent to the fact that the majority of the stations working are in the United States of America, and stations in other countries have had to use the language of the majority. It is now possible to work by Morse code with amateurs in every part of the world in English. A few days ago (writes "3DB" in Melbourne "Argus") I overheard two experimenters in France working. The main part of the communication was made in French, but one of them was apparently so used to working with the Morse code in English that he kept dropping in English words and expressions.

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Mainly about Construction

By "Megohm."

The Two R. F. Browning-Drake Unit

THE FIRST COMPLETED

THE first letter to hand announcing completion of the two R.F. and detector unit for the Browning-Drake is from Auckland, and reads as follows:—

"I HAVE completed, and have in operation, the 2.R.F. shielded Browning-Drake as described by you in the 'Radio Record.' I have finished the shielding by oxidising and lacquering, and the completed receiver is worthy of a place in any home. I am using a separate two-valve amplifier, or perhaps I should say that I am using one stage of a two-valve amplifier because it is impossible to use the two owing to excessive volume, even on Australian stations with reaction at zero. Selectivity leaves nothing to be desired when I can get 3YA Christchurch or 2BL Sydney with Auckland working 4-mile distant only, and no background. Even with the foregoing praise of this receiver I do not think that I am getting the results that the set could deliver with a little adjustment, and in that particular I would be obliged if you could advise me on the following points. . . ."

THIS constructor then asks three questions concerning the working of the unit. The first deals with the matter of filament voltage, which requires adjustment for each station, and the other questions refer to primary turns and neutralisation.

The fact is, that this constructor is obtaining too much amplification per R.F. stage, which is a thing to be avoided in all receivers with more than one R.F. stage. In commercial re-

ceivers, R.F. amplification is kept low, in order to obtain undoubted stability under any conditions, with perhaps a different valve, and unskilled operation, and to make up for the comparatively low amplification per stage, an extra stage will be added, and the advantage of greater selectivity gained, for each tuned radio frequency stage increases selectivity.

SUPPOSE we have one R.F. stage working on a receiver of any type, and from this stage the highest possible amplification is being obtained. We will give this amount of amplification the value of 10. Now we cannot add extra stages and get an amplification of 10 from each, and at the same time preserve stability. But suppose that we have a stable circuit with an amplification of 8 from each stage, then the total R.F. amplification is 64 in place of 10, and with three stages it might be 7 per stage, giving a total of 343. This is given to show the principle upon which R.F. amplification is to be worked. Stabilisation of R.F. stages is the suppression of any tendency to self-oscillation of the valves, which is chiefly met with on the lower wave-lengths. Other conditions being suitable, neutralisation forms an effective means of stabilisation by balancing out the stray capacities of the circuit, and shielding reduces to a negligible minimum the interaction that would otherwise be present between one stage and the next.

IT is a recognised fact that an amateur constructor expects to obtain greater amplification per R.F. stage

than is usual in a commercial receiver, and there is no harm in this, provided the gain per stage is not overdone. The commercial proposition is a receiver that will suit all conditions and unskilled operation, whereas the constructor knows, or soon will know, sufficient to enable him to handle his receiver quickly and efficiently, correcting any tendencies that might prove troublesome to a less experienced operator. The constructor knows all that his set contains, and is, or should be, keen upon learning the purpose of each part, and how it should be handled.

It is impossible for two constructors to build their sets exactly alike, even from the specifications published, as there may easily be slight differences in sizes of coils, and placing of parts, and then there is the choice of valves, which, of course, leaves a loophole for considerable differences. Nevertheless, the writer does not anticipate that constructors will experience any greater difficulty in this work than on any other circuit, especially if they have already had the experience of constructing the four-valver.

A WARNING was given to constructors to look over the coils when in position in order to ensure that adjacent turns are not touching anywhere, as such a happening causes great instability, and was the experience of the writer at the outset, a fine hair-like shred of solder making a loose connection between the two bottom turns in this detector stage, a varying contact that would sometimes change with the rotation of the tiddler, and so insignificant as to be difficult to locate. Apart from this trouble, the unit neutralised with ease, and functioned well from the start, using PM5's (of which PM5 is the six-volt equivalent) with 16 primary turns.

COMMERCIAL Browning-Drake sets with two R.F. stages have been turned out of the factory for some time, and the writer is of opinion that bogies raised by some people about the difficulty of adding an R.F. stage to the Browning-Drake have been the outcome of half-hearted attempts to carry it out. One correspondent states that his dealer told him he would gain nothing by carrying out the method advocated by "Megohm." This is sheer nonsense, and if the dealer in question took the trouble to construct the unit, adhering faithfully to the specifications, he would find that his ideas would require revision.

THE extra R.F. stage gives a great improvement in quality of reception over the four-valver, because its greater reserve gets signals well above the noise level, so that the background of rushing noises, usually present, is minimised when receiving New Zealand or Australian main stations. Our correspondent is to be congratulated upon his construction, and when he has cut down the amplification to a reasonable amount by reducing primary turns, he will still be well satisfied with his receiver and its performance.

It is as well to remind constructors of the two R.F. unit that something more than ordinary in the way of an audio amplifier is required to efficiently handle the heavy volume which the unit is capable of delivering, and this matter will have early attention.

QUERIES BY CORRESPONDENCE.

1. Every communication enclosing queries is to be addressed to "Megohm," Box 1032, Wellington, and must be accompanied by a stamped addressed envelope for reply by post.
2. Questions must be written so that a space is left in which the reply may be added.
3. No charge is made for replies.

THE UX222 BOOSTER UNIT

A READER writes for information as to what this unit will actually do. What is claimed for it is clearly stated in the heading to the article—"Adds high R.F. amplification to any receiver." It was also stated in the preliminary announcement the previous week that when attached to an ordinary four-valve Browning-Drake receiver the volume would be doubled. This was proved by an actual test on such a receiver, tuning in several Australian stations. Added to the two R.F. Browning-Drake, tremendous volume, far too heavy for the present audio system, was the result, this increase being upon reception of distant stations. The unit in a slightly different form as to lay-out is being extensively used in America, and time only permitted the writer to make such tests as would confirm the correctness of the claims made for it.

The Editor has just received a letter from a correspondent who, amongst other matters, states: "I have built a Booster, using the new UX222 valve, and attached to my receiver it makes it a set of great volume and a help to DX reception. It can recommend it to anyone; it does all it is claimed to do."

There is no doubt that the unit, if constructed to specifications, will "deliver the goods."

Transformer-Coupled Audio Amplifiers

POINTS OF VALUE

WHERE two or more transformer-coupled amplifying stages are used trouble may be experienced with the set howling at a high-pitched frequency. This is most common when the A.F. amplifier is preceded by a detector valve in which the grid condenser and leak method of rectification is employed. The grid connections of such a detector are very sensitive to stray electrostatic pick-up, and in particular are likely to be affected by the stray field set up by the large A.F. potentials generated in the last stage of the amplifier! This provides enough reaction to maintain the whole amplifier in a state of A.F. oscillation. This pick-up by the grid-leak detector is the seat of a number of troubles for which the succeeding A.F. stages are apt to be unjustly blamed. The remedy is to arrange the detector layout so that the length of connecting wire between the grid condenser and the grid of the detector valve is an absolute minimum. Also arrange things so that nothing carrying amplified A.F. currents comes within several inches of the grid connections of the detector valve. This form of instability is entirely absent from receivers employing anode bend detection.

SETS are sometimes described in which the detector unit is completely screened by a metal compartment of its own. This is an excellent plan, as it materially assists both A.F. and R.F. stability.

Sometimes, of course, the trouble does actually arise in the amplifier itself. The simple expedient of reversing the leads to one of the interval transformer primaries is often resorted to. This is not, however, invariably effective, especially when there is electrostatic feed-back from the output to the input of the amplifier.

BREAK-DOWN OF WINDINGS.

MOISTURE getting into the windings of audio transformers is a frequent cause of what is usually classed as a "burn-out," but is really a corrosion of the wire by electrolysis made possible by the dampness.

MANY manufacturers now adopt various methods of impregnating the windings with moisture-proof compositions, including waxes of various sorts, and there is no doubt that in the better-class transformer moisture is effectually excluded. In a new transformer some very special process is used in which the whole transformer, including the stator laminations and leading-out wires all complete, is absolutely sealed in a special preparation which, as the description says, "seals them for ever against the inroads of moisture, rust, and electrolysis." As a test, instruments which were immersed in water for three

months were afterwards just dried off the exterior, and were then found to work as well as those which had not been so treated.

TESTING TRANSFORMERS FOR CONTINUITY.

TESTING the windings of transformers for continuity is a simple matter, and should be carried out on a new transformer when purchased. A single dry-cell, which may be one that has done service, is connected to one end of a pair of 'phones. To the other side of the cell a length of wire is attached. Place the 'phones on the head, touch one end of the primary winding with the wire from the cell, and the other end with the free 'phone tip. A good click should be heard in the 'phones, almost equal to that when the connection is made without including the primary winding. If only a very faint click is heard, the winding is not continuous. The secondary winding is tested in the same way. High voltage ages must not be used for this test.

PLATE CURRENT FEED RESISTANCES.

SOME time ago in this column was mentioned a system of supplying B accumulator plate current to several valves by adopting the method of placing a resistance in each common plate lead in order to cut down the voltage to the required value, thus doing away with battery tapplings and evenly exhausting the whole accumulator. This was taken from an American source, but it appears that this method is advocated by Ferranti's chief radio engineer, Mr. A. Hall, A.R.C.S., who has been making searching investigation into the matter of preventing oscillation in audio circuits.

It has been shown that as a result of feed-back when using two stages transformer coupled with the same B battery feeding both stages, that the overall amplification is by no means the product of the two stages when measured separately, and that in fact this ideal condition could only be obtained by supplying each (audio) plate from a separate B battery, or could nearly be obtained with a separate B battery for the detector.

MR. HALL found that a low-frequency choke of high inductance could be placed in each plate lead and would effectively prevent any back-coupling, provided that the battery end of the choke be connected to earth potential through a condenser of 4 mfd. capacity in the same way as obtains across separate output resistances of an eliminator. For the benefit of new readers it may here be explained that back-coupling mentioned above is the action or inter-action of one valve upon another through the medium of the B battery.

(Continued Next Page.)



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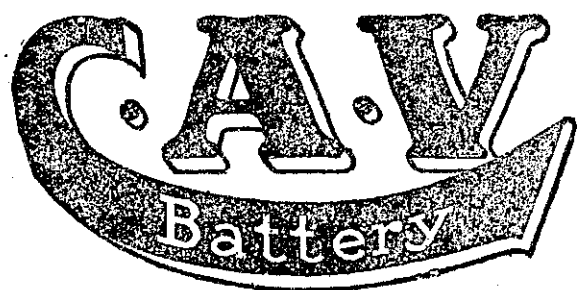
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Construction Continued

(Continued from page 14.)

It was then found that instead of chokes wire-bound resistances could be used. These are much cheaper than chokes, and fulfil not only the same function of preventing back-coupling and giving results equivalent to a separate battery for each valve, but also provide a means of evenly exhausting the whole B accumulator. And it is claimed that with this system "motor-boating" cannot occur, and the amplification is as great as in the case of feeding each plate from a separate B battery.

EVERY receiver with audio stages fed from the same B battery is liable to produce a change in waveform and amplification characteristic due to interaction, of which interesting curves have been published taken by means of the oscillograph, a piece of apparatus that traces out and records the form of either high or low-frequency waves. One of these curves shows the audio wave of high amplitude, and running through the centre is a high-frequency ripple that should not be there, and which would cause a shrill whistle in the loud-speaker.

LOW-FREQUENCY oscillation is a fault that is difficult to remedy, especially as it is sometimes evident as an oscillation above audibility which creates an unpleasant form of distortion. The principle of interposing suitable resistances in each plate lead is of some importance, and when properly appreciated is likely to become widely adopted. A variable resistance included in series will allow of fine adjustment, much as is the practice upon B eliminators in which there is not a continuous resistance (potential divider) with tapings, extending from positive to negative.

R.F. VERSUS A.F.

QUITE likely a large number of listeners have an idea that audio amplification gives a greater increase than radio amplification per stage. But this conception probably arises from the fact that almost every receiver incorporates one or two stages of audio amplification. This, for the reason that audio is so easily added, and its effect assured with minimum trouble. Nevertheless, it is a fact that R.F. amplification gives the greater increase in signals. The power into the loudspeaker is proportional to the square of the voltage on the grid of the power tube and the output

of the detector is proportional to the square of the voltage on its grid. Voltage on the grid, it should be explained, means signal voltage only, and is in no way connected with battery voltage.

WHEN the A.F. amplification is multiplied by 10, for example, the power into the loudspeaker is 100 times greater, but when the R.F. amplification is multiplied by 10, the detector output is 100 times greater and the power into the loudspeaker is 10,000 times greater. The following table shows the comparative increase produced by the two methods of amplification:—

Added Amplification	Increase in Speaker R.F.	A.F.
2	16	4
5	625	25
10	10,000	100
20	160,000	400
50	6,250,000	2,500

But in spite of these figures, the audio side of a receiver forms a handy means of building up large output after detection, so that the detector is not called upon to carry heavy volume as would be the case with only one or no audio stages. A single audio stage is sometimes adopted in order to avoid troublesome, unwanted inter-stage couplings causing loss of quality.

IN CONCLUSION.

IT is scarcely safe to mention "distortion" nowadays, for after an article such as the above has appeared, one or two letters are sure to arrive from individuals who erroneously take it as an attempt to lay the blame for all distortion upon every receiver. Such an idea is far from the intention of the writer at all times, and it is his firm resolve to continue with these articles so long as they appear to be helpful to a majority of constructors. One individual classed them as contentious matter that should be excluded from the paper! In constructional writing the question of how the signals arrive at the aerial, and the condition in which they arrive has little bearing on the case. The constructor builds and improves his receiver so that signals will be as efficiently handled as possible, so that the quality of good signals will be preserved, and the bad quality of others not made any worse than necessary.

will be seen that Galena, the basic material of all the proprietary "ites," is included in the category of sulphide rectifiers.

Now, just as sulphur can combine with metals to form sulphides, tellurium and arsenic are able to enter into a similar combination with metals with the formation of tellurides and arsenides. Many of these latter compounds behave as efficient rectifiers. Hesseite, a telluride of silver, is about the best-known mineral of this class, and Niccolite, or nickel arsenide, is another example of this category of minerals.

From the table it will also be seen that the "pyrites" minerals are all sulphides. Some of them are complex sulphides containing more than one kind of metal in their composition. Thus it will be seen that whilst galena, molybdenite, and iron pyrites contain only one metal, minerals such as copper pyrites, Bornite, and Bournonite contain two or three different metals in each case.

It is interesting to note that Argentite, a sulphide of silver very similar in general type of composition to galena, is, to all intents and purposes, a complete non-rectifier, but, nevertheless, when a small proportion of this mineral is fused with galena it is able to increase the sensitive properties of the latter mineral. Most samples of argentite have a very much lower electrical resistance than galena, and probably this fact may account in some way for their non-rectifying properties.

THE OXIDE GROUP.

PASSING on to the oxide group of minerals which are able to act as radio rectifiers, we notice from Table II that the most important member of the group is the well-known Zincite, which can be used in combination with so many other rectifying minerals.

Zincite is a naturally occurring oxide of zinc, and its ruby-red colour is imparted to it by the existence of slight traces of manganese compounds in the mineral. This trace of manganese in the mineral seems to have a lot to do with the efficiency of its rectifying powers, for zincite which has been devoid of such impurities is found to be a poor rectifier.

Mineral.

Galena	Lead sulphide
Molybdenite	Molybdenum sulphide
Covellite	Copper sulphide
Stibnite	Antimony sulphide
Iron pyrites	Iron sulphide
Copper pyrites	Sulphide of iron and copper
Bornite	Sulphide of iron and copper
Bournonite	Sulphide of copper, antimony, and lead
Mispickite	Sulphide of iron and arsenic
Tin pyrites	Sulphide of copper, iron, and tin

Table I.—The above table indicates the composition of most of the sulphide group of mineral rectifiers. Note that these minerals can be further divided into "single" and "mixed" sulphides.

Chemical Composition.

Single sulphides.	Galena forms the basis of most proprietary crystals.
Complex or mixed sulphides.	

METALLIC RECTIFIERS.

IRON and copper oxides have been used experimentally as rectifiers of R.F. currents under the names of Magnetite and Cuprite respectively, but owing to the varying sensitivities of different samples of these minerals they are not used with any frequency in general amateur work.

A number of oxide rectifiers which do not give very good rectification under ordinary conditions can have their rectifying powers very much increased by the application of a small local potential across the rectifying contact. Such mineral rectifiers include the two oxides of manganese, Magnetite and Pyrolusite; Cassiterite, an oxide of tin; Anatase, or titanium oxide; and one or two other similar compounds.

It is the rectifying nature of many metallic oxides which is often responsible for rectification at the point

Mineral.

Zincite	Zinc oxide (containing traces of manganese).
Magnetite	Iron oxide (magnetic).
Cuprite	Copper oxide.
Cassiterite	Tin oxide.
Anatase	Titanium oxide.
Brookite	
Pyrolusite	Manganese (dioxide).
Tellurite	Tellurium oxide.
Ilmenite	Oxide of iron and titanium.

Table II.—Indicating the composition of a number of materials which may be included in the oxide category of rectifiers. A large number of other metallic oxides will produce rectification, but only when they are present in very thin films on the surface of their constituent metals. The above, however, are able to rectify in their mass condition.

of contact of two metals. For instance, if a strip of clean metallic copper is placed for a minute or two in the flame of a spirit lamp and then withdrawn and allowed to cool, its surface will be covered with a film of tarnish consisting, for the most part, of oxide of copper. Such a strip of copper will give good rectification when an extremely light contact is made with it either with an ordinary fine cat's-whisker or with a fragment of zincite. A few experiments of this nature, using different varieties of metals and alloys, will be of interest to the amateur should he be keen on the fascinating subject of crystal rectification. An explanation similar to the one given above accounts for the often surprising phenomenon of "rectification by means of the crystal cup alone." In these cases, the crystal cup has become slightly tarnished, and its film of oxide has such a physical form that it is able to display strong rectifying properties.

The last type of rectifier which we have to deal with in our brief survey of the chemistry of crystals is the compound carborundum. Carborundum has the honour of being the first rectifier to be employed for any practical purposes in radio reception, and its use in this direction dates back to the year 1906, when it was brought into service by General Dunwoody, of the United States Army.

Carborundum is a compound of two elements, carbon and silicon, both of which are rectifiers. The

RADIO DIRECTORY

What to Buy and Where

ATWATER-KENT RADIO	Frank Wiseman, Ltd. 170-172 Queen Street.
ALTONA & HAMMARLUND-ROBERTS SETS.	Johns, Ltd. Chancery Street.
AMPLION LOUDSPEAKERS	All Radio Dealers.
BREMER-TULLY RADIO	Superadio, Ltd., 147 Queen Street.
BURGESS RADIO BATTERIES,	All Radio Dealers.
CE-CO VALVES	All Radio Dealers.
CROSLY ELECTRICAL AND BATTERY MODELS	The Forrest-Crosley Radio Co., Ltd. Cuba Street, Palmerston North.
CROSLY RADIO SALES AND SERVICE	D. A. Morrison and Co. The Avenue, Wanganui.
FADA RADIO	Radio Supplies, 251 Symonds Street.
FEDERAL, MOHAWK, GLOBE	Federal Radio House, 8 Darby Street.
GAROD, CROSLY, RADIO AND ACCESSORIES	The Hector Jones Electrical Co. King and Queen Streets, Hastings.
GILFILLAN AND KELLOGG	Harrington's, Ltd., 138-140 Queen Street.
GREBE RADIO	Howie's, Dilworth Building, Custom St. E.
MARCONI ECONOMY VALVES	All Radio Dealers.
MULLARD VALVES	All Radio Dealers.
RADIOLA RECEIVERS	Farmers' Trading Co., Ltd., Hobson Street.
RADIOLA DEALER AND SERVICE	G. C. Carrad. 140 The Avenue, Wanganui.
RADIOTRON VALVES	All Radio Dealers.
RELIANCE BATTERIES	Reliance Battery Mfg. Co., Ltd., 90 Albert Street.
PHILIPS VALVES AND APPARATUS	All Good Radio Dealers,

on the New Zealand market, showing at a glance their main characteristics and the positions in the set for which each valve is best suited. There is also a table giving the necessary grid-bias for any valve likely to be used in audio stages.

ANOTHER useful list is that of rectifying valves that are sold without the stipulation that the purchaser must be in possession of the charger for which they are designed. Valves for B battery eliminators and A battery charging are also included, full particulars of all the rectifiers being given.

OTHER tables include winding of solenoids for given wave-length; turns for spider-web coils to tune with condensers of different capacities; turns for secondary coils tuned with condensers of various capacities; tables for making fixed mica condensers of capacities from .5 mfd. down to .00015; wire tables; list of amateur transmitters, etc.

CONSTRUCTIVE articles include crystal receivers, with the "R.R." Selective Crystal Receiver, which so many constructors have found highly successful, and which makes a highly effective wave-trap. Then there are two amplifiers for the crystal, a one- and a two-valve.

The ever-popular four-valve Brown-Ing-Drake is fully dealt with, including the amplifying for which inquiries are coming to hand in connection with the two R.F. tuning unit. The "Record" short-wave receiver is fully described, both as a complete shielded three-valve receiver, and as a one-valve "converter" or "adapter," which can be plugged into the detector socket of any broadcast receiver and thus use the audio amplifier to increase the volume of the short-wave reception.

Other information includes the Government regulations relating to wireless listeners, a handy glossary of radio terms, etc.

The "Guide" can be obtained from your dealer for 2s. 6d., or 2s. 9d. post-ed from the "Record" office.

substance is thus silicon carbide, or, as some prefer to call it, a carbon silicide. Both names, however, mean the same thing.

Carborundum and also silicon are the only commonly used rectifying materials which are not found in Nature, and which have to be produced artificially. Carborundum, as is well known, requires a local potential for its proper functioning, but, all the same, it can be used without the application of such a potential if the material is of good rectifying quality to begin with.

ORGANIC CRYSTALS.

THE whole range of mineral rectifying substances may thus be divided up into a few classes: the elementary class, the sulphide class, and the oxide class. Apart from a few exceptions to this classification, such as carborundum (silicon carbide) and one or two other little-known materials, all the crystal rectifying substances are contained in the above categories.

Experiments have been made with a view to producing well-defined crystals of an organic nature which contain metallic atoms in their composition and which would be suitable for rectifying purposes. Such experiments appear to have proved fruitless up to the present time, but they represent an interesting line of research, and doubtless, at some future date, they may provide the crystallographer and scientist generally with much interesting data of a theoretical and a practically applicable nature.

THE LISTENERS' GUIDE

SPECIAL INTEREST TO CONSTRUCTORS

CONSTRUCTORS and experimenters will find the "Listeners' Guide" extremely handy for general reference for lists of New Zealand, Australian, American and Canadian stations, with power and wave-lengths, short-wave stations, and a wide range of other information.

Of special interest to constructors there is a list of practically all valves

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Our Short Wave Corner

MR. F. W. SELLENS writes:—

There is not much variety in short-wave stations heard just now. Two old friends were heard again this week, who, as far as I am concerned, have been silent for some time—AU Japanese and RSR (Germany). The early morning is not so good now for distant (European) reception. 5SW is seldom loud enough to clearly understand up to 7.30 a.m., when I close down. PCJJ also is much weaker than usual, and is seldom strong enough for the speaker much before 7.30 a.m.

Saturday, June 9.

5SW was fair 'phone when tuned in, but too unsteady to follow a talk which was on. I went home for a short time to hear the arrival of the Pacific flyers at Brisbane. Reception was spoilt by a faulty land line from Brisbane which caused a loud roaring noise all the time. Volume was all that could be desired, and when talk or music came from the studio, it was very good. Although reception from Brisbane was so bad, most of the talk was intelligible enough to follow what was said.

2XAF on 31.4 metres was audible at 12.45 p.m., but the last half an hour it was possible to hear all that was said three or four feet from the loud-speaker. A Morse station was interfering most of the time.

PCJJ on 31.4 metres commenced their weekly special transmission for reception in Australia and New Zealand with the National Anthem. They then called various towns and States in Australia, announcing that this was a special transmission, etc., from 4 to 6, Greenwich mean time, asking for reports to be sent to their Sydney office.

From 3.30 p.m. till 4.30 p.m. reception was good loud-speaker, the loudest yet received. After this strength gradually decreased. After about 6 p.m. it was too weak to bother about. As soon as the volume went off a little, oscillating valves spoilt reception.

Sunday, June 10.

2XAF was spoilt by a howler who stuck on him all the time till 3 p.m., when he probably decided that short waves were not worth while and left in favour of 2YA. Directly this interference ceased, music was good speaker strength till 3.30 p.m., when they closed down.

Piano solos and orchestral items by the Hotel Orchestra were heard from the Wentworth Hotel, Albany, New York. The programme was broadcast by WGY, Schenectady and WMAK, Buffalo.

At 9.40 p.m. I tuned in RFM, when a banjo solo was coming through very good, but they went on to their favourite stuff—talk—directly after.

Monday, June 11.

2ME on 32 metres were testing just before 6 a.m. and "went over" to 3LO in the hour.

During the news session the speaker stated that through the A.W.A. the result of the Derby was in the "Guardian" office 1-10th of a second after the winner had passed the post per beam wireless. Reception was good speaker with intense fading.

Tuesday, June 12.

The carrier of 5SW was audible at 5.30 a.m. and a voice too weak to understand. At 7 a.m. an orchestra was just audible on the speaker, and at 1.30 a.m. a pianoforte item was fair speaker strength.

On about 24.5 metres (just above 5SW) our old friend "Au Japanese" was talking with at short intervals. "Allo, Allo, Au Japanese." Strength was very good phone.

Wednesday, June 13.

PCJJ was fair phone at 5.30 a.m., but reception was spoilt by a rushing noise and static. Volume increased to good phone by 7.30 a.m. "Au Japanese" was again heard, but much weaker than yesterday. Nothing but talk. 5SW was not audible at 6.30 a.m., but was fair phone strength at 8 a.m., when a talk was on with short pieces

of music interspersed, as though the music was to illustrate some period. Shakespeare was mentioned during the talk, but reception was too unsteady to follow properly.

2AW and 2BO, both of Wellington, were testing on telephony during the evening.

Thursday, June 14.

At 6.15 a.m., on about 42 metres, a foreign station was picked up, which proved to be RSR, Germany. Once "Achtung, Achtung — Orchestra" was heard, followed by an orchestral selection. After another "Achtung" a lady sang, accompanied by the orchestra. Clapping was heard at the end of the item. Each item was preceded by the call "Achtung," followed by some German talk. At 7.30 a.m. a longer announcement was made, including some broken English, which was not good enough to follow, but something about days of transmission, etc., the call RSR was given, being repeated. Both speech and music was very clear and steady, and received at fair speaker strength.

5SW at 7.30 a.m. was audible, but too weak to be intelligible.

Friday, June 15.

5SW again was too weak to understand at 7.30, though stronger than an hour before. PCJJ was tuned in at 5.45 a.m., when a long talk was in progress, all foreign. After this followed what appeared to be a relay, not any call being heard between the items, which consisted of solo and concerted items, with an orchestra. Volume was very weak at first, but improved all the time, and was very good phone at 7.30 a.m.

RFM was heard in the evening. The past week or two has been bad for DX on the short waves, and static has been very bad, and most signals heard have been weak. Although I always go round the dial after 2YA has closed down, not one Aussie has been heard of late, or Zedders, except local hams.

A SHORT-WAVE STRANGER

SEVERAL correspondents have reported a short-wave stranger on 24.5 metres or thereabouts. In the opinion of Mr. Sellens the station is AU Japanese who sometimes talks in French (which is reported by one correspondent). The station R2FNE does not appear in the latest English Call Book. Radio Paris is a station, but no call sign is given for it. We publish our correspondent's letters as received in the hope of drawing fuller identification.

Station on 24 Metres.

I WONDER if any of your readers could give me the identity of this station. This morning, June 8, Friday, at 7.30 o'clock, I tuned in a very loud station on about 24 metres. Speaker strength was louder than PCJJ, to which I had just been listening and modulation was perfect. I held the station till 8 o'clock and a man was speaking in slow French the whole time with frequent announcements. "Allo, allo." Then followed some word or letters which were too slurred to understand. The talk appeared to be news items, as the words Paris, Toronto, Nouvelle Zelande were mentioned frequently. — Graham C. MacDiarmid (Hamilton).

Special Session For South America.

I APPRECIATE much your S.W. corner and would like to give a few notes on my past two days' reception.

Thursday, 7th.—Listened to 5SW, 7.30 to 10.30, when signed off after Big Ben struck midnight. As usual it was much stronger towards the end of transmission. 10.45 a.m., tuned in a station speaking Spanish on about 36.5 metres, but got no call sign. At 1.30 p.m. tuned in the best programme I've had yet. All announcements and speech were in Spanish. The speaker prefaced the items with senoras and caballeros, and called various senoras and senoras in Havana, Buenos Aires, Uruguay, etc., and mentioned New

Zelandia. It turned out to be Hind-hoven broadcasting a special programme for South America. First there were some splendid cello solos, then later jazz records, one in particular being strong enough to dance to: "Who's Wonderful, Who's Marvellous, Miss Annabel Lee." Closed down 3.35 p.m. with National Anthem. Friday, 8th.—PCJJ at 7.30; signed off 7.35 with anthem.

At 7.35 a.m. I tuned in a very powerful station, 25 metres (about). It was Mr. Sellens's friend, "AU Japanese." I listened to him till he signed off, with the exception of listening to a lecture by Sir Alan Cobham from 5SW on his trip over Africa and its aims. He gave as its aims: To survey the possibilities of British aviation in Africa; to test out the all-metal flying boat, and to survey the through air route from the Mediterranean to the Cape.

To return to our friend. I'd have to polish up my French to read him, but I got a lot of what he said: "Notre transmission continue jusqu'à vingt trois heures a Greenwich" (our transmission will continue till 11 p.m. G.M.T.). He mentioned after his call on several occasions a Monsieur ? a Paris. His call sounded like this: "Ulo, ullo, R deux furce," which I read as R2FNE. He talked a lot about Le General Pershing et se Americaines; also illed Monsieur ? a Rouen et M? a Boulogne. He signed off at 10.30 a.m. Very polite about it. Said something about "vous nous excusez." All talk and news items.

On May 30 I heard the nightingale put on the air twice from 5SW.

P.S.—R2FNE mentioned something about transmission a dix sept heures a Dimanche (17 G.M.T. Sunday).

Heard in Taranaki.

PERHAPS some of your S.W. enthusiasts may be able to identify an S.W. station I have received recently. This stranger is on about 24-25 metres, and was on the air on Friday and Saturday mornings, June 8 and 9, from 8 a.m. to 10 a.m., and again this morning at 6.50 a.m. (Tuesday), but was not on the air when I tuned in again at 8 a.m. The station came in at loud-speaker strength with good modulation. The "programme" consisted of talk in a foreign language, interspersed with announcements of (sounded like), "Ulo, ullo, ullo. Au Nov Guinea. Ulo, ullo."—J. R. Miller.

Believed to be French.

I WISH to report reception of a high-powered station which I am positive was this new French station of 50 kilowatts, situated in Paris. I will write what I entered up in my diary.

Thursday morning, June 7.—Picked up a foreigner on about 26 metres at 7.40 a.m. He was about five or six degrees above 5SW's dial setting. Volume and clarity were remarkable. He would read something, evidently from a newspaper, at the end of which he would appear to say, "Hullo, hullo, YO Japanese." However, it was not a Jap. Of that I am positive. During his talk he spoke of Coliere, the French aviator. He was still going strong at 9.10 a.m. His speech, and at regular intervals he would give his call.

The following morning I tuned in to where I had received him on the dial, but I could not locate him. This was at about 7.20 a.m. However, as luck would have it, I just happened to run across him at 7.40, when he came on the air. He was talking partly in broken English (very broken) about America and New York, and his volume and clarity eclipses anything heard on short-wave band before. Left him at 8.30 a.m. sharp.

Picked him up again on Tuesday morning, June 12, when he came on the air punctually at 7.40 a.m. Speech was all that was received.

I was surprised in not seeing it mentioned in your "Short Wave Corner" or in your "Mailbag." Surely someone else must have heard it; at any rate, they will be able to confirm my report. My set is an adapter, the circuit of which was got from the "Radio Record" and it functions wonderfully. — D. Huston, Waitaki, B.I.S., Oamaru.

SHORT-WAVE RECEPTION

AERIAL VAGARIES.

A LISTENER writing in an English journal states:—

"Working the other night on the American short-wave broadcast station 2XAD, I found that I obtained a most marked improvement in signal strength by transferring the set from my own aerial, which, incidentally, is not a very long one, to a small counterpoise which I had had erected for transmission work. The aerial is actually about 30ft. high, and is probably about 30ft. long, the down lead not being more than about 20 to 25ft. at the outside, since the set is located on the first floor. The counterpoise consists of 20ft. length of wire carried horizontally about 1ft. from the wall, and is about 12ft. from the ground. The lead to the counterpoise does not go to one end of it, but is tapped on at about a quarter the way along. Using this instead of the aerial lead resulted in a very marked increase in signal strength on the very short waves."

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Auckland Notes

(By "Listener.")

LISTENING was in the boom here during last week-end, and the achievement of the Pacific flight, combined with the achievements of broadcasting stations in describing it while in progress, have had quite an educative effect upon the general public. The period from sunset on Friday to noon on the Saturday was one of those which come only occasionally. It was one of those for which broadcasters long—an opportunity to demonstrate to the world at large what only the listener himself realises, and that is the remarkable utility of radio. It can be predicted with safety that the splendid efforts of broadcasting stations during last week-end will result in a considerable gathering into the fold of new licensees.

2BL was the most popular station during the final stage of the flight. It catered splendidly for listeners with an all-night service which did not let up for a minute. Of course, the flight was to Australia, and residents of the Commonwealth were more closely interested in its accomplishment than were New Zealanders, so it was fitting that the palm for success should go to 2BL. Considering distance and disadvantages under which work was carried out, Aucklanders are of opinion that the performances put up by 2YA and 1YA were no less praiseworthy. At short notice 1YA decided to continue through the night, broadcasting hourly the news that was obtained from short-wave readers of Morse. On each occasion of a broadcast a preliminary warning was given by the playing of a record, and then came the eagerly awaited news, quite as up-to-the-moment as that provided by 4QG, which was "on the spot," and which, one thought, would have made more of the all-night broadcast than it did. 1YA's effort must have entailed hard work on the staff, and particularly on the operator. All concerned in it deserve both congratulations and thanks from listeners, who must have realised how well the station rose to the occasion in catering for them.

THE local papers express delight at the announcement of the organisation of the YA studio orchestra. According to information published here, the orchestra will mail its bow to the studio microphone next month, when Mr. Bellingham will put it through its initial performances in the same capable manner as he did with the Wellington orchestra. The night of the initial performance will be a red-letter one in the story of Auckland radio. Everyone spoken to on the subject is pleased at the rapidity with which the Broadcasting Company is fulfilling its promise that "Auckland should be next."

THE news regarding the orchestra is not the only item to bring the smile of satisfaction to the faces of local listeners. When we listen to Sydney stations we often feel the regret that we have not the chances for relaying from theatres that are afforded in the Commonwealth. Now comes the glad tidings that there will be regular relays of "star turns" from the "Embassy," the ne home of vaudeville-revue that is providing a type of programme beloved by Aucklanders. Here is another innovation for which we may well say "Thanks."

OF all overseas artists heard per radio none is more popular than Mr. Alfred O'Shea, the well-known tenor who sang his farewell at 2BL on Sunday last, when he was inundated with request numbers. Mr. O'Shea is making a concert tour of the Dominion. What a treat it would be if, on the conclusion of this tour, he could be persuaded to appear at, say, 2YA. Mr. O'Shea owes much of his popularity to radio.

OUR programmes are still on the up grade, and one hears very few complaints as to their quality. In fact, there has been much of praise for them in the local Press, and it will not be surprising if this praise is voiced at the annual meeting of the Listeners' League, which occurs on the 25th at the Unity Hall. Further artists have been advertised for, and the one occa-

H.B. Notes

A SLIGHT improvement recently is reported in local reception conditions, but static is still too prevalent to make listening a pleasure. It shows signs of clearing, however, and the last week has brought some good nights.

In this quarter, 1YA and 3YA are still going neck and neck for first place, with 2YA a good deal further back. As a result of the competition recently conducted in the "Record" it seems a general opinion that the hills are responsible for the poor reception of 2YA in these parts, but if such is the case, why is it that daylight reception from Wellington is so good, when, except well away from interferences, the Auckland and Christchurch stations are only a whisper? Here's a problem which some of your readers might be able to solve.

4YA, Dunedin, has also been coming through well this week.

THE Aussies keep up to the mark, it being a toss-up between 2BL and 2FC. One night finds the former in front and the next night it has to take second place. 2BL's all-night transmission during the Pacific flight was great and more than one local listener sat it through. In this connection 2YA is also to be congratulated on its relay of 4QG through 2FC on the morning of the arrival of the Southern Cross. The interest in the flight was phenomenal. Another point for congratulation to Wellington was the opening up of the station on Sunday morning to give the result of the All Blacks match—but, oh, the disappointment after the first wrong score was announced.

An "Aussie" which has come to the front recently is 2KY, Trades Hall, and on Saturday night, the 9th, the writer had it at excellent speaker strength on four valves in the early evening.

Evidently 2BL has had to give up the broadcasting of the Sydney Stadium boxing contests on Saturday nights. This is to be regretted for locally many enjoyed these broadcasts. It is hoped that the contests can be broadcast, particularly when a New Zealander is engaged.

AT the last meeting of the H.B. Radio Society Mr. W. J. Lyons gave a thoroughly enjoyable lecture on television. Mr. Lyons was associated with the inventor, Mr. Baird, for a time, and he expects at an early date to be able to give a practical demonstration. This should be interesting. The appeal for funds to instal a receiver in the Hastings Hospital is not very far advanced. So far about £70 has been received, with quite a lot more promised, but it is not much use thinking of starting the work until at least £250 is in sight.

The Hastings radio inspector, Mr. R. E. Sissons, is at present in hospital. All local listeners will join in wishing him a speedy recovery.

sional growl, that of monotony of artists, will soon be completely drowned in a chorus of approbation.

SHORT-WAVE enthusiasts, such as Messrs. Arthur, Warn, and Clarkson, were in their element during the past week-end when they supplied the local Press with the latest regarding the flight. They will be ready again when the plane starts on its trans-Tasman journey—and so, we can rest assured, will 1YA, to improve even on the excellent service it gave last Friday night.

SOUTH AFRICAN SHORT-WAVE

JOHANNESBURG ON 32 METRES.

A LONDON exchange states: "The Johannesburg station, JB, is now broadcasting on an additional wavelength of 32 metres." Well, it is nice to read this news, but Oh where Oh where is the JB short-wave station during the All Blacks' tour. Several have raked the ether endeavouring to find a South African short-wave station, but there has been a complete blank. New Zealand amateur transmitters are not able to get in touch with their South African colleagues.

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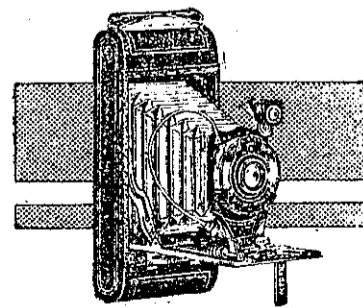
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