

THE RADIO RECORD

Published Weekly
REGISTERED G.P.O., WELLINGTON, N.Z., AS A NEWSPAPER.

Vol. II., No. 39.

WELLINGTON, FRIDAY, APRIL 12, 1929.

Summary of World Radio

MR. J. H. OWEN, who was for many years president of the Wellington Amateur Radio Society, has just returned from an extensive tour of Canada, France, and the United Kingdom. Mr. Owen is very definitely a radio enthusiast, and either carried with him a portable set at various stages of the journey or secured temporary possession of a set wherever he was situated. He was thus able to devote many hours to listening to programmes both in Canada, United States, Great Britain and Europe.

Arrangements have been made for Mr. Owen to give a talk from 2YA on his radio experiences, but opportunity was taken by the "Radio Record" last week to secure an interview with Mr. Owen, in order to place before readers a summary of his experiences and views.

Right from the outset of his trip, Mr. Owen, in order to place before readers bond of sympathy with others and an open sesame to friendships and contact. On the voyage to Vancouver on the "Aorangi" he enjoyed much benefit from an old-time friendship with the chief radio officer of the ship, Mr. Taylor, from whom Mr. Owen had earlier received instructions concerning one of his first sets.

"No Comparison" in Methods.

FROM Vancouver Mr. Owen crossed Canada, and proceeded to Britain. While in Toronto he was held up for three weeks by a bad cold. Hiring a set, however, he devoted the time to radio listening, and thus secured a very intimate knowledge of conditions on the air in that continent. This experience proved of definite value in enabling him to make a detailed comparison between the American system and the British system of radio broadcasting.

Asked the specific question as to which system—the British or American—was the better from the listener's point of view, Mr. Owen unhesitatingly and emphatically replied that there was simply

Mr. J. H. Owen enthusiastically praises B. B. C. attainment, endorses unified control, and condemns advertising

no comparison—the British system developed by the B.B.C. was immeasurably superior in every way. "There," he said, "you have complete control of the air, and the corporation is able to devise and issue an informative and comprehensive set of programmes, which are a delight to listeners and render outstanding service in the cause of entertainment and education. The contrast with the American system is that America gives no unity of programmes whatsoever, and there is no coherent effort to render public service by the diffusion of news or definitely educative talk. Everything is sacrificed to the advertiser, and the effect upon the listener definitely is not good.

God help New Zealand and broadcasting if the Government ever allows any interference, in any shape or form, from the would-be advertiser or private stations. The result will only be a polluted atmosphere, such as obtains in Canada, the United States and to some extent in Europe. I do not hesitate for a single moment to say that."

Sidelights on Practice.

SPEAKING in detail of the American and Canadian system as experienced by him Mr. Owen stated that, because of the need for advertising revenue and

business economy, the practice was prevalent there of one transmitting station equipment being used ostensibly for two or three separate stations with individual call signs. These worked at different hours and on different wavelengths, so that so far as the public knew, there were three or more stations operating in the locality, but in point of actual fact, all used the one transmitting equipment. Each individual station would be primarily concerned with advertising the goods of the firms maintaining it. To limit its expenses, it would sell to other firms of a non-competitive character a certain proportion of their time, because obviously they had to have revenue in order to continue operations. A typical method of operation might be cited in order that New Zealand listeners should understand just what advertising on the air meant. For instance, in Toronto one station would open up with the announcement that the "Mad Hatters" would entertain listeners. Speaking with a strong American twang, the announcer would say, in hearty fashion, something like the following: "Say, folks, we have a real fine programme for you this afternoon. The Mad Hatter's Orchestra will entertain you for the next half hour. This orchestra is maintained by Mr. Armitage, the hatter on Blank Street, where they sell the very best hats that money can buy. Very likely you have seen his premises. In addition to selling hats, however, the organisation maintains an orchestra, and that orchestra to-day will give you a real fine half-hour of music." Then the orchestra would perform—and frequently a very second-rate performance it would prove. At the conclusion of the half-hour, a further speech from the announcer would eulogise the hats. Thereafter would probably come a similar announcement from the manufacturers of someone's starch, and so on. There was no national coherent effort to render uniform service to listeners. The air was

—Continued on page 2.

World Radio

(Continuation of Front Page.)

crowded with a number of competing stations, and it was difficult to say just how far each individual station secured an audience. The authorities in Canada were investigating the B.B.C. method, in order to see whether a national scheme for improvement could be effectively put into operation. In the States no fee at all was charged, but in Canada a fee of one dollar was supposed to be collected. It seemed, however, to be more honoured in the breach than in the observance. Unquestionably, the system of national unified control was the only possible system and New Zealand should never entertain departing from it.

Praise for B.B.C.

COMING to the B.B.C., Mr. Owen said that it was impossible to refer to that organisation and service without speaking in superlatives. A wonderful, even marvellous, service was given. A spirit of great earnestness animated the officials of the Corporation in their enthusiastic endeavours to serve the public. They did not resent criticism or suggestions—in fact, the letters that were published in the "Radio Times" showed that it was recognised that all individuals were entitled to express their views on the programmes, and that expression was appreciated as a help in enabling the Corporation officials to assess the programmes and their appeal. The popularity of the service was very marked, listeners now totalling some 2,400,000, with numbers still growing.

A system of simultaneous broadcast of contrasting programmes was now

in force. This meant that listeners practically all over the country, at any time, had the choice of two programmes, which were in marked contrast the one to the other. London was linked up with relay stations at various strategic points throughout the country. These provincial centres drew largely upon London programmes for the more outstanding items, but each maintained its local character by giving, at set times, local news, and utilising outstanding local talent. The network of relay stations was most remarkable, and the effect was that listeners in the area served by, say, Belfast could receive London programmes as relayed by Belfast with as much clarity as listeners in the suburbs of London would receive the programme of 2LO direct. He spent a little time on the Isle of Man, staying at a farmhouse. He arranged for the installation of a good receiving set, and regularly tuned in to Belfast or other stations. The inmates of that farmhouse, who had not previously experienced wireless, were so captivated that they would not allow him to remove the set on his departure, but took it over.

The standard of programmes maintained by the British Broadcasting Corporation was very marked. The aim was to make broadcasting a definite instrument of national advancement and national service. The very best was given in the way of music, and moreover, a strong effort was made to make available the best lecturing talent of the country in artistic and educative talks.

Outstanding Courtesy

ARMED with a letter of introduction from the Radio Broadcasting Company of New Zealand, Mr. Owen paid

a visit to the headquarters of the British Broadcasting Corporation at Savoy Hill. He was given a very courteous reception, and afforded all facilities for making contact with the British system of broadcasting. A special privilege enjoyed by Mr. Owen was a half-hour interview with Captain Eckersley, the distinguished and able chief engineer of the Corporation. The manner in which Mr. Owen was accorded this interview spoke volumes for the courteous consideration extended by the authorities to overseas visitors. On Mr. Owen being asked if he desired any special assistance, he intimated that he would like, if possible, an interview with Captain Eckersley. It was explained that the chief engineer was a particularly busy man and, in point of fact, was leaving for Geneva the next day to attend one of the numerous conferences on radio matters there held in connection with European broadcasting. The promise was made, however, that Captain Eckersley would be informed of Mr. Owen's call and his desire.

By the first mail next morning, Mr. Owen received a special letter from Captain Eckersley stating that, although he was very busy, he would be glad to see Mr. Owen at 11.30 that morning. Mr. Owen was not slow to take advantage of the opportunity.

Captain Eckersley, he found on acquaintance, to be most charming and capable, and a very pleasant half-hour was spent. The captain was particularly interested in short-wave reception in New Zealand, and specially inquired Mr. Owen's experiences in that direction. Mr. Owen was constrained to admit that his experience had been limited to occasional experiences at friends' houses. Captain Eckersley mentioned that a good deal of criticism had been directed against the B.B.C. for not maintaining a regular short-wave broadcasting service for the rest of the world. The reason why this was not done was that considerable improvement had yet to be effected in the standard of receiving sets to ensure satisfactory reception in all parts of the world. From the transmitting point of view it was contended perfection had been attained, but it was useless maintaining a service until satisfaction could be assured at the receiver, wherever situated. In the meantime, therefore, short-wave was an interesting stunt, but further progress was required to warrant uniform operation. Experimental transmission from 5SW would be continued, and doubtless the necessary improvement in receiving sets would follow.

Asked about television, Captain Eckersley indicated quite clearly that in his view perfection in television would ultimately be attained, but that in the present state of development sufficient satisfaction could not be assured to warrant regular transmission. Mechanical difficulties had to be overcome by those who were pushing the science. The B.B.C., he indicated, was quite sympathetic to this new phase of broadcasting, and stood ready, when the time was ripe, to render the necessary service.

Of special interest to Mr. Owen was a visit to the station at Daventry. Two stations were really in existence there side by side, viz., 5XX Daventry, and 5GB, the latter being mainly for experimental work. The officials

Public Visit YA Studios

KEENLY curious as to the how and the why of broadcasting, many listeners are availing themselves of the opportunity of visiting the studios. For long they have been at the receiving end and they have been puzzled by the mystery of how sound can be carried by perfectly soundless waves from the studio to their homes, so, when the opportunity of being shown over the studios has presented itself, the invitation has been accepted with alacrity.

Some are now more informed on the technical side, some are not, but all have enjoyed the visit immensely. They have at any rate seen where the broadcasting starts from, even if they do lose track of the sounds while they travel from the aerial to their receiving sets, and are somewhat at a loss to explain why they should then again be audible from a loudspeaker.

Of course, to all, the way in which a studio concert is "staged" has been most interesting. They have seen the little microphones whose tireless ears absorb all that the artists sing or play. They have found it interesting to attempt to trace the conversion of energy from the singers to the re-creation of their voices in the homes of thousands of listeners throughout New Zealand and overseas. And, as they have thought of it all, they have marvelled.

When an artist sings he causes mechanical vibrations of his vocal chords, which produce sound. The sound strikes the microphone and causes an electric current to be produced, which is exactly like the sound. This is amplified many times and caused to modulate or mould the high frequency carrier wave of the transmitter in accordance with the electrical low frequency current produced by the microphone. This high-frequency modulated current is supplied to the antenna, from where it is radiated into space in the form of electrical magnetic waves. These waves travel with the speed of light to the receiving sets, where they are changed to low frequency currents, so that they can operate a loudspeaker. This means that the electrical energy is converted into sound and radiated on the air to the ear in the form of sound waves identical—or should be, if the set is efficient—with the sounds emerging from the mouth of the singer in the studio.

A Sunday Talk

An interesting talk will be given by Mr. Arthur Hirst, F.R.S.A., on the evening of Sunday, the 14th inst., at 8.56 p.m. His subject will be "The Place of Fine Art in General Education."

at this station gave Mr. Owen a very warm welcome. It seemed that comparatively few visitors were received there these mainly being foreigners interested in the technical side. Every facility was given even to those to see and learn all that was available. "We have no secrets," one of the officers said. "We are quite ready to show everyone everything that we have, in order that broadcasting may be advanced."

Mr. Owen will, it is hoped, be able to give listeners in general further experiences at a later date.

**Longest
Life,
Honest
Rated
Capacity**



Voltage	Capacity Amp.	Price
4	60	£3 10 0
6	60	4 10 0
6	80	5 5 0
6	100	6 5 0

FOR SALES AND SERVICE—

Auckland: BATTERY SUPPLIES LTD.

130 Broadway, Newmarket; Phone 45-540.
Also Auckland at 3 Lower Albert St. Phone 44-174.

Wellington: L. J. PURDIE & CO., LTD.

97 Dixon Street, Wellington. Phone 20-057.

Christchurch:

WATKINSON'S LTD.
(STARTING-LIGHTING-IGNITION EQUIPMENT)

261-265 TUAM ST.

Between Madras and Barbadoes Streets.

Telegrams: "Vesuvian," Chch.

P.O. Box 1118. Phone 2241

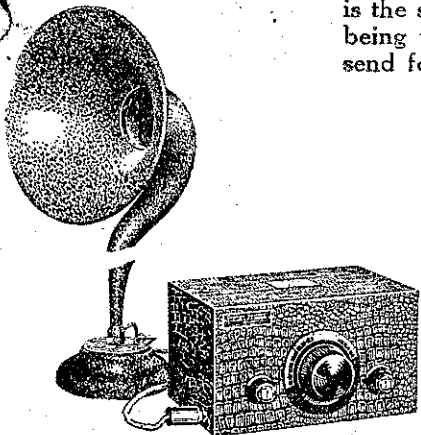
Dunedin: J. & A. P. SCOTT LTD.

Corner Albany and Leith Streets, Dunedin.
P.O. Box 209. Telegrams: "Japscot."

Three New Courier Models

—all Improved Radio Sets

ALL that could be required in selectivity, compactness, power, portability and simplicity of operation is now combined in these three new Radio Sets. The high standard of Courier workmanship and quality is the same in each Set—the only point to consider in making your selection being the amount of money you can afford. Read these brief descriptions, send for the new leaflet giving full details—and make your choice.



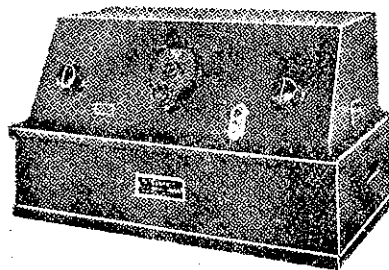
The Courier Junior
Model 3.

The best quality parts are used throughout and the Set presents a very attractive appearance in its Brown Crocodile Leatherette Cabinet, measuring 10½ ins. x 6 ins. high. The Set will give loud-speaker reception of Australian and New Zealand stations—performing with astounding efficiency when coupled to a good aerial. Battery consumption is reduced to a minimum, thus the cost of upkeep is next to nothing.

Price Complete, £17/17/-
(Accessories included in price).

The Courier Junior is sold complete with the following accessories: Courier Junior 3, bare: 3 Philips Valves (4 volt), 1 4-Volt L.B.C. Accumulator (will last about 150 hours between charges), 2 Burgess 45-Volt B Batteries, 4½-Volt C Battery, Phone or Speaker Plug, A.J.S. Junior Loudspeaker (as illustrated), 100 feet 7/22 Aerial Wire, 6 Insulators, 1 Inlead Tube, and a Lightning Arrester.
(SOLD COMPLETE ONLY).

A simple illustrated instruction card and 6 months' written Guarantee accompanies each Set.



The Courier Three
Model Q.R.3.

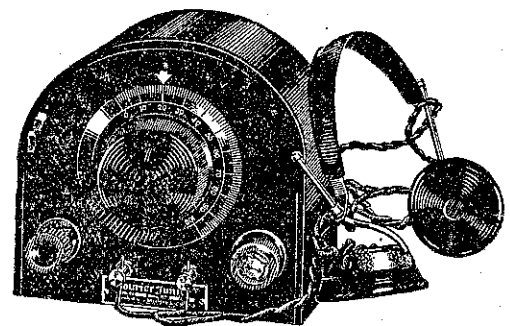
There are several points of outstanding interest about this Set—we list them briefly, but suggest you write for the leaflet giving full particulars as this set shows a number of almost unique features. There is no local interference. Both long and short-wave stations on the same Set. A special plug for Gramophone Amplification. A device enabling voice amplification. Portability. As powerful as the 1928 Courier 4.

Price Complete, £27/10/-
Price, with Valves &c. £18/8/-.

Accessories:—Courier Q.R.3, bare: 3 Philips Valves (4-volt), Orphean Speaker, Pair of Head Phones, 4-Volt L.B.C. Accumulator (will operate Receiver about 200 hours between charges), two 45-Volt Burgess B Batteries, a 4½-Volt C Battery, Phone Plug, 100 feet 7/22 Aerial Wire, two Lead-in Tubes, Lightning Arrester, Six Insulators, and 12 feet Earth Wire.



Anyone can erect and operate any of these Sets, for simplicity is one of the Courier features.



The Courier Junior
Model 1.

A Valve Set for the price of a Crystal Set. You can listen-in to any station in New Zealand—and with practice in tuning, Australian stations, too—on this One-valve Set. For the farmer who is debarred the use of a Crystal Set, and does not wish to make any great outlay for his Radio—this Set is just the thing. Cheap to buy and cheap to run.

Price Complete, £5/5/-

The Courier Junior is sold complete with the following accessories:—Set and Valve, 1 Pair Head Phones, 3 Burgess Dry Cells (A Battery), 1 Burgess 22½-volt B Battery, a 100-ft. Coil of 7/22 Aerial Wire, 4 Egg Insulators, Inlead Tube, and Lightning Arrester.

(SOLD COMPLETE ONLY).

COURIER RADIO RECEIVERS

Write to the nearest Agent or Manufacturers

Wholesale only from J. WISEMAN & SONS LTD., Albert Street, Auckland.

Special Pleas of Television Enthusiasts



LAST week we published the information that the British Postmaster-General had agreed that the British Broadcasting Corporation's experimental plant might be used, in hours outside those ordinarily occupied by broadcasting, for further experiment with the Baird television apparatus. It was stressed by the Minister that this concession in regard to experiments did not imply any immediate revision of the British Broadcasting Company's attitude following on the earlier experience with the Baird apparatus.

From articles appearing in the magazine "Television," the official organ of the Television Society, it would seem that this decision on the part of the British Postmaster-General is the outcome of persistent propaganda on the part of the television enthusiasts for greater co-operation on the part of the British Broadcasting Corporation in making available its technical resources and equipment for further experiment. The magazine "Television" has now been in existence for twelve months, and has attained a very creditable technical and editorial standard. Articles in the February issue now to hand strongly review the technical and practical attainments in television broadcasting, and make strong plea for "a more broadminded attitude" on the part of the British Broadcasting Company authorities. The claim is made that the measure of success so far attained by the Baird television system definitely warrants effective co-operation, and that by such co-operation more rapid progress would be possible in bringing this new phase of public service into popular use. The paper editorially states:—

B.B.C. Yields to Importunity and Grants Facilities for Experiment

"A large number of critics of television, many of them with distinguished names, have stated not once but many times, and at great length, that television could never be successfully accomplished by mechanical methods. When Baird proved that it could be successfully accomplished, and while he was publicly demonstrating television images the scope of which enabled the head and shoulders of a person to be reproduced, the critics, being forced to admit that mechanical methods were successful, minimised that success to the best of their ability and stated in unequivocal terms that it would be impossible to increase the field of vision by mechanical methods and televise anything but small objects such as a person's head.

Baird, retaining his faith in his mechanical methods, continued his researches. The British inventor has so far perfected his system that it is now possible to televise whole scenes in which appear, full length, several people at a time. The received images as reproduced on the standard home televisor, though smaller, are nevertheless quite as completely recognisable. A further development relates to the projection of the received images on to a screen some four feet in diameter. Such a size of screen makes it possible to demonstrate television to a number of people at once. It could, in fact, be employed in a small hall. This marks the first step towards the ultimate development of the size of the image to kinema screen dimensions, so that audi-

ences in picture theatres may witness a reproduction, not of something which happened some time previously, as is the case with a kinema film, but of something which is actually happening at the moment of presentation.

"Surely these improvements constitute a vindication of mechanical methods of image scanning, and serve to discredit the theorists and armchair critics."

The Technical Aspect.

A FURTHER article in the same number under the heading, "The Future of Television," by Dr. C. Tierney, D.Sc., F.R.M.S., vice-president and chairman of the executive of the Television Society, enters into a more detailed review of the technical position, and pleads for B.B.C. co-operation—which plea would now seem to have been successful. Dr. Tierney says, inter alia:—"We have recently read in a leading London newspaper, the 'Morning Post,' report of an interview between its representative and an official of the B.B.C., which purports to challenge Mr. J. L. Baird to come forward with any new development which will enable them to reconsider the question of affording facilities for broadcasting television. Without entering into any discussion as to the merits or demerits of this mode of negotiation, or whether the desired end is not more likely to be achieved by co-operation rather than by pseudo challenges, a few observations upon the results of some recent tests will be of interest.

"While theorists are still debating whether the disc and spot-light method of exploring is capable of scanning anything more than a very small object, and whilst they are theorising on the speed of the disc in terms of millions of revolutions per second which make one giddy to read, what are the facts? J. L. Baird has repeatedly demonstrated to scientific and other competent observers, as well as to the public, the adequacy of his well method for the transmission and reception of televised images.

"The image of the head and shoulders of the subject is received with complete satisfaction to all, and more recently he has transmitted a whole stage scene showing two athletes giving an exhibition boxing-bout to demonstrate the practical application of his system to larger scenes. The latter demonstration, which the writer, amongst others, was privileged to witness, was carried out from a stage some 15 feet by 10 feet, temporarily constructed for the test.

"The scene, received in another room of the same building, clearly depicted the small, but recognisable, images of the combatants and their every movement, which at times were particularly rapid, as blow upon blow was exchanged, and one or other would speedily dodge or retreat in order to escape an impending disfigurement. The reception only needed the loud-speaker attachment to render audible the ex-

change of blows, and perhaps the remarks, to complete the realism.

"A further difficult and exacting test was carried out with equally satisfactory results. A cyclist, riding a bicycle round a ring, illuminated by the same method, was transmitted to the same receiver, which accurately showed every movement, both of the machine and the rider in motion, and without any question as to identity or direction of movement, which abundantly justified our expectation.

"I have referred to these two experimental tests in order to show the practical application of the Baird system to extended scenes, and if further evidence were necessary to emphasise the possible development and potentiality of this system I may perhaps be permitted to refer to the subject of projected television, i.e., the projection of the image on to a large screen.

"In company with a number of distinguished visitors to Mr. Baird's laboratories, I subsequently witnessed the received image of a well-known person projected on to a screen some four feet in diameter, which could be seen and recognised by a large audience. The result, though as yet not fully developed, was astonishing. Not only was every movement of the head, the eyes, the lips, etc., reproduced with fidelity, but also those subtle expressions of pleasure or annoyance, or joy or grief, truthfully portrayed.

Foreign Folk Interested.

"These few facts alone are sufficient to show that there is in these developments a potentiality as yet unappreciated in this country. Foreign governments and powerful organisations from abroad are concerned to acquire rights and privileges in these which our own authorities are so reluctant to secure, and which, in the opinion of those experts most competent to judge, are more than sufficiently advanced to justify trial through any of the British broadcasting stations, all of which, for good or ill, the British Broadcasting Company is granted the monopoly.

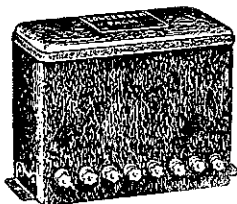
"Our present broadcast system was not perfected in its first year of service, nor indeed, while fully appreciating its excellence, is it perfect yet; but if, in the matter of television, the British public is expected to be satisfied with the transmission of still pictures when the living image is as readily available, then those responsible for the delay are failing in their duty to their employers and to the public in whose hands the ultimate remedy lies.

"To challenge Mr. Baird to produce anything new may appear very heroic, but it sounds rather like the smarting boy who whistles to keep his courage up. In any case it is not 'challengers,' but co-operation and a fair trial, that the public would welcome.

"The present attitude of the British Broadcasting Company is by common consent a fundamental mistake, and it is hoped that their mode of remedying this is not so insincere as it at first appears, and that the British public may yet have a British system of television which, in spite of ill-formed opinions to the contrary, is more ad-

EMMCO'S CONDENSER PACK

EMMCO
PRODUCTS
ARE FULLY
GUARANTEED



EMMCO
PRODUCTS
ARE FULLY
GUARANTEED

A thoroughly tested condenser pack for use in eliminators, power packs, or amplifying units. Containing two 4 mfd, two 2 mfd, two 1 mfd and two .1 mfd bypass condensers. The pack has eight terminal tappings and is made up in an attractive crystalline finish metal case, size 6½ x 3 x 5 inches.

Price of Standard Pack 60/-

MADE BY ELECTRICITY METER MANUFACTURING CO., LTD.

Distributors for New Zealand:

JOHNS LTD., Chancery Street, AUCKLAND.

THOS. BALLINGER & CO., LTD., Victoria St., WELLINGTON.

L. B. SCOTT LTD., Worcester Street, CHRISTCHURCH.

vanced and more promising than any other.

"It is safe to say that television is many, many years ahead of where wireless was when that first started. We have no hesitation in stating that had this country turned down wireless in those early days because of the crudity and imperfections of the coherer and anode, Britain would not hold the position it controls to-day in wireless telegraphy and telephony; and when a prominent member of the B.B.C. staff, who wisely, or otherwise, posing as an unbiased technician, states in reference to the Baird system of television that 'quantities beat it,' whatever that might mean, he is speaking with insufficient knowledge and without authority.

"We have instances enough in this country of the folly of waiting for perfection before we condescend to consider important inventions which have gone abroad for development, resulting in huge industries. The cinematograph is a conspicuous evidence of this, and if through garrulous ineptitude television is similarly compelled to go abroad for its development and practical application, then the loss will be to British workers and a scandal to British enterprise and British genius.

A Further Plea.

MR. SYD. EY A. MOSELEY, in what may be termed a pleading propagandist article also drives home the point of attainment reached, and pleads for technical co-operation. He says:—

"When the time for experimental broadcasting comes there should be mutual co-operation between Mr. Baird (whom I know—despite what has happened—bears him no malice whatever), Captain Eckersley and the staffs of both the B.B.C. and the Baird Company. I have never posed as a technician, but (and this should interest the chief engineer) from information which I have taken care to obtain, I believe that these obstacles can be surmounted.

"Comes the question whether television has recently advanced to a stage where it would be of general interest: Let us, for the moment, wash out the past, and come to the latest happenings. I will offer no views, but give the facts.

"Within the past few weeks there have trooped up to the Baird Studios in Long Acre such eminent men and women as Sir Thomas Inskip, the Attorney-General, Sir Herbert Samuel (who came twice), Lady Waley Cohen, Field-Marshal Lord Allenby and Lady Allenby, several members of Parliament, and certain other people of public prestige whose names I am not permitted to mention.

"These emissaries merely view television from the public standpoint. They came to see whether this thing was as interesting as we claimed it to be. They saw their own friends televised, they saw the pictures of magazine covers flashed instantaneously, and read the names on the outside cover of a music sheet.

"There can be no gainsaying they were 'held.' From their spoken and written observations they were almost unanimous in stating that the images were easily recognisable and were of astonishing interest. They were puzzled, as I have been all along, as to why we were not permitted to broadcast television to the multitude.

"Apart from this, we have had the French and German experts over to judge what has been done. Let me quote the dispatch from a newspaper, the original of which I took the trouble to see:

"I called to-day upon Dr. Bredow, who occupies in Germany a position similar to that of Sir John Reith, the Director-General of the B.B.C., and who is also a member of the Government.

"Dr. Bredow and his two chief engineers, Dr. Reisser and Dr. Baneth, have only recently returned from London, where they made a close examination of the Baird Television System in its present stage of development.

"I found Dr. Bredow firmer than ever in his belief of the possibilities of this system.

"He declared that he and his colleagues had been amazed (the German word he used was even more emphatic, but has no English equivalent) by what they had been allowed to see in the Baird laboratories.

"From the progress which television has made, and which is beyond dispute, it is evident that with sympathy and help, particularly from such a powerful body as the B.B.C., this British invention will forge ahead even more rapidly. Isn't it the very least one would expect from the B.B.C., which possesses the facilities to say to this inventor: 'There may be technical difficulties, but we don't wish to hinder you; on the contrary, we wish to help you. Let us come together, and see what we can do to help. We will, without any undue interference with our present work, grant you such facilities as will enable you to justify your claims. We will give you so fair a trial that not even our bitterest enemies will be able to point a finger at us and declare that we have not played the game. I will stake my reputation that if Captain Eckersley begins to help in the broadcasting of Mr. Baird's television he will soon become immersed in this wonderful new branch of wireless, and will be lending his whole-hearted co-operation. He will say that the faith of those who believed in this thing had some foundation in fact, and beyond that he will have an opportunity of making up for the extreme caution he has adopted in the past."

It now remains to see what the outcome will be of the experiments now to be undertaken in conjunction with the B.B.C.

ORDINARY lighting flex, obtainable from any electrician, makes quite a good indoor aerial.

Radio Round the World

SO successful have been the results of the persistent and energetic campaign of the Pacific Radio Trade Association in reducing interference to radio reception in the San Francisco Bay region that other cities throughout the country are planning similar work. Nearly two thousand complaints have been investigated and, in a majority of cases, have been remedied during the past year. The work has been financed by the public service corporations whose equipment is sometimes responsible for the interference. Thus neither the radio dealers nor the public has been put to any expense for eliminating these troubles. The effect has been highly beneficial to the dealers, who are now selling sets where they could not be sold before, and to the listening public who can now enjoy radio without the unseemly noises due to interference. This will also redound to the benefit of the radio industry, which is not selfishly allowing the public to suffer after buying radio sets.

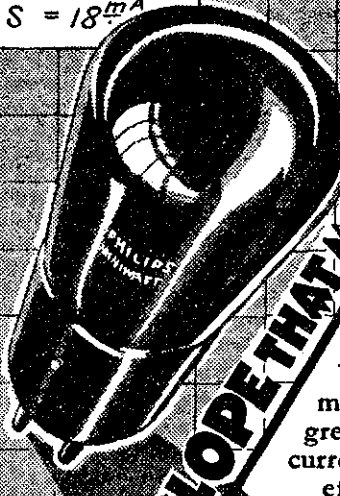
AMERICAN papers describe the strenuous efforts of the staff of station WJZ, New York city, to repair its aerial, torn down by a violent wind on the Presidential election day; the feat of putting up a 2500-pound aerial

between the 700-foot towers was accomplished in less than three hours by a small crew, and the station came into the chain, broadcasting returns, only a few minutes late. A few days later WEA, New York, suffered temporary disability by the freezing of its cooling system in an unexpected cold snap. But seldom indeed does the American broadcast engineer allow little freaks of nature like this to make a programme late.

SINCE the appointment of the Rev. C. C. Martindale, S.J., to represent the Roman Catholics on the British Broadcasting Corporation headquarters' Religious Advisory Committee, there has been a marked revival of interest in radio possibilities among Catholics. Father Martindale is taking the London studio services occasionally. Notable Catholics in the B.B.C. include Mr. Cecil Graves, Lord Grey's nephew. Father Martindale, it will be remembered, visited New Zealand going to and returning from the Eucharistic Conference in Sydney. He was in the motor-car with Bishop Cleary when a serious collision occurred on the road between Rotorua and Auckland and Bishop Cleary was severely injured.

**PHILIPS
MINIWATT**

$V_f = 4.0 \text{ V}$
 $I_f = 0.15 \text{ A}$
 $V_a = 50-150 \text{ v}$
 $I_s = 50 \text{ mA}$
 $I_g = 100$
 $S = 18 \text{ mA}$




IT'S THE SLOPE THAT MAKES THEM BETTER

THE
STEEPER
THE
SLOPE
THE
BETTER
THE
VALVE

The curves of Philips 'Miniwatts' SOAR up—they're higher—they're steeper

The slope of a valve tells you much—for the steeper it is the greater the change in the plate current—grid voltage ratio, higher efficiency, and of course the louder and clearer your music.

[You can pick out the INDIVIDUAL IN-STRUMENTS with a Philips Loudspeaker.]



PHILIPS

MINIWATTS

50-40

Adapt. of Philips Lamps (N.Z.) Ltd., (Radio Dept.), Hope Gibbons Bldg., Courtenay Place, Wellington.



BURGESS
RADIO
BATTERIES

The New Zealand Radio Record

P.O. BOX, 1032, WELLINGTON.

Published Weekly. Price 3d. Subscription Post Free in advance, 10s. per annum; booked 12s. 6d.

Literary communications should be addressed: "The Editor"; business communications to "The Manager."

Advertisers are asked to note that alterations of advertisements should be in hand Friday of each week for insertion in the succeeding issue, printed Tuesday, bearing Friday's date. No responsibility is accepted for blocks remaining unclaimed three months after each insertion.

N.Z. RADIO PUBLISHING CO., LTD.,
P.O. Box 1032, WELLINGTON.

WELLINGTON, FRIDAY, APRIL 12, 1929.

EDITORIAL.

LISTENERS will read with interest the comprehensive comment on radio matters made by Mr. J. H. Owen, former president of the Wellington Amateur Radio Society, in the course of an interview published elsewhere in this issue. Mr. Owen has made several journeys abroad, and on every occasion has devoted special attention to radio development. On this occasion, as on earlier trips, Mr. Owen made a prime point of making contact with radio transmission and development wherever possible. His criticism and comment on the position, therefore, have a value greater than that of the casual observer.

Whole-hearted endorsement of the system of unified national control is given by Mr. Owen. Specially asked for a comparison between the British method and that developed by America, Mr. Owen says that there is simply no comparison, and that the British method of unity and cohesion is the one and only way by which a comprehensive broadcasting scheme can be developed and maintained. In Britain the system is administered by the British Broadcasting Corporation, as successors to the former British Broadcasting Company. In New Zealand development has been entrusted to the private enterprise of an individual company, under strict Government regulation and control. In each case the principle of unified control, under a system of revenue contributed by the license fees of listeners, maintains the service. The advantages that Mr. Owen finds in this development are wholly in favour of the listener. The listener is given the best in musical entertainment that is possible. He is given an adequate news service, and beyond that, the attempt is made to use the radio as an instrument of culture and entertainment in the furtherance of national well-being. The demerits of the American system lie wholly in the undue dominance of the advertiser, and the superfluity of stations. Musical numbers are given over the air, but too frequently as bait for the boosting of commercial products or companies. There is no unified effort to distribute news or extend cultural talks. Further, there is chaos on the air in undue competition between station and station. Unquestionably much of great value is broadcast to listeners in America by the stations that are operating, but the listener, it is held, pays an undue price in interference and the arduous duty of selection imposed upon those seeking to avoid insidious advertising. Nothing stronger has been said, or, we think, can be said, against the proposal to unleash in New Zealand certain stations with the right to exploit the air for advertising purposes. "God help New Zealand," says Mr. Owen, "if either stations or amateurs are allowed to exploit advertising."

The merit of Mr. Owen's considered opinion lies in the fact that he is concerned only with the results from the listener's point of view. He has no end to serve save the good of the general body of listeners who provide the funds for radio. We commend his opinion to listeners in general.

4YA Dunedin Strengthening Equipment

Increased Service to be Given

FOR some time past improvements have been in progress at station 4YA, Dunedin, the latest being the erection of the new towers on the roof of the "Evening Star's" new building.

It is now, however, possible to make a definite announcement concerning the Broadcasting Company's plans in connection with 4YA.

It is only a matter of a few months now till Dunedin will have a station which will rank in every way with 1YA and 3YA. The necessary new plant has been ordered.

In the meantime, the present plant is being moved to its new location on the top floor of the "Evening Star" building, and broadcasting from there will commence on April 29.

April 29 will also mark the extension of hours at 4YA. A new timetable will then be introduced, and the two silent days which have hitherto obtained will be reduced to one. In future, therefore, after April 29 the station will be on the air daily except on Thursdays.

With the completion of the new studios in the "Evening Star" building, which work will be completed by the time the new transmitting plant comes to hand, when the official opening will take place, Dunedin will no longer be able to consider herself the Cinderella of the cities in regard to broadcasting.

Miss Edith Harrhy from 2YA

Two Recitals by Welsh Pianiste-Composer

MISS EDITH HARRHY, the eminent Welsh pianiste-composer, made her first appearance at 2YA on Monday evening, April 8, last, and delighted all listeners with her singing and playing. Miss Harrhy sang songs of her own composition and played selections by Chopin and Rachmaninoff.

Miss Harrhy will give her second song and pianoforte recital from 2YA next Monday evening, April 15.

This talented musician, who has been engaged by the Broadcasting Company to appear at all four New Zealand stations, is a very interesting personality. At the age of six she took her first music lesson, and when seven years of age passed the examination of the Trinity College of Music. In her early teens she won a scholarship to the Guildhall School of Music, where she went through the whole curriculum, including piano, voice, chamber music, and ensemble playing. It is interesting to note that Sir Landon Ronald, the principal of the Guildhall School of Music, followed her progress with interest, and had a silver medal struck for her playing in the solo piano competition.

Miss Harrhy's songs for next Monday evening will be "The Young Rose," "You," "Bells Across the Moor" and "There is a Fair Isle," all composed by herself. Her pianoforte solos will comprise two by Chopin. Palmgren and MacDowell will also be represented.

2YA Dinner Session

Particulars Next Week

Commencing on Monday evening, April 29, a Dinner Music Session will be a regular feature of 2YA programmes.

This innovation is likely to meet with widespread appreciation, not only by the townspeople but the country people as well. A session of music such as is proposed will to some extent recompense the farming community for the curtailed evening concert session, for country folk have perforce to retire early, and thus miss much of the evening's entertainment.

Full particulars of the dinner session will be published in next week's "Radio Record."

"Merry Wives of Windsor"

Stage Broadcast by 4YA

WITH the consent of Mr. Allan Wilkie, 4YA will broadcast on April 16 a portion of the stage presentation of the "Merry Wives of Windsor," by Mr. Wilkie's Shakespearean Company.

Football from 2YA

FOOTBALL enthusiasts will be interested to know that April 27 will mark the commencement of 2YA's football relays for the 1929 season. On that afternoon the first match of the series at Athletic Park will be broadcast.

N.Z. Pianist

Competitions

Radio in N.Z.

Mr. Sydney Francis Hoben An Interesting Talk

THE notable New Zealand pianist, Mr. Sydney Francis Hoben, who is now resident in Christchurch, has been engaged by 3YA for a series of recitals. Mr. Hoben graduated with honours from the Konigliches Conservatorium der Musik, Leipzig, Germany.

As a youth, Mr. Hoben was sent to the famous Conservatorium of Music



in Leipzig, where he gained high honours in a stay of several years.

On returning, he toured New Zealand, and taught for a period before settling down in his native city, Sydney. Here he became musical critic for the "Sydney Mail," and organist of one of the largest organs in the Harbour City, and took a prominent part in the musical life. Some years later he returned to New Zealand as principal of music of Woodford House College in Hawke's Bay.

After four years he went for a concert tour to America, and it proved so successful that, on the advice of Mme. Teresa Carreno, he remained for some years in California. He had a brilliant and successful life in the States, which he has toured completely. In California he appeared constantly in all the large cities, and became extremely well known as a pianist, lecturer and teacher.

American newspaper critics devoted much space to his recitals. He accompanied artists of celebrity, such as Miss Geraldine Farrar, Mr. John Barrymore, etc.

By constantly hearing and associating with the foremost vocal and instrumental artists of the day, Mr. Hoben gained invaluable knowledge as to their methods and secrets of success.

Since returning to New Zealand, Mr. Hoben has completely toured the Dominion and given many successful recitals.

Mr. Hoben will appear on 3YA's programme for April 12.

DO not use an ordinary small H.T. battery if your set has a power valve, as so much H.T. current is required by a valve of this type that it is essential to use a large-capacity H.T. battery or else a mains unit.

English Adjudicator Speaks

AN interesting lecture will be given from 3YA on May 9, by Mr. W. H. Dixon, L.R.A.M. (London), A.R.C.M., professor of singing, on the subject of musical competitions and their value to students, teachers and the nation. Mr. Dixon, who is conductor of the Christchurch Royal Choral Society, has recently arrived in Christchurch from the Old Land. He comes with the highest credentials. After much experience with competitions in England he will be able to give valuable advice to students and teachers.

Mr. Dixon will make his first radio appearance in New Zealand next Wednesday evening, when he will describe and narrate the story of "Rigoletto."

Mr. Dixon will be musical judge at the Wellington Competitions in August.

MR. DIXON is a native of Lancashire. In the early days of his musical career he won the open tenor solo at Oxford Berks' and Bucks' Festival, at Slough, and also the gold medal at Bristol Eisteddfod; afterwards securing the Acott Singing Scholarship at Oxford. Following this training he was awarded the diplomas of L.R.A.M., and A.R.C.M. After this he was appointed principal tenor at Mansfield College.

He organised choirs at St. Nicholas Congregational Church, and was for many years conductor of the Felixstowe Choral Society. At the Ipswich Social Settlement, in collaboration with the late Rt. Hon. Sir Daniel



Goddard, M.P., he formed a choir which performed some of the finest music ever heard in Ipswich. In the operatic world he also added distinction to his activities, and the performances of the Ipswich Amateur Operatic Society and Ipswich Players at the Lyceum, with a week's presentation of five or six different operas, will long be remembered.

After the death of Sir Daniel Goddard, Mr. Dixon was offered the post of musical director at Tacket Street Congregational Church, the "Cathedral" of Nonconformity in Ipswich. The music of this church had always

been of a high standard, and under the new conductor the choir improved from "strength to strength." On one occasion its singing in the county competition caused the adjudicator to temporarily forget he was judging a competition, and just to lean back in his chair and listen to the superb singing of this choir.

He trained choirs for the L. & N.E. Ry. Musical Society, and in 1920 was selected to coach the whole of the eastern area for the London concerts.

At the Suffolk County Musical Competition Festivals at both Ipswich and Bury St. Edmunds his pupils won distinction after distinction—18 pupils winning first prizes, and 25 second prizes—and his choirs won premier honours over all comers whenever they were entered. A large proportion of his successful pupils became members of the Ipswich Choral Society.

In addition to the great oratorios, he has tackled some of Elgar's masterpieces, such as "The Dream of Gerontius" and "Caractacus," with conspicuous success. The splendid performance of "The Dream" is remembered as a concert never to be forgotten in musical annals in the town. Many smaller works, presenting nearly as many difficulties, have been given and Mr. Dixon has never let the society or the public down by a second-rate performance.

4YA's Announcer

THE Federated Clubs of New Zealand held their annual elocutionary and debating contests in Dunedin over Easter, eleven teams competing. Mr. A. L. Curry, announcer at 4YA, a member of the Dunedin Club, received first award in the prepared debate section, the subject being "That European Countries will be deterred from War by a Pact of Peace."

Mr. Curry's team also secured first place in the aggregate teams' award.

Praise for Attainment

PRAISE of New Zealand's radio performance and standard is given by Mr. J. H. Owen, former president of the Wellington Amateur Radio Society, who has just returned from a comprehensive tour abroad. Because of his special interest in radio, Mr. Owen made a point of listening assiduously wherever possible to radio transmission. His comments on the local standard are, therefore, of interest and value to listeners. In the column of Notes and Comments, conducted by "Switch," a paragraph will be found, in which Mr. Owen particularly dwells upon the fine quality of 2YA's transmission. This testimony is, of course, gratifying to those responsible, and may be taken as somewhat of a guide by listeners who are in doubt at times whether to blame their own sets or the station for faulty reception.

Commenting upon the standard of radio obtaining in New Zealand, as compared with other countries, Mr. Owen definitely goes on record as holding that having regard to the conditions under which it has been working, and the state of development of the country, the New Zealand Radio Broadcasting Company has done wonderfully well in the standard of programmes put on the air and the quality of transmission maintained from the various stations.

A full and comprehensive interview with Mr. Owen will be found elsewhere.

BY a decree (published in Rumania, in the "Nonitorial Official" of November 6) the restriction in force since 1925, under which the erection of transmitting and receiving stations within a zone of 36 km. from the frontier was forbidden, has now been removed.

Take a 'Kodak'—bring back your holiday

When the time comes for you to pack up, don't leave your happy times behind—bring back your holiday in your 'Kodak'. Bring back the glorious scenery, the exciting incidents, the friends you met, the romping children, the picnic parties—bring them all back in happy 'Kodak' snapshots.



Modern 'Kodaks' are inexpensive from 30/-.
Brownies from 10/6.

New Catalogue Free

OF ALL KODAK DEALERS

Copyright of Gramophone Records

Royalty Payable by B Class Stations

AS every listener knows, a payment is made by the New Zealand Radio Broadcasting Company, Limited, in respect of the copyright of all musical items performed by it over the air. Prior to the passing of legislation last session this payment was made direct to the Australasian Performing Rights Association, which claimed possession of approximately 90 per cent. of the music worth while for broadcasting purposes. On account of the position which arose, last session legislation was passed by the New Zealand Government directing that, pending finality and legislation likely to arise from the Report of the Copyright Convention held in Rome, at which New Zealand was represented, payment on a set basis should be made by the Radio Broadcasting Company to the Government for distribution by it to the Australasian Performing Rights Association, on proof of copyright of the music claimed being duly held by it.

While this decision has obtained in respect of the A stations throughout New Zealand, various amateur transmitters and B Class stations have not been troubled with any demands for payment of royalties in respect of the music broadcast by them from time to time. From the strictly legal point of view this position would seem now to be likely to end, although it remains for a specific demand upon such stations to be made by the party concerned, namely, the Australasian Performing Rights Association.

Action was recently taken by that association in Australia against a B Class station in Melbourne, namely, 3BD. This action was taken to determine the liability or otherwise of the station in respect of gramophone records used by it from time to time. The decision of the Court was in favour of the Performing Rights Association and against the B Class station, and an injunction was granted restricting the transmission of such records. This decision naturally will have a bearing upon the position as it obtains in New Zealand, and would seem to open the way for any action on a similar basis that may be contemplated against the B Class stations—i.e., were it not for the existing copyright legislation as passed by the New Zealand Government last session, and to be reviewed in the coming session in the light of the recommendations of the Rome Convention. As the case is of

interest to all those concerned in B Class stations and listeners in general, we give a summary of the Melbourne legal proceedings.

Injunction Sought.

THE Australasian Performing Rights Association, Ltd., sought an injunction against 3BD Broadcasting Company, Ltd., of Capitol House, Swanston Street, to prevent that company from infringing the performing rights of plaintiff, an inquiry regarding damages or, alternatively, an account of profits.

Mr. Menzies, K.C., and Mr. Eager (instructed by Messrs. Gillott, Mohr and Ahern) appeared for the plaintiff, and Mr. D. C. Robertson and Mr. Dean (by Messrs. Martin and Martin) for the defendant company.

Plaintiff in its writ claimed that it was the owner of the performing rights in the Commonwealth in the following and numerous other musical works: "Lolita," "Ramona," "My Ohio Home," and all selections from "The Desert Song," "Rio Rita," "Aida," and "La Tosca." Defendant without licence or consent of plaintiff had recently performed in public the said musical works, and thereby had infringed the plaintiff's performing rights. Plaintiff had requested defendant to desist, but defendant had neglected to comply with the request. As a result plaintiff had sustained serious loss, and unless defendant was restrained, would suffer further loss.

For the defendant it was admitted by Mr. Robertson that, insofar as the broadcasting by the defendant company was of vocal and instrumental performances, the defendant was bound by the decision of the Full Court in the case of Chappell and Co. against Associated Radio Company, Ltd., and must submit to an injunction. Insofar, however, as the claim related to the broadcasting of works performed by means of gramophone records or pianola rolls, the defendant contended that, the record having been lawfully made, the plaintiff had no right to prevent the public performance of musical works by means of those records, and that the performing right of the owner of the original work could not include the right to prohibit performances by means of such records.

Counsel for plaintiff contended that, although the Copyright Act permitted gramophone records and pianola rolls

to be made without consent of the owner, in certain circumstances, the Act nowhere authorised the public performance of musical works, in which copyright subsisted, by means of such records or rolls. The public performance of musical works without the consent of the owner of the performing right was an infringement of such performing right.

Judgment Against Radio Company.

IN giving reserved judgment, Mr. Justice Lowe said that at the trial Mr. Robertson (for the Broadcasting Company) had stated that, insofar as plaintiff's complaint related to vocal and instrumental items rendered by local artists, the defendant considered itself bound by the decision of the Full Court in the case of Chappell and Company versus Associated Radio Company, and in respect of those items it submitted to an injunction. Insofar as plaintiff's claim related to work performed on gramophone records and pianola rolls, defendant admitted that the works set out were performed in the manner alleged, and were broadcast by the defendant from its studio. Mr. Menzies, K.C. (for plaintiff), admitted that as to certain of the musical works specified in the statement of claim plaintiff was not the author of any such work, and that the gramophone records and pianola rolls by means of which the performances of the items complained of were given were lawfully made.

Mr. Justice Lowe said that the question which he had to determine was whether that part of copyright which was preserved under the right of performing a work in public was infringed by the performance in public of the reproduction of the work obtained from a gramophone record or a pianola roll. That question was, so far as he knew, novel. He was not called upon in this case to determine the full extent of the copyright conferred upon the owners of the copyright in mechanical contrivances when the owner of the performing right in the work recorded on the mechanical contrivances did not interfere. He had no admission that defendant was, in respect of these mechanical contrivances, an assignee or licensee from the owner of the copyright, nor was any assignment or licence in evidence before him. Nor was there anything to suggest that the contrivances used by the defendant were made otherwise than by or with the consent or acquiescence of the owner of the copyright. He must, therefore, on the admission he had set out, consider the defendant as one protected by, and to the extent of, section 19 (2) of the Copyright Act. He thought that this subsection did not authorise a performance in public of the work recorded on the contrivance in conflict with the right of the owner of the performing right of the work itself. In his opinion, therefore, the action succeeded, and there would be an order for an injunction against the defendant. If the plaintiff insisted there should be an inquiry regarding damages or profits, but plaintiff must elect which relief it wished. Plaintiff would be given the costs of the action, but he

Edison's Forecast

Views on Radio on 82nd Birthday

ON the occasion of the celebration of the 82nd birthday of the great inventor, Mr. Thomas Edison, a special meeting of America's prominent citizens, including the President and Mr. Henry Ford, was arranged. During the celebrations the great inventor was asked his opinion on twenty-two questions, and the following pertaining to radio are of particular interest to all who are interested in that science.

The inventor was asked: "Do you think that radio has been improved to any marked extent during the past year, and what do you see for it in the next year?" to which Mr. Thomas Edison replied, "Improvements are being made continually every year." Another question, "Will it ever be possible to completely eliminate static?" and the reply, "It is improbable."

"What is your opinion of what electricity, machinery, and man's genius will make the world 50 or 100 years from now?"

"It is impossible to tell anything about it," replied Mr. Edison. "We don't know a millionth of 1 per cent. about anything. Sound is the only feature that has been revealing to the men who have studied it."

IN the evening Mr. Edison talked to the people of the country over the air, and millions of Americans from coast to coast listened to the 31 radio stations of the National Broadcasting Company.

"Ladies and gentlemen," he said to the radio audience, "this is Thomas A. Edison speaking from Fort Myers, Florida."

"This has been such an eventful day, with so many kind messages from so many kind people that I find it difficult to express my heartfelt thanks."

"I am still working hard, and I ask you to accept my efforts as a proof of my affection, instead of my words. I wish I could invite all of you to have some of my birthday cake, but unfortunately we can't eat by radio just yet. I will have to work on that problem."

"Well, good night everybody. Thank you and good luck."

reserved for further argument the question of the costs of the notice of motion for an interlocutory injunction which had stood over to the trial of the action.

Mr. Eager (for plaintiff) said that plaintiff elected to waive the claim for damages and an account of profits. It had desired to have the legal questions determined, and was not insistent upon obtaining an award of damages.

Mr. Justice Lowe said he should think this was the proper course to take in the circumstances.

Use Our Booking Offices in Advance

S-O-S

TRAVEL IN COMFORT BY
CAR

WELLINGTON — PALMERSTON
NEW PLYMOUTH

Be Early to secure the BARGAINS at WELLINGTON'S RECORD RADIO AND ELECTRICAL SALE

Building coming down. Must be out in three weeks.

EVERYTHING REDUCED IN PRICE
except a few proprietary lines

G. G. MACQUARRIE LTD. CROSLEY RADIO SALES
ELECTRICAL CONTRACTORS, Wellington Agent Teleco Silk Shades,
95 WILLIS ST., WELLINGTON. AND SERVICE.
PHONE 45-865.

Hawke's Bay Notes

THE R.B.C. deserves the congratulations of all listeners on its rebroadcast of 2BL's description of the boxing match between Tommy Griffiths and Billy McAlister. Atmospherics prevented a good performance, and most listeners up this way preferred to tune in to Sydney station direct, but this did not detract from the appreciation of 2YA's effort. By the way, this station seems to be coming through now better than for many months past. The distortion is not so pronounced, but the fading is still frequently evident.

Taken on the whole static has not been bad in the past week, and generally reception has been good. With local listeners it is still a toss up which is the more popular, 1YA or 3YA, but both these stations are listened to in preference to 2YA. The Aussies are all in great form and the "kiddies hour" from the main stations are now easy to tune in.

AMONGST most of the local dealers there is a big growl over the increased license fee, and more than one threatens to give up the business, but when the pot boils over, it will probably be found that licenses will be renewed. The same thing is applying to listener's licenses. There are many who are growling and telling the world that they have finished with radio, but the "thirty bobs" will roll in as strong as ever during the next couple of weeks.

SOME listeners suffer badly from imagination. The other day one informed the writer that 2YB was a great station, and that he had been hearing it clearly for week's past. The writer was very surprised and somewhat crestfallen, for his set had failed to locate the station since the trials at Wellington. There was consolation in the fact that other listeners who were approached were in the same box. How the imaginative one has managed to log the station when it does not commence operations for at least another week is a bit of a problem.

AMONGST local listeners who are always anxious for improved tone, quite a miniature warfare of words is going on over loud-speakers and amplifiers. It is generally agreed that the dynamic is king pin of the speakers, but the argument concerns the different makes now on the market. It is an argument which will take some settling too. As for amplifiers, it would seem as if there is a good majority in favour of push-pull, and these are now freely built.

BY the way, a few days ago, the writer was approached by a budding radio "bug," asking for instructions as to how to read a circuit diagram. This is a query which is frequently made, and there are many newcomers to radio who are anxious to know, so I suggest Mr. Editor, that if possible this should be made the subject of a "Record" article or a series of articles if necessary. I notice that one of the Australian wireless journals is being asked the same question, and is arranging to have the whole thing published. If the "Radio Record" did likewise, it would be doing good service, and the suggestion is forwarded for favourable consideration.

Trade Developments

Airzone "Three" on Distance

(By Observer.)

IT has already been remarked that the Airzone "Three" is capable of handling very great volume without distortion; in fact, it was found on test that it could operate a power valve of the 171 type. It would be possible to operate a very large speaker on the local station and so supply all the volume that could be desired with perfect quality.

It remains to add a few comments on the distance-getting achievements. The main New Zealand and Australian stations on the speaker have been claimed, and it was found by the writer to fulfil this claim. The set was tested at a point too close to 2YA to allow of that station being eliminated and others brought in, though a wavetrap was incorporated. It was found that this latter was an excellent volume control, for there is no better place to reduce the strength of the signals than before they enter the set.

After the local station had closed down the following stations were brought in on the speaker at comfortable strength, that is, they could be enjoyed without straining: 1YA, 3YA, 2BL, 2FC, 3LO, 3AR, 4QG, 4YA could be heard, but the attention had to be fixed on the signals in order to follow them.

A special feature of the set is its very smoothly operating controls.

Prize Poems and Plays

Broadcast Performances

PRIZE-WINNING efforts in connection with the recent 1YA one-act play and 2YA poetry competitions will be broadcast from the respective stations next week.

At 1YA the performers will be Mr. J. F. Montague and the Auckland Comedy Players. In the one-act play competition, two entries tied for first place. One of these, "Devil's Rock," written by Miss Betty Kerr, of Timaru, will be read by Mr. Montague. The other play, "The Old Bachelor," written by Mr. Frank H. Goodey, of Wanganui, will be performed by the Comedy Players.

On Monday at 2YA Mr. Barton Ginger will recite the first prize humorous poem (from the pen of Mrs. Bertl Windsor, Westland), and the second prize dramatic poem (written by Mr. J. P. Black, of Wellington).

At 2YA on Thursday the third prize dramatic poem and the second prize humorous poem will be recited by Mr. Norman Aitken, the well-known elocutionist. Mrs. V. M. Cottrell, of Napier, is the authoress of the first-mentioned poem, and the other was written by Mr. G. T. Palmer, of Dunedin.

FRAYED flexible leads in which a single wire stands out from the others are not only a source of irritation when screwing down terminals, but give rise to the possibility of leakage and scraping noises.

The AIRZONE Three

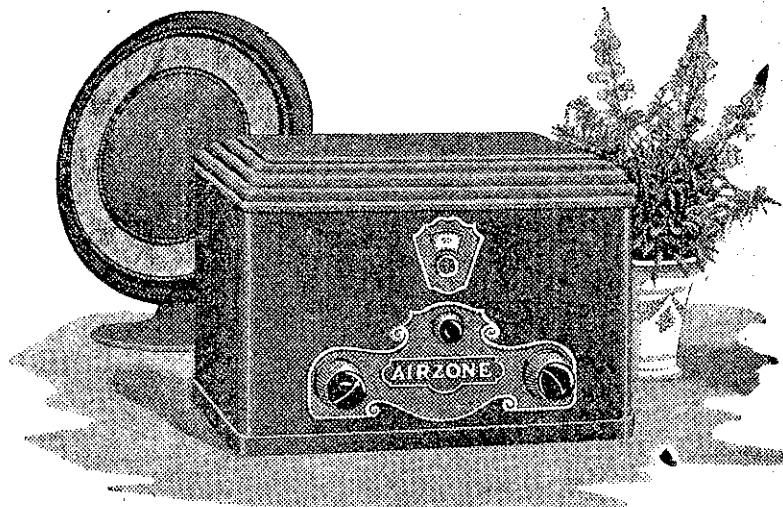
Has been built for you!

For the Crystal Set Owner;
For the Crystal and Amplifier Owner;
For the One-valve Set Owner.

FOR EVERY OWNER

The simplicity, power, tone and beauty of the Airzone Three make the strongest appeal whether you own a Set or not—it is a new super-quality, super-efficient three-valve Set.

The former Crystal owner finds new delight in the marvellous simplicity and smoothness with which the Airzone Three brings into his own home all the stations he has so longed to hear—AUSTRALIA. And all to be had on the speaker—no more phones when you own an Airzone.



YOU MUST OPERATE THE AIRZONE THREE YOURSELF to fully appreciate the delightful new simplicity which Airzone has brought into being in this fine new Receiver. There is an ample reserve of power for immediate use, just a turn of the volume control brings in the distant stations loudly and clearly.

The Airzone Three comes to you in a handsome, strong metal cabinet, attractively decorated in a deep blue crystalline finish, and with the indicator port and escutcheon plate in antique silver. Controls are of polished black bakelite.

Go in to your nearest Airzone dealer and ask him to let you hear the new Airzone Three. Simplicity, attractiveness, quality, POWER are its outstanding accomplishments, coupled with an amazing simplicity of control that you have never known before.

The price is, with Valves (Philips) **£12/3/6**

Complete with Philips Valves, Burgess Batteries and Loud-speaker **£16/16/-**

SEND FOR FREE LITERATURE.

OBTAINABLE IN WELLINGTON FROM—

ELECTRICAL SUPPLIES, LTD., 37 Lower Cuba Street.
F. J. W. FEAR & CO., 63 Willis Street.
STIRTON'S MUSIC AND RADIO STORE, Petone

A limited territory is still open to dealers.
Applications should be made immediately to—

NEW ZEALAND DISTRIBUTORS:

J. A. SMYTH & CO., 71 Victoria Street, Wellington.

Broadcast Music for Coming Week

"'Tis the deep music of the rolling world,
Kindling within the strings of the waved air—
Aeolian modulations."

—Shelley.

By
Bolton
Woods

"The Dance of Death."

VALE Triste is from the incidental music written by Jean Sibelius, the foremost Finnish composer, for the drama by Arvid Jarnfeldt, entitled "Knolema" (Death), which will account for the shuddering sadness of the theme and its haunting spectral character. One annotator comments thus: "It is night. A son watching by the bedside of his dying mother falls asleep from weariness. He dreams—the room is filled with a ruddy light; there is the sound of distant music stealing nearer until the ear is greeted with the strains of a valse melody. The sleeping mother awakens, rises from her bed, her long white garment taking the semblance of a ball dress. She begins to move slowly and silently to and fro. She waves her hands and beckons in time to the music, as though summoning a crowd of invisible guests. These now appear, strange visionary couples, turning and gliding to the unearthly valse rhythm. The dying woman mingles with the dancers. She strives to make them look into her eyes, but the shadowy guests one and all avoid her gaze, she sinks exhausted upon her couch, and the music ceases. Presently she gathers all her strength and invokes the dance once again, with more energetic gestures than before. The shadowy dancers return. The weird gaiety reaches a climax; there is a knock at the door, which flies open; the mother utters a despairing cry; the spectral guests vanish, the music dies away—Death stands on

the threshold." This wonderful composition will be played at 3YA on Sunday (April 14) by the Chicago Symphony Orchestra.

"Love's Greeting."

"Salut d'Amour" (Love's Greeting) is like a little romance or avowal of love, one of Elgar's most beautiful shorter works. It displays that composer's ability to write a lovely melody and embellish it with delectable harmonies. A sense of the dramatic is revealed in its fine climax and its romantic fervour. At 1YA on Wednesday next this little gem will be played as an organ solo by Mr. Arthur S. Wilson.

A Jubilee Song.

"SWING Low, Sweet Chariot," which will be sung as a baritone solo by Mr. Clinton Williams on Wednesday next at 1YA, is a Jubilee song, and was always a feature in the programmes of the Fisk Jubilee Singers, the American Negro Choir that electrified the musical world nearly sixty years ago.

The origin of the songs they sang is unique. They were never "composed" after the manner of ordinary music, but sprang into life, ready made, from the white heat of religious fervour during some protracted meeting in church or camp. They came from no musical cultivation whatever, but are the simple ecstatic utterances of wholly untutored minds. From so unpromising a source we could reasonably expect only such a mass of conditions as would

be unendurable to the cultivated ear. On the contrary, however, the cultivated listener confesses to a new charm, and to a power never before felt, at least in its kind. What can be inferred from that but that the child-like receptive minds of the unfortunate slaves and children of slaves were wrought upon with a tone inspiration, and the gift so bestowed quickened the pulses of life and kept them from descending into the abyss of hopeless despair and apathy. Mr. Theo O. Seward further asserts that the coincidence that more than half these jubilee melodies are in the same scale as that in which Scottish music is written, that is, with the fourth and seventh notes omitted. The fact that the music of the ancient Greeks is also said to have been written in this scale suggests an interesting inquiry as to whether it may not be a peculiar language of nature, or a simpler alphabet than the ordinary diatonic scale, in which the uncultivated mind finds its easiest expression. Great as was the power of the Jubilee Singers over audiences the world throughout, this power was chiefly in the songs themselves, and it is a happy outcome that these folk songs are in permanent form, and can be heard in a later century under unique conditions undreamt of by their first exponents.

A West Country Song.

IN the original Dorset dialect, W. Darnes's folk song "Linden Lea" makes entertaining reading, and for those unversed in singing unfamiliar and curious words, the publishers have considerably provided a modern version. This charming countryside poem praises God's bountiful nature as seen in lovely Dorset. We note its rustic beauty in general, and the charm of the apple tree which "do lean down low in Linden Lea" in particular. The music by Ralph Vaughan Williams is captivating and expressive. "Linden Lea" will be sung by Mr. George Crawford at 4YA next Tuesday.

"A Perpetual Ascension."

DESCRIBED by Vincent d'Indy as "a perpetual ascension towards pure bliss and life-giving light, because its construction is solid and its themes are manifestations of beauty," Cesar Franck's "Symphony in D Minor" (which will be played by the Philadelphia Symphony Orchestra at 3YA next Sunday), is a curiously beautiful work. It is, literally, all beauty, but is happily of a beauty that embraces both grace and sternness, and there is thus never any suspicion of there being a surfeit of loveliness. Cesar Franck is a composer whose fame (and the popularity of whose works) is comparatively recent, though he died over thirty-seven years ago. He was by nature a mystic, and lived a life of comparative seclusion. His works are few in number; the most important can be numbered on the fingers of the hands.

But upon these few works rests his reputation, and it is still a growing one. The Symphony has an extraordinary and wide appeal. It has no esoteric interest; its music is intelligible to the "man in the street," but its appeal nevertheless becomes stronger and stronger as the work becomes more and more familiar. Yet Franck's music has much of that introspective spiritual quality that ravishes the listener and can move to tears. The composition of the Symphony occupied a period of some years, and it is believed that Franck began it in 1886. It was finished in 1888. It contains only three movements (as in contrast to the conventional four movements of the form), but the second contains a middle section which suggests a scherzo. The whole work is bound together in an interesting way. Franck quotes the principal themes of both the first and second movements in the finals. The effect of this device is to give an impression of unity. Particularly beautiful is the second movement, with its famous passages for harp and for cor anglais.

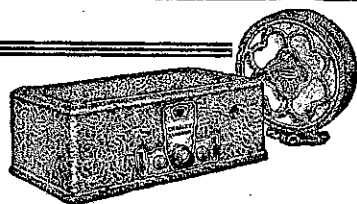
Fated to come as the crown of the composer's artistic work, the Symphony is both joyous and sanely vivacious. The once misunderstood and slighted master is at long last recognised as one of the greatest artistic influences of the last century, and the leading spirit in the regeneration of the musical life of his country.

"The Sound of a Great Amen."

DURING the anxious hours of watching by the bedside of his dying brother, Sullivan recalled some verses which had attracted him a few years before when they had appeared in "Household Words." His brother appeared to have drifted into slumber. Arthur Sullivan drew together some odd sheets of paper and sketched out the complete setting from the first bar to the last of "The Lost Chord." This tribute to his dear brother, upon its publication in 1877, swept through England as an inspiration, and has never since waned in popularity. This famous song will be sung at 3YA on Sunday (April 14) by Mr. Robert Allison.

Faust Visits Hungary.

AT 1YA on Friday (April 19) the famous Philadelphia Symphony Orchestra will play Rakoczy March or Hungarian March from "Faust," by Berlioz. This march was first performed under Berlioz during his visit to Budapest in 1845. Thinking to please the Hungarians he took as its theme their national march, the Rakoczy, and treated it in a very original way. The long, gradual crescendo of the middle part, where fragments of the theme are heard in different parts of the orchestra leading up to a tremendous fortissimo, roused them to such a pitch of enthusiasm that the orchestra was drowned in their excited shouts. At the commencement the trumpets give out the rhythm of the principal theme



CROSLEY BANDBOX

—You only have to look at this Handsome Set to realise that here at last is the "beau ideal" of Radio Sets. A beautiful, ripple-finished all-metal Cabinet, housing one of the most efficient 6-VALVE CIRCUITS ever introduced into New Zealand. Picks up distant stations with ease—reproduces with tremendous volume, yet no distortion—tunes easily, sharply.

And sold at a price much lower than you would expect for such a superlative instrument. With Valves, Batteries and Speaker.

£31

Or available on £5 down and 11/- weekly.

Order your "Bandbox" NOW, in time to enjoy the finest attractions of the new 1929 Radio Season. Post the coupon for further information.

Messrs. Abel, Smeeton Ltd.,

Wholesale and Retail Merchants,
27-29 Customs Street E.,
Auckland.

Sirs:—Please send me particulars of the 6-Valve Crosley Bandbox, and other Special Values you are offering in Sets and Accessories.

Name

Address

R.

Our Mailbag

Praise for Orchestra.

KINDLY permit me to express my appreciation of the programmes sent out from 2YA. The orchestra's rendering of Beethoven's Symphony No. 5, in C Minor, on Monday night last was one of the finest things I have heard over the air. Items such as that certainly make listening-in worth while. I should also like to say a word in praise of "Mr. Announcer": to tune in at 7 p.m. and to hear his pleasant "Good evening, everybody," is in itself a panacea for all the cares and worries of the day just gone. Thank you and him—"Listener" (Gisborne).

News of the Fliers.

THIS evening I tuned in at 7 p.m. for news session with the express purpose of obtaining the latest information in connection with the accident to the Southern Cross. Surely no news of greater importance could have been put over the air, yet not a single reference was made by the announcer. Surely this was a great oversight upon those in charge of compiling the news of the day for broadcast. There must be many thousands of "listeners in" anxiously waiting for news of these most unfortunate airmen. There is another point I would draw your attention to, and that is the omission on the part of the announcer from 2YA when describing race results to give the relative positions of the winners to the favourite. This is not done in most cases outside Trentham.—Herbert Ziele, D.D.L. (Napier).

[2YA believes that it has given fullest possible service in connection with the missing aviators, and is thereby desirous of affording listeners all information concerning the missing airmen. The additional information concerning race results sought is not always available.—Ed.]

which is first heard softly on flutes and clarinets, accompanied by a lovely pizzicato by the strings. Afterwards appears a contrasting subject in the major, which works up, and then, starting from pianissimo, comes the exciting crescendo above-mentioned. Berlioz was so enamoured of this work that in defiance of Goethe, he drags Faust to the plains of Hungary to see the passing of a regiment of soldiers, solely that he might introduce it into his score.

Auckland Notes

(By Listener.)

A NEW radio year has begun, and, from such particulars as can be gathered at this early stage it has begun very well indeed locally. Just before Easter the special staff at the Wellesley Street Post Office was almost snowed under by the avalanche of listeners. Matters were easier, but still brisk on Tuesday morning, and there was ample evidence that country listeners are licensing in large numbers. A small proportion of cancellations has been notified, but such is only natural, and there is no doubt that within a few weeks our district totals will be all that was anticipated of them, and will grow steadily as the winter advances. The radio trade is quite brisk and there are numerous inquiries, particularly for electric sets, which promise to be the general fashion with the majority of new listeners.

IN re-broadcasting, 1YA put up what must be a New Zealand record on Saturday last. Twice, in the intervals between race descriptions, the Auckland station "turned on" 2XAD, but both static and surging were so bad that the only thing a listener could say was that he had "heard America." Quite different were the results in the evening. KDKA was transmitting private messages of friends of the members of the Byrd expedition, and 1YA re-broadcast these in a manner that must have astounded many listeners. Every word was distinctly audible, and enthusiasts here shared the greetings to those now wintering in the far south. The whole effort was a most commendable one, but for interest it was quite eclipsed by what followed. Australian stations have been coming in with fine strength and clarity of late, and 2BL put over a fine account of the feather-weight contest between Grime and Leckie. 1YA quickly hopped in, found conditions excellent, and re-broadcast a story that thrilled and delighted tens of thousands. So well did the account come across that one listener rushed to his telephone at the end of a round and summoned nearby and unfortunately "setless" neighbours to come and hear the "scrap." They came, and were almost as excited as the ringside spectators. It was a splendid advertisement of the utility of New Zealand broadcasting, and a tribute to the enterprise of 1YA. A few years ago the remark, "Did you hear the fight?" would have sounded ridiculous, but it

was a remark that was on the lips of hundreds in trams and trains on Monday morning.

A PROPOS of "good things" broadcast from our own station, the writer engaged a number of listeners whom he met re-licensing, in conversation, and, among other matters, the question cropped up as to what was the best local programme sent out by 1YA. Many memorable nights of entertainment were mentioned, even going back to the special concert put on when Mr. Prentice was in charge, but the unanimous opinion was that nothing could come up to a recent evening—the occasion of the broadcast of "Outward Bound." On the air this drama gave wonderful thrills, and would even bear repetition.

ANYONE who was not satisfied with all the New Zealand programmes given him on Monday evening last would be—well, words fail me. Tuned in three "YA's" and enjoyed variety galore. Music, humour, speech, news, distress calls, and sporting descriptions—all were there for the hear-

ing. Aucklanders followed with special interest the account of the Wellington motor-cycle events. The account of them was splendidly given, the announcer's voice ringing clear and crisp in every syllable. It sounded very like Mr. Clive Drummond at the microphone.

SO keen is the concern of local radio fans over what has befallen the "Southern Cross" airmen that several local sets have been kept tuned almost continuously to Sydney during the past three evenings, their owners deadly anxious to hear that the gallant flyers have again got into touch with the world. At the time of writing Sydney advises no news, and 'planes setting out on search expeditions.

JANUARY 1, 1929, was the date selected for the introduction of the new Q sign abbreviations for wireless.

THE earth connection is quite as important as the aerial, if not more so.



FERRANTI

British and Best

Distributors:

A. D. RILEY & CO., LTD.

WELLINGTON - - AUCKLAND


Agents:

P. F. MANN, LTD., Madras Street, Christchurch.

S. VEITCH & CO., Rattray Street, Dunedin.

HECTOR JONES ELECTRICAL CO., Hastings

F. W. ADAMS, Blenheim.



SIEMENS

RADIO BATTERIES

Absolutely Silent in Action.

Catalogue posted free on request

N.Z. Distributors:

CORY-WRIGHT & SALMON

Engineers, Wellington, Auckland

Coil Specifications.

RHEOSTAT, Westport, writes asking information on the following points:

1. Please advise specifications of coils for wavelengths 80 to 200 metres. In the set used spiderweb coils are employed, and I should like to wind up my coils to fit it. If these specifications are not available, would you please advise the different types of coils.

A.: We regret that we do not have the specifications for spiderweb coils, but in any case it would be impossible for one set of coils to tune between 80 and 200. Solenoid coils would be better, and the following specifications should meet the correspondent's case:—

Secondary turns.	Tickler turns.	Range (metres).
20	7	95 to 110
11	5	45 to 65
6	5	30 to 45
3	4	15 to 30

The specifications for a coil to tune from 110 to 220 metres could be arrived at by proportion and experiment by taking the above as a basis. Full details appertaining to this have been worked out in our 1929-30 issue of the "Radio Listeners' Guide," which will be published within the next three weeks.

2. Would a higher voltage than 22½ "B" increase volume and distance?

A.: If the set oscillates freely, there would be no advantage whatever.

Concerning the Screen-Grid.

DIALS (Napier) writes: "I wish to thank you for your answers to my questions published in this week's

"Radio Record" re the advantages of condenser coupling for the screen-grid valve, and have read up your explanation, and feel satisfied I am making up a B D screen-grid, and I would again ask you for an O.K. on the circuit of which I set down below.

A.: The circuit is quite O.K., but in the "Radio Listeners' Guide" we shall publish the last word in screen-grid circuits. The circuit to be described (erroneously called the Screen-grid Browning Drake, for where is Browning Drake when the slotted primary is removed? embodies the latest researches of the world's technicians.

2. Would the radio frequency choke described in an earlier issue of the "Radio Record" be efficient enough for a screen-grid valve? The choke is 1000 turns divided into five slots of 200 turns each.—Yes, quite O.K.

3. Which is the correct side of the filament of the detector to bring in the lead from the grid lead?

A.: Always to A positive.

4. In the diagram on Page 30, volume 2, No. 36, the filament is shown connected to be plus 135 as well as to A positive. This I take is a draughtsman's error.

A.: Obviously yes. We regret the little inaccuracy, but take it that anyone desiring to experiment with the screen-grid valve would immediately recognise, as did the correspondent, that the connection was erroneous.

Questions and Answers

5. Can you tell me on what date the Listeners' Guide will be released?

A.: Sorry, but at the present time we cannot. The technical staff is working on the publication as fast as possible, and there is every prospect of it being published within the next fortnight, as there are very heavy demands.

Data for Moving Coil.

I AM making up "Pentode's" dynamic cone and am just about ready for winding. Could you advise me the number of turns on moving coil to suit UX112 in last stage. Would it be possible to rewind suitably a burn-out audio transformer for the output 25 to 1? I am making the gap 5-64.—J.B. (Christchurch).

A.: See "Pentode's" article on "Finer Details of Radio"; 112 would require 105 turns. Owing to the fineness of the transformer wire and difficulty of gauging the exact quantity of wire it would be advisable to purchase one.

An Appreciation.

THANKS for tip in "Mail Bag" of March 15 re 10,000 ohm variable resistor. I have sent away for resistor, as I had no other means of reducing volume I had to cut down filament current. Needless to say I always read all technical news in "Record." I have only one problem at present and that is reduction of volume, and that should be solved when resistor arrives. I am satisfied that if batteries are kept up to scratch most radio troubles are cured.

Constructors of the dynamic cone speaker will find much useful information in a special article by "Pentode" on "Finer Points of Radio" on page 30.

Away up here we can log in on five valves 1, 2 and 3YA any time, night or day, except 3YA in summer daytime.—H. W. Young (North Auckland).

The Home-made Moving Coil.

H. F.B. (Auckland) has made the dynamic cone speaker, and has been running it for the past week with excellent results, but has had to reduce the number of turns on the coil to 86 to get the best results from a 609-valve. Until the spool dried out it was found that the consumption was 3 amps., but it now requires 1.3 with 1-16 inch gap. We are asked to supply the following information:—

1. The number of turns required on the coil with two 171s and the number of turns suitable for a B605.

A.: See the special technical article by "Pentode" in another part of this issue.

2. The amplifier is now using OPC 3 and AF 5 C transformers. Is this O.K. with 171 valves?—Yes, quite O.K.

The "AC" Dynamic Speaker.

N.D.B., of Pahiatua, writes suggesting that the current required for the speaker be drawn from the 230-volt mains. A rectifier would be required, and we have been asked to give information as to its assembly.

A.: The construction of a rectifier to supply current to both the amplifier and the speaker would be a job much too difficult for the amateur, for it would necessitate the handling of the voltages approximately 1000. An electrician could make a satisfactory job, and we could supply particulars to such a technician.

The "Rotorua" Portable.

C. F.M. (Auckland) asks the following questions relative to the construction of the "Rotorua" portable, described by "Pentode" in our issue of December 14, 1928.

1. Is there any reason why the grid-leak and condenser should not be screwed to the base board?

A.: It is inadvisable to secure these to the base board, as there is a possibility of this being slightly green, causing a short circuit. This being the case, the higher frequencies or lower wave lengths could not be tuned in.

2. I have brought both ends of the wire out on the base of the choke by passing these down its side and cementing them to the centre. Is this all right?—Yes.

3. I am making the box, 20in. x 6in. x 14in., will this effect the number of turns on the loop and at what turn should I take the tapping off?

A.: In the first instalment there was an error in the specifications for the loop antenna, the number of turns of which should be twelve. This was corrected in the second instalment. This being the case, there is no necessity to vary from twelve in the altered size. The tapping will be taken off at the fourth turn from the inside.

4. What ratio transformer should I use if another make other than that specified were to be used?

A.: There is no necessity to adhere to the recommendations, as far as makes given in the article. The ratio of the transformer should vary between 3½ to 1 and 5 to 1.

5. It was not stated in the article how the speaker diaphragm and unit were connected.

A.: On purchasing the unit it will be quite obvious how the connections are to be made.

Blue Print Wanted.

COULD you send me a blue print of a five-valve "Raleigh"? I have been unable to obtain one here.—A.R.A. (Dunedin).

A.: In all probability you will have great difficulty in obtaining a blue print of this receiver, but try J. A. Smyth and Co., Wellington (who advertise in this issue), as they are the agents.

Improving Tickler Reaction.

W. J.B. (Dunedin North), writes:—I wish to improve my tickler reaction and, incidentally, tone. Shall I use a

Are You Having Trouble?

Does your Set fall short of expectations?

If so, do you know where to look for the trouble?

The 1929-30 Listener's Guide has a Special Service Section to help you.

A selection of the topics invaluable to the amateur are:—

Absence of Signals.

Dead Spots.

Weak Reception.

Distortion, Noises.

Howling and Neutralization.

Available shortly from all Dealers at 2/6, or

Direct from the publishers, with 3d. Postage added.

N.Z. RADIO RECORD
P.O. Box 1032, Wellington.

The Very Best Value Of All!

LISSEN B BATTERIES

LISSEN B Batteries cost much less than other Batteries of even lower voltage, and they give service equal to, if not better than, others at this price.

If you want value in Radio B Batteries choose a Lissen.

Prices: 60 volts 13/6, 100 volts 22/6

Lissen Batteries and Radio Parts have a world-famous reputation for **SERVICE** and **VALUE**.

LISSEN Radio Parts—There's one for every Radio Need!

Your Radio Dealer can supply you—or send to—

ABEL, SMEETON LTD.,
CUSTOMS STREET EAST :: AUCKLAND.

RF choke or a 25,000 ohm resistance in combination with 1 MFD condenser between the tickler and the first audio transformer?

A.: In our issue, volume 2, No. 30, this point was dealt with very fully, and the correspondent is referred back to that number.

5. Would I be right in using a PM3 for the first RF followed by a SG and detector?

A.: No. The correspondent has reversed the order. The screen-grid should come first, followed by the RF and then the detector.

Cannot Increase Filament Voltage.

C. L.F. (Dannevirke), who sent us a few points for enlightenment in Volume 2, No. 35, makes additional comments: "I asked what was the matter with my receiver that I could use only 4 volts on a 6-volt valve. I have turned off the tickler, but I still get continual oscillation, when I increase the voltage. Your reply was that the set was not neutralised, and it is only a 1-valve set. How do you neutralise such a set? The batteries are only four months old, and the valve is practically new. When the dial is turned from 10 to 0 a continual scream is heard."

A.: We regret that in our previous reply we missed your point regarding the neutralisation, but for this we cannot altogether take the blame, for no reference to the type of receiver used was made. A 1-valve set cannot be neutralised, this process being possible only when radio frequency stages are employed. We still think there are too many turns on the tickler, and the fact that the set oscillates violently on the lower wavelengths seems to strengthen this opinion. Reduce the number of turns still more. There is no indication how many volts are being used on the B battery. This may be too high, as when a detector only is being used there is little advantage in exceeding 45 volts. If the correspondent has been using his batteries only four months, he would be advised to test them.

The R.F.C. is preferable to the resistance. If the moving tickler alone is to be used and it is desired to incorporate the choke and by-pass condenser, make the connections as follow:—

From the plate of the detector valve make a direct connection to the tickler. Connect the other end of this to the radio frequency choke and the free end of this to the audio transformer. From the tickler side of the choke take a lead to a one RF fixed condenser, the other end of which is connected to the earth or "A" negative.

2. I have not had much success with screen-grid boosters. I have been using a RF choke of 900 turns in groups of 200 turns wound with 34 D.S.C. wire. Is this all right or would you suggest the names of some reliable chokes?

A.: This choke should be quite efficient, but at the present time there are very many reliable makes of chokes on the market. The general consensus of opinion is that the English chokes, although slightly more expensive, are to be preferred to American for New Zealand conditions.

3. In your article on the application of the screen-grid in the issue volume 2, No. 36, it is stated that two RF chokes are employed, whereas your diagram shows one only.

A.: By regarding the aerial coil as a choke and taking the aerial in at one end and a lead to earth at the other end, the difficulty of the non-agreement of text and drawing can be overcome.

4. Does the shielding of the RF and the detector stages of the receiver increase distance-getting or not?

A.: Shielding introduces certain losses, the chief aim being to prevent interaction and distortion. As far as distance is concerned there will be very little difference between the shielded and unshielded receiver; if anything, the shielded may be a little inferior to the unshielded, but as far as the selectivity, stability, and clarity are concerned, the shielded is far to be preferred.

A Corner for Beginners

Neglected Instructions.

WITH all eliminators instructions are issued regarding their operation. Foremost among them will be found invariably, "Turn on the filaments before the eliminator, the eliminator before the filaments." For some unknown reason this is frequently neglected, usually resulting in burnt-out components.

A case arising from neglect of this precaution has come before the notice of the writer. A unit was installed and connected to the lights by means of a two-way adapter and plug. Between the plug and the eliminator there was not a switch of any description, so that the eliminator was constantly connected to the light while it was burning. Current was thus passing through the unit and incidentally through the set all the time the light was on, irrespective of whether the set was turned on or off.

This continued for some time, and then it was found that the set began to become considerably weaker in volume and very harsh in tone. It was rather unfortunate, for this was far back in the country where radio service was difficult to obtain. On examination it was revealed that one of the anode resistances of the set had been burnt out, and that actually the set was operating from 5 volts only. On changing round the resistances, so that the power was cut off the second last valve, fair volume was received, and the use of another new resistance cured the trouble.

Really the owner of the set was more fortunate than unfortunate, for very many cases are on record of extensive damage being done through the eliminator being left connected. By-pass condensers usually suffer, and quite frequently more than one resistance is burnt out.

Causes of Distortion.

DISTORTION in wireless receiving sets is more common than is generally admitted, and it can be noted even on very good sets that are acclaimed to be almost perfect. Most good sets leave the manufacturers' hands in such a condition that, given a fair trial, distortion will not take place, but when the batteries begin to run down and valves begin to grow a little dull, distortion gradually creeps in until it is realised that the set is not as good as it used to be, though no reason can be offered.

When this is the case or suspected to be the case, the valves should be taken in to a dealer to be tested, and any weak valves thrown out, and like-

wise the battery should be tested. For good reproduction frequent testing of both valves and batteries is essential, meaning by frequent six months or less in the case of the batteries, and after 12 months in the case of the valves. A good make of valve will last for some considerable time as compared with a poorer make, although the characteristics of both types of valves are the same. Particularly is tone ruined by a poor detector and a poor last stage valve. A weak or cheap detector will cause a humming noise in the speaker that may develop into a low-pitched squeal. The detector is then spoken of as being microphonic and should be replaced by a new valve or by one of a better make. There are several standard makes among which it is almost if not impossible to discriminate, but beyond these few makes there are a large number of second-rate valves that do not give satisfactory service.

Where several valves are used as radio and audio frequency amplifiers, an adequate power valve must be provided for the last stage. By a power valve one means one of the 171 type. Actually, 17X171A is a Radiotron valve, but it is usually taken as a standard, and its equal can be obtained in all good makes. If the beginner specifies 171 type in the make he particularly likes, his dealer will be able to supply the necessary information.

If a valve of this type is selected adequate plate voltage must be applied, that is, from 135 to 180 volts. With batteries this would be rather expensive, but with an eliminator there would be no difficulty, as the voltage could be quite easily regulated, and in some of the later types grid bias can be adjusted at the same time, so that purity of tone can be assured. Where bias has to be applied through a battery, it will be necessary to provide from 22½ volts to 40 volts according to the particular make of valve used. Failure to provide adequate grid voltage means that full benefit of the power valve is not being realised.

The beginner might ask himself, "When might I use a power valve?" It can be taken for granted in this respect that if five or six valves are being used on a powerful station such as 2YA within a radius of anything up to 150 miles, other things being equal, any valve smaller than the 171 would not be able to handle the output satisfactorily, and a certain harshness of tone would be present.

A case illustrating this has been recently brought to the notice of the writer. A factory-made set using six valves had been in operation for some considerable time, but on 2YA and even on 2BL and 2FC on good nights, there was a certain harshness, and it was necessary to dull the filaments of the valve considerably and so weaken the volume in order that music could be listened to. The valve in the last stage was of the 112 type and biased by a 4½-volt battery, which had almost run flat. A few changes in the circuit were made and grid bias was placed upon the second last valve, which had been a 201A. This was replaced by the 112A and a power valve of the 171 type used in the last stage. Actually the valve was of "660" manufacture, valves which as yet have not appeared on the New Zealand market. The result was very gratifying. Instead of the harsh, unnatural tone, the music came in sweet and mellow, the bass fully recorded and the treble notes clear and pure. The result was really outstanding, and fully justified the inclusion of such a valve in the last stage.

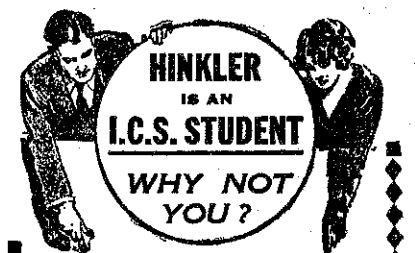
Actually, volume is slightly weakened, but to so little an extent that it is fully worth while. Even with this alteration, it was found that volume had to be controlled on the main Australian and New Zealand stations.

Regulating the Eliminator.

ON most battery eliminators there are two or three knobs which control the plate voltages. Many listeners neglect to adjust these for the reason that they do not understand their operation, and are afraid of destroying their valves. It is very important that these be correctly adjusted, especially the one controlling the detector valve. Voltage on this valve should not exceed 50, but it will be found that for each detector there is a maximum voltage at which it will work satisfactorily, and this maximum varies. To adjust to this maximum tune in to a station that is coming in at medium strength. Then steadily turn the knob marked "detector," or "plus 45," and listen carefully to the result.

It will be found that up a certain point signal strength increases with tone, but beyond this, although strength may increase, tone will rapidly decrease. This means that the optimum point has been passed, and that the voltage on the plate of the detector is too high. The knob should now be turned in the opposite direction, until the point of quality and volume are at a maximum. The eliminator should be left at this for some time, but occasionally it is necessary to repeat the test.

In a similar manner, the knobs controlling the audio side should be adjusted. Turning the knob marked "Audio," listen carefully for the maximum point, but if the eliminator provides grid bias as well this should be adjusted with the audio control, so that the point where quality and volume is at its greatest can be readily ascertained.



The Remarkable I.C.S. NEW ILLUSTRATION METHOD makes Home Study simple and practical. THREE THINGS EVERY MAN WANTS: To make good; To receive recognition and honour; To make more money, for money is the world's standard of a man's value, and a symbol of his success. THE I.C.S. TRAINED MAN DESERVES THE BIG JOB—AND GETS IT.

International Correspondence Schools

(NEW ZEALAND) LIMITED
1321 Wakefield Street, WELLINGTON.

Sirs,—Please send me a free prospectus giving full particulars of all branches of the profession or occupation before which I have marked X (If your subject is not on this list, write it here).....

—Architect,	—General Bookkeeper,
—Mech. Draughtsman,	—Station Bookkeeper,
—Concrete Contractor,	—Salesman (any branch)
—Building Contractor,	—Sales Letter Writer,
—Carpenter,	—Advert. (any branch)
—Plan Drawer,	—Artist (any branch)
—Shire Engineer,	—Journ. (any branch)
—Shire Overseer,	—General Education,
—Motor Engineer,	—Language (G'phans)
—Motor Mechanic,	—Special Examinations
—Electrical Engineer,	—Accountant (Int. Ex.)
—Elec. Mech. Exam.,	—Medicine,
—Mechanical Engin'g,	—Intermediate,
—Mine Electrician,	—Harford House,
—Telephone Mach.,	—Public Service
—Aeroplane Engineer,	—Special Women's Dept.
—Aeroplane Rigger,	—Dreammaking,
—Textile Expert,	—Millinery,
—Plumber,	—Shorthand-Typing,
—Mathematician,	—Bus. Correspondence

(There are over 4,000,000 I.C.S. Students, over 19,000 of these being in New Zealand). ENQUIRIES COST NOTHING—POST NOW

Name.....

Age.....Occupation.....

Address.....R.E.

The Dearest Thing in Radio is---Experience

That's one item you don't have to buy at

MACK'S.

Only Standard Parts are Used in All Work.

They may cost you more, but they will give more.

No matter where you live, you are not too far from

MACK'S RADIO

76 KENT TCE., WELLINGTON.

Telephone 20-798.

Next Week's Features

1YA Features

ON Tuesday evening vocal excerpts from the popular musical comedy, "Lilac Domino" (Cuvillier) will be rendered. The presentation will be under the direction of Madame Irene Ainsley, and the cast will include Miss Violet Harrison (Leonie), Mrs. Bond (as Georgine) Mr. Len Keven (as Eliston), and Mr. Leo O'Malley (Andre). In the supporting programme Mr. A. E. Davies will sing "Thora"; Mr. O'Malley, "On the Road to Mandalay"; Miss Harrison, "Grey Eyes"; Miss Marjorie Fair, the "Waltz Song" from "Tom Jones"; and Mr. Len Keven will sing "Ships." The studio Trio will play the "Shoe Ballet" music and selections from the light opera "Princess Caprice" (Fall). "The Maori—His Fortifications," will be the subject of Mr. A. B. Chappell's talk this evening. Miss Molly Wright, cellist, will contribute "Wie Einst in Schönen Tagen" (Popper), while orchestral music will be broadcast from the Majestic Theatre, where the orchestra is under the baton of Mr. J. Whiteford Waugh.

THE second instalment of Verdi's great opera "Rigoletto," will be one of the main features on Wednesday evening's programme. This will be presented in an informative manner which will be appreciated by all lovers of grand opera. Also outstanding on this programme will be an organ recital to be rendered by the well-known organist, Mr. Arthur E. Wilson. Mr. Wilson will also play grand opera accompaniments in conjunction with Mr. Clinton Williams, baritone. The Clarion Quartet will be heard in a variety of solos and duets.

"THE Troubadours" will contribute the vocal programme on Thursday evening, their items including the choruses "Day Born of Love," from the "Geisha," "Blue Danube Waltz,"

"Bonnie Laddie" and "Three Fishers." Solos include the Maori songs "Titi-Torea" and "Matangi," "Se Saran Rose," "Sunshine Above," and "Tommy Atkins." Humour for the evening will be provided by Mr. T. T. Garland, while orchestral items will be played by the studio orchestra. Dance music from 10 to 11 will conclude the programme.

THE outstanding items on Friday's evening programme will be the presentation of the two first-prize winning plays in connection with the recent IYA One-act Play Competition. One of the plays will be read by the well-known Auckland elocutionist, Mr. J. F. Montague, this being "Devil's Rock," by Miss Betty Kerr, Timaru. The other play, "The Old Bachelor," by Mr. Frank Goodey, Wanganui, will be performed by the Auckland Comedy Players. The Studio Trio will contribute "Melody in D" (Faure) and "Ave Maria" (Greig) while Miss Ina Bosworth's violin solo will be "Rondo" (Mozart-Kreisler). Other artists will be Mr. Lambert Harvey, tenor, and Mr. G. Colledge, baritone. The well-known pianist, Mr. Cyril Towsey, will play "Andante and Rondo" (Mendelssohn).

THE main vocalists on Saturday evening's programme will be Mrs. Daisy Basham and Mr. Arthur Briggs, their items including a wide variety of solos and duets. Mr. Tom Harris will render elocutionary numbers while the Hebrew Two will be heard in Hebrew humour. The Studio Orchestra's items include a number of popular and entertaining selections.

One of the records to be broadcast on Friday evening is worthy of special attention. It is an item by the Russian State Choir, "Storm on the Volga," and is a remarkable voice production. With no instrument aids, a wonderfully realistic presentation of a storm is given.

Items at 2YA

ON Sunday evening 2YA will relay the religious service to be conducted in Trinity Methodist Church, Newtown. The preacher will be the Rev. T. W. Vealie, the organist, Miss Lilian Thawley, L.A.B., and the choirmaster,

and "The Little Irish Girl." Mr. Len Ashton will give two humorous numbers, "The Fireman's Dream" (by request) and the "Village Concert." Popular songs that will be sung by Miss Lily Charles will be "Laugh, Clown, Laugh" and "Get Out and Get Under the Moon." From 9.30 the balance of the programme will be devoted to dance music.

ON Thursday evening the Band of the 1st Battalion, Wellington Regiment, under the conductorship of Lieut. Shardlow, will present a varied and interesting programme, the items comprising the "La Militaire" overture, a selection from Bellini's Opera, "I Puritani," a serenade, "Moonlight," and a waltz and several marches. Amongst the latter will be a march dedicated to the famous Irwell Springs Band. Sergt. Burke will play a cornet solo, Sanderson's ballad, "Beyond the Dawn," and Corporal Brittain, a euphonium solo, "Reverie in B Flat." The vocal portion of the programme will be provided by the Mellow Fellows Male Quartet, who will be heard in ballads and popular numbers.

A feature of Thursday's programme will be Mr. Norman Aitken's recitation of the third prize dramatic poem and the second prize humorous poem of the recent 2YA poetry competition. The former is



—Photo, Lewis Studio.

Miss Gretta Jespersion, a youthful performer from Palmerston North, who has played acceptably from 2YA.

Mr. E. Eales. Following on the church service broadcast, 2YA will relay a concert to be given in the Grand Opera House by the Port Nicholson Silver Band under the conductorship of Mr. J. J. Drew.

ON Monday a classical programme of unusual merit will be presented. The contributing artists will be headed by Miss Edith Harry, the celebrated composer-pianiste-singer, whose items are bound to create a good deal of interest. Other artists will be Madame Emily Briggs (soprano), Miss Nora Greene (contralto), Mr. Roy Hill (tenor), and Mr. Claude Moss (baritone).

Two outstanding items on Monday's programme will be the recitation of the prize poems of the recent 2YA Poetry Competition. Mr. Barton Ginger will recite the second prize dramatic poem (there was no first prize awarded), and the first prize humorous poem. The dramatic poem is from the pen of Mrs. Beryl Windsor, of Ross, Westland, and the humorous number is the work of Mr. J. P. Black, of Seatoun, Wellington.

TUESDAY'S programme will comprise baritone solos by Mr. Claude O'Hagan, who will sing "Shipmates o' Mine," "The Company Sergeant-Major"



Radio Pancakes

Now and again some good cooking hints come over the air—but the wise housewife doesn't rely on them alone—she sends for the new "Anchor" Recipe Folder, and keeps it on hand. Like a copy? It's free. Write "Anchor," Box 844, Auckland.

ANCHOR

SKIM MILK POWDER

TROUBLE—?

SET OWNERS and RADIO DEALERS throughout N.Z. will be pleased to learn that we have a SERVICE DEPARTMENT which is undoubtedly one of the finest in the Dominion.

It is under the supervision of an experienced radiotrician and is equipped with the latest testing apparatus, which means that a minimum of time is spent in finding the fault and repairing same.

No experimenting by inexperienced amateurs, and no job is too large or too small.

L. B. SCOTT Ltd., Manchester and Worcester Sts.,
CHRISTCHURCH

"THE BIG RADIO FIRM"

by Mrs. V. M. Cottrell, of Napier, and the latter by Mr. G. T. Palmer, of Dunedin.

THE Melodie Four, with the able assistance of Mrs. R. S. Allwright, will, on Friday evening, render a programme consisting mainly of operatic and comic opera gems. Mrs. Allwright will sing the well-known aria, "One Fine Day," from Puccini's opera, "Madame Butterfly," and with Mr. Duncan will sing the famous duet, "The Miserere," from "Il Trovatore." Other items of interest will be the "Pirates Song," from "The Pirates of Penzance," sung by Mr. W. W. Marshall, the "Pilgrims' Chorus," from "Tannhauser," and the "Soldier's Chorus," from "Faust," and a tenor solo by Mr. S. Duncan, "Take a Pair of Sparkling Eyes," from Sullivan's "The Gondoliers." Mr. F. Bryant will sing Handel's "Where'er you Walk," and Mr. R. S. Allwright, "Waiata Maori" (by request). The humour of the programme will be provided by Mr. and Mrs. Albert Russell, who can be relied upon to present an entertainment which will be in keeping with their usual high standard.

Included in Friday's programme will be a further instalment of the grand opera "Rigoletto."

ON Saturday, April 20, the 2YA Revue Company makes its debut with the revue "Bits and Pieces." The whole of the evening will be devoted to a programme consisting of sparkling sketches, numerous numbers and light attractive songs. The 2YA Revue Company is composed of artists of wide experience and undoubted ability and they will provide listeners with a jolly, intimate, informal evening's entertainment. The sketches are witty and clever without being in the least bit "high-brow," and, while most of them have already made London laugh and hold its sides, one at least has been specially written for this particular programme by Mr. C. W. Surry-Dane, of Wellington. This sketch is entitled "In the Taxi" and is a particularly dainty morsel. The studio orchestra will present a special programme.

3YA Features

THE religious service to be broadcast on Sunday evening will be relayed from the Oxford Terrace Baptist Church. The preacher will be the Rev. J. Robertson, M.A., the choirmaster, Mr. Victor C. Peters, and the organist Mr. Melville Lawry. A sacred concert will follow from the studio. The local artists will be Miss Thelma Ayres (soprano), Miss M. Lewes (contralto), and Mr. Robert Allison (baritone). There will also be a programme of specially selected records.

Mr. E. J. Bell, public librarian at Christchurch, will give another of his interesting book reviews on Monday evening.

THE studio concert on Monday evening will be contributed by the Woolston Band, assisted by 3YA artists. Mr. R. J. Estall has arranged one of his excellent programmes for his band. Among the items will be "The Thin Red Line" and "The Mad Major" (both by Alfard). There will be a song medley, "The Song of the Volga Boatmen," and a selection from "Mignon," a fox-trot, "Chiquita," a Russian

dance, and "Bells at Sunset." A cornet polka, "Red Cap," will be played by Bandmaster Ohlson, with band accompaniment. An interesting programme will be played by the Studio Trio.

THE vocalists will be headed by Mr. Harold Prescott, whose tenor solos will be the old favourites, "Sally in our Alley" and "My Ain Folk." A new and very promising singer for radio will be Miss Myra Colliard, one of whose numbers will be "The Lass with the Delicate Air." A popular baritone who has not been heard from 3YA for some time, in the person of Mr. W. J. Salkeld, will sing two songs by Jude, "King of the Mist" and "Neath the Rolling Tide."

On Wednesday evening the first instalment of the grand opera, "Rigoletto," will be presented. Mr. W. H. Dixon, Professor of Singing, being the narrator.

WEDNESDAY will also be notable for the appearance in radio of Mr. Sydney Francis Hoben, pianist. The vocal portion of the evening's programme will be entrusted to the Salon Quartet, Miss Lilian Hanam, Miss Dulcie Mitchell, Mr. H. Blakeley, and Mr. J. Graham Young, whose items will include popular, classical and operatic solos, duets, and quartets, as well as popular ballads. There will be instrumental items by the Bohemian Quintet.

IN view of the lively recollection which the people of Canterbury still have of the Arthur's Pass earthquake, special interest will attach to a lecture to be given on Thursday evening by Mr. H. F. Skey, Director of the Christchurch Magnetic Observatory. He will speak on "Earthquakes, their causes and effects, with special reference to the recent disturbance."

TRULY operatic will be the programme on Thursday evening. All the vocal numbers will be selected from well-known operas. The singers will be Madame Gover Burns, Miss Dorothy Spiller, Mr. Ernest Rogers, and Mr. J. Filer. There will be instrumental numbers by Miss Irene Morris (violinist), and the Studio Trio.

EXCERPTS from "The Quaker Girl" in choruses and solos will comprise the vocal portion of Friday evening's concert. The Radiolians will be the singers. In association with Mr. George Titchener (humorist) and the Bailey-Marston Dance Orchestra they will provide an excellent programme.

Saturday evening's programme will be another vaudeville entertainment provided by the Revellers' Concert Party.

4YA Notes

THE Sunday evening service of the Hanover Street Baptist Church will be relayed, and this will be followed by a concert by the St. Kilda Municipal Band.

MISS IRENE HEYWOOD (mezzo-soprano) will make her first appearance at 4YA on Tuesday evening. Her numbers will include "Rain" (by Curran), "The Enchanted Forest" (by Phillips),

and Coleridge-Taylor's beautiful song, "She Rested by the Broken Brook." Two very popular singers, Mr. G. Crawford (tenor) and Mr. Arthur Alloo (baritone) will also be heard, and the elocutionist is Mr. Carl Moller. The St. Kilda Band will give another of their enjoyable concerts.

"THE Dancing Mistress," a musical comedy, composed by Lionel Monckton, will be given by that happy combination "The Serenaders," on Wednesday. Also appearing on the programme are Miss Anita Winkel and Major Lampen in two of their humorous sketches.

THE programme to be presented on Friday will be given by some very popular artists. Miss Irene Hornblow, L.R.A.M. (mezzo-contralto), Mr. A. R. Thompson (tenor), and Mr. Arthur Lungley are the vocalists, and Miss Tui Northey the elocutionist. The 4YA Broadcasting Trio will play No. 4 of the ballet music from Gounod's "Faust," while their solo numbers include the "Largo" from the "New World Symphony," to be played by Miss Eva Judd (violinist), McDowell's "Polonaise" and "Prelude" (by Schutt), pianoforte solos by Mrs. Ernest Drake, and cello solos, "Plainte D'Amour" (by Zellier) and "Mazurka" by Squire, played by Mr. P. J. Palmer.

SATURDAY'S programme includes much of a lighter type. Mr. Lester Moller will give several humorous recitals, Miss Mona Melville will sing some of the latest songs, and Mr. Buster Brown will be heard in humorous Scottish items. Mr. Neil Black (bass) always sings songs to appeal to lovers of the older ballads.

IF your accumulator carrying case has a leather handle, be absolutely certain not to get any acid upon this or the result will be to eat it away, possibly with disastrous results to the carpet.

Listener's Suggestion

THAT country listeners in particular appreciate radio, and are desirous of helping in every way possible, is shown by the following letter: "I think it would be a good idea for the Company to approach the P. and T. Department regarding a scheme whereby all licensed listeners' names in their separate district should be posted up in a conspicuous place in city, suburb and country post offices. It would go a long way towards deterring the pirate, or unlicensed listener, from carrying on. Another idea might be to offer a 'reward' for a conviction. I have an idea that there are one or more unlicensed set users in my district. They are prominent and influential people and I think that may have something to do in keeping other people from exposing them, as I think there are those who might lose their employment if they complained to the Post Office on the matter. This is not fair to those who pay their licenses. I consider the Company is doing its best for the majority, and while you work on a broadminded scale, I consider that success is yours, but I think the bugbear of commercialism is suggested in the B grade schemes. I see that Auckland is forming a Radio Society, and trust they will work hand in hand with the Company. Unity and co-operation are the strong links in any successful venture, either in business or private life. The country listener trusts that his weather and market and shipping reports will not interfere with the city listener as regards entertainment. He is quite willing and anxious to work in harmony with city folks. The farmer, having to work early and late, needs to retire to bed usually between 8 and 9 p.m. in order that he may be able to rise about 3.30 a.m. to 4 a.m. to milk a big herd of cows with other work to follow. His tea time is usually about 7.30 to 8 p.m. and 16 hours a day is a common days work, Sundays included, so that 'wireless' comes as a boon and a blessing to many."

Travel by Rail —and RELAX!

THERE is nothing more refreshing and invigorating for mind and body than a restful holiday.

The Railway traveller appreciates the restfulness of the roomy, smooth-running, well-sprung carriages—from the very beginning of his journey he can RELAX. He has a delightful sense of security, too, from the knowledge that over 70,000,000 passengers have been carried during the last three years without a single fatality.

**For the complete enjoyment of your.
Holiday Trip—Go by Rail.**

Full Programmes for Next

[Copyright.—These programmes are copyright, but individual daily programmes may be published on day of performance.]

Sunday, April 14

1YA, AUCKLAND (333 METRES)—SUNDAY, APRIL 14.

- 3.0: Afternoon Session.—Selected Studio Items.
 4.0: Literary selection by the Announcer.
 4.8: Further studio items.
 4.30: Close down.
 6.0: Children's session, conducted by Uncle Leo.
 6.55: Relay of Divine service from St. James Church.
 Preacher: Rev. E. R. Harries.
 Organist: Mr. Walter Impett.
 8.30: Studio Concert. Orchestral—The British Broadcasting Company's Symphony Orchestra, "Ruy Blas Overture" (Mendelssohn) (Columbia Record 02576).
 8.38: Soprano solo—Miss Lola Solomon, "Thanks Be To God" (Dickson).
 8.42: Violin solo—Eugene Ysaye, "Caprice Viennois" (Kreisler) (Columbia Record 7115).
 8.46: Baritone solos—Mr. Fred Baker, (a) "Pro Peccatis" (Rossini), (b) "Requiem" (Alban).
 8.54: Contralto solo—Miss Madge Clague, "Abide With Me" (Liddle).
 8.58: Orchestral—Royal Philharmonic Orchestra, "Le Prince Igor" (Borodine) (Columbia Record 04157).
 9.2: Weather report.
 9.4: Soprano solos—Miss Lola Solomon, (a) "Speak, Music" (Elgar), (b) "Ave Maria" (Luzzi).
 9.12: Baritone solo—Mr. F. Baker, "Lord God of Abraham" (Elijah) (Mendelssohn).
 9.16: Pianoforte solo—William Murdoch, "Sleepers Awake" (Busoni) (Columbia Record 02610).
 9.20: Contralto solos—Miss Madge Clague, (a) "The First Primrose" (Grieg), (b) "A Swan" (Grieg), (c) "Two Brown Eyes" (Grieg).
 9.26: Orchestra—Royal Philharmonic Orchestra, "Introduction Act 3—Lohengrin" (Columbia Record L1962) (Wagner).
 9.30: Close down.

2YA, WELLINGTON (420 METRES)—SUNDAY, APRIL 14.

- 3.0 p.m.: Afternoon session.—Selected studio items.
 4.30: Close down.
 6.0: Children's session, conducted by Uncle George.
 7.0: Relay of service from Trinity Methodist Church, Newtown.
 Preacher: Rev. T. W. Vealie.
 Organist: Miss Lilian Thawley, L.A.B.
 Choirmaster: Mr. E. Eales.
 8.15 (approx.): Relay from Grand Opera House of recital by the Port Nicholson Silver Band under the conductorship of Mr. J. J. Drew.
 Close down.

3YA, CHRISTCHURCH (306 METRES)—SUNDAY, APRIL 14

- 3 p.m.: Afternoon session.—Selected studio items.
 4.30: Close down.
 5.30: Children song service.
 6.15: Hymn chimes.
 6.30: Relay of service from Oxford Terrace Baptist Church. Preacher, Rev. J. Robertson, M.A. Choirmaster, Mr. Vic. Peters. Organist, Mr. Melville Lawry.
 7.45: (approx.): Studio concert.
 Orchestral—Philadelphia Symphony Orchestra, "Symphony in D Minor" (Cesar Franck) (1st. Movement—Lento Allegro) (H.M.V. Records D1404/5).
 8.0: Contralto solo—Miss M. Lewis, "Out of the Deep I Call" (Easthope-Martin).
 8.4: Baritone solo—Mr. Robt. Allison, "Arise, O Sun" (Day).
 8.8: Orchestral—Philadelphia Symphony Orchestra, "Symphony in D Minor" (2nd Movement—Allegretto) (Cesar Franck) (H.M.V. Records D1406/7).
 8.19: Soprano solo—Miss Thelma Ayres, "How Lovely are Thy Dwellings" (Liddle).
 8.23: Contralto solos—Miss M. Lewis, (a) "Teach Me to Pray" (Gwynn); (b) "Immortality" (Lohr).
 8.27: Orchestral—Philadelphia Symphony Orchestra, "Symphony in D Minor" (3rd Movement—Allegro) (Cesar Franck) (H.M.V. Records D1047/8).
 8.39: Baritone solos—Mr. Robt. Allison, (a) "The Star" (Rodgers); (b) "The Lost Chord" (Sullivan).
 8.46: Grand organ solo—Edwin Lemare, "Traumerel" (Schuman) (H.M.V. Record C1455).
 Violin solo—Erica Morini, "Rondo on a Theme by Beethoven" (H.M.V. Record EC5).

- 8.53: Soprano solos—Miss Thelma Ayres, (a) "The Prayer Perfect" (Stenson); (b) "The Lord is My Light" (Allitsen).
 9.0: Vocal duet—Hislop and Granforte, "O, Mimi, Tu Pici Non Torni" (Ab, Mimi, you will never come back to me) ("La Boheme") (Puccini) (H.M.V. Record DB989).
 9.4: Violin solo—Erica Morini, "Russian Folk Song" (Kreisler) (H.M.V. Record ED8).
 9.8: Vocal duet—Fanny Heldy and Marcel Journet, "Baigne d'Eau Mes Mains Et Mes Levres" (Bathe my hands and lips with this water) ("Thais") (Massenet) (H.M.V. Record DA940).
 Soprano solo—Fanny Heldy, "O, Messager de Dieu" (O, Messenger of God) ("Thais") (Massenet) (H.M.V. Record DA940).
 9.16: Orchestral—Philadelphia Symphony Orchestra, "Prelude in E Flat Minor" (Bach) (H.M.V. Record D1464).
 9.20: Vocal sextet—Galli-Curci, Homer, Gigli, De Luca, Pinza and Bada, "Chi Mi Frena? (What restrains me?) ("Lucia di Lammermoor") (Donizetti) (H.M.V. Record DQ102).
 9.24: Orchestral—(a) Chicago Symphony Orchestra, "Valse Triste" (Sibelius); (b) San Francisco Symphony Orchestra, "Funeral March of a Marionette" (Gounod) (H.M.V. Record ED5).
 9.32: Close down.

4YA, DUNEDIN (463 METRES)—SUNDAY, APRIL 14.

- 5.30 p.m.: Children's Song Service conducted by Big Brother Bill.
 6.30: Relay of the Evening Service from the Hanover Street, Baptist Church.
 Preacher: Rev. E. S. Tuckwell.
 Organist: Mr. Upton Harvey.
 Choirmaster: Mr. H. P. Desmoulins.
 8.5: Relay from St. Kilda Rotunda, of concert by the St. Kilda Municipal Band, under the conductorship of Mr. James Dixon.
 9.15: Close down.

Monday, April 15

1YA, AUCKLAND (333 METRES)—MONDAY, APRIL 15.

SILENT DAY.

2YA, WELLINGTON (420 METRES)—MONDAY, APRIL 15.

- 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, conducted by Uncle Jeff.
 7.0: News session—market reports and sports results.
 7.40: Lecturette—Mr. A. J. Nicholls (representative of Hutt Valley Horticultural Society), "Gardening."
 8.0: Chimes of the G.P.O. clock.
 8.1: Overture—Orchestra, "The Bartered Bride" (Smetana).
 8.10: Soprano solo—Madame Emily Briggs, "The Harvest of Sorrow" (Rachmaninoff).
 8.14: Pianoforte and song recital by Miss Edith Harrhy: Pianoforte (a) "Refrain de Berceau" (Palmgren); (b) "Etude in A Minor" (Macdowell). Songs: (a) "The Young Rose" (Harrhy); (b) "You" (Harrhy).
 8.26: Baritone solo—Mr. Claude Moss, "To-morrow" (Keel).
 8.30: Recital—Mr. Barton Ginger, "The Bushman's Child" (Mrs. Beryl Windson) (second prize Dramatic Poem in recent 2YA Poetry Competition).
 8.40: Suite—Orchestra, "Woodland Sketches" (MacDowell) (Part 1): 1. To a Wild Rose. 2. Will o' the Wisp. 3. At an Old Trysting Place. 4. In Autumn. 5. From an Indian Lodge.
 8.47: Contralto solos—Miss Nora Greene (a) "Drumadoon" (Sanderson); (b) "Sweet Miss Mary" (Neidlinger).
 8.52: Tenor solo, with violin obligato—Mr. Roy Hill, "O Lovely Night" (London Ronald).
 8.56: Instrumental—Orchestra, repeat number.
 9.4: Weather report.
 9.6: Pianoforte and song recital by Miss Edith Harrhy: Pianoforte: (a) "Nocturne in E Minor" (Chopin); (b) "Polonaise in A Major" (Chopin). Songs: (a) "Bells Across the Moor" (Harrhy); (b) "There is a Fair Isle" (Harrhy).
 9.18: Suite—Orchestra, "Woodland Sketches" (Part 2) (MacDowell): 1. To a Water Lily. 2. From Uncle Remus. 3. A Deserted Farm. 4. By a Meadow Brook. 5. Told at Sunset.
 9.25: Vocal duet—Miss Nora Greene and Mr. Roy Hill, "In the Merry Month of May" ("Merrie England") (German).

Week-all Stations-to Apl. 21

[Copyright.—These programmes are copyright, but individual daily programmes may be published on day of performance.]

- 9.29: Humour—Mr. Barton Ginger, "My Baby" (J. P. Black) (first prize humorous poem in recent 2YA Poetry Competition).
 9.33: Cello solo with orchestral accompaniment (soloist, Mr. Geo. Ellwood)—"Pilgrims' Chorus and "Song to the Evening Star" (Wagner).
 9.38: Soprano solos—Madame Emily Briggs, (a) "Mignon" (Schubert); (b) "Margaret at the Spinning Wheel" (Schubert).
 9.44: Baritone solos—Mr. Claude Moss, Two Mexican folk songs, based on old Mexican airs: (a) "Fler de mi Corazon"; (b) "Serenade" (Woodforde-Finden).
 9.50: Contralto solos—Miss Nora Greene, (a) "What the Chimney Sang" (Griswold); (b) "The Night Nursery" (Arundale).
 9.55: Tenor solos—Mr. W. Roy Hill, (a) "My Love's an Arbutus" (Irish folk song); (b) "The Frog and the Mouse" (English folk song, arrgd. Sharpe).
 10.0: Orchestral—Orchestra, "Slavonic Rhapsody No. 1" (Dvorak).
 10.10: Close down.

3YA, CHRISTCHURCH (306 METRES).—MONDAY, APRIL 15.

- 3 p.m.: Afternoon session—selected gramophone items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session, conducted by "Scatterjoy."
 7.15: News session.
 7.30: Talk—Mr. E. J. Bell, Book Review.
 8.0: Chimes.
 Musical programme by the Woolston Band, under conductorship of Mr. R. J. Estall, and assisting artists.
 8.1: March—Band, "The Thin Red Line" (Alford).
 8.5: Song melody—Band, "Song of the Volga Boatmen" (traditional).
 8.10: Tenor solos—Mr. Harold Prescott, (a) "Sally in Our Alley" (Carey); (b) "My Ain Folk" (Lemon).
 8.18: Cornet Polka—Soloist Bandsmen Ohlson, with band accompaniment, "Red Cap" (Moss).
 8.24: Mezzo-soprano solo—Miss Myra Pollard, "The Lass with the Delicate Air" (Arne).
 8.28: Male quartet—De Reske Singers, (a) "Absent" (Metcalf); (b) "My Lady Ohlo" (Clough).
 8.34: Instrumental trios—Christchurch Broadcasting Trio, (a) "The Wood Nymph" (Lind); (b) "Minnet" (Beethoven), (c) "Turkish Rondo" (Mozart).
 8.45: Baritone solo—Mr. W. J. Salkeld, "King of the Mist" (Jude).
 8.49: Chorus—Zonophone Light Opera Company, "Gems from 'The Yeoman of the Guard'" (Sullivan) (Zonophone Record A321).
 8.57: Reverie—Band, "Bells at Sunset" (Mackenzie).
 9.2: Weather report.
 9.10: Instrumental trios—Christchurch Broadcasting Trio, (a) "Ave Maria" (Schubert); (b) "Polacca" (Thomes).
 9.17: Mezzo soprano solos—Miss Myra Pollard, (a) "Daffodils" (Scott); (b) "Don't Come in, Sir, Please" (Scott).
 9.24: Selection—Band, "Mignon" (Thomas).
 9.36: Baritone solos, Mr. W. J. Salkeld, "Neath the Rolling Tide" (Jude).
 9.40: Foxtrot—Band, "Chiquita" (Wayne).
 9.45: Vocal duet—Dalhart and Robison, "Oh, Suzanna" (Foster) (H.M.V. Record EA309).
 Chorus—Light Opera Company, "Gems from 'The Desert Song'" (Harcbach) (H.M.V. Record EB7).
 9.52: Danse Russe and march—Band, (a) "Trepak" (Tschalkowsky); (b) "Mad Major" (Alford).
 10.1: Close down.

DUNEDIN (463 METRES).—MONDAY, APRIL 15.

SILENT DAY.

Tuesday, April 16

1YA, AUCKLAND (333 METRES).—TUESDAY, APRIL 16.

- 3.0 p.m.: Afternoon session—Selected gramophone items.
 4.0: Literary selection by the Announcer.
 4.8: Further studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session, conducted by Uncle George.
 7.15: Talk—Mr. Geo. Campbell, "Motoring."
 7.30: News and market reports—Book Review.
 8.0: Chimes.
 8.1: Relay of overture of Majestic Theatre Orchestra, under the conductorship of Mr. J. Whiteford Waugh.

- 8.10: Baritone solo—Mr. Leo O'Malley, "On the Road to Mandalay" (Hedgecock).
 8.14: Instrumental—Studio Trio, ballet, "The Shoe" (Ansell).
 8.23: Soprano solo—Miss Violet Harrison, "Grey Eyes" (Phillips).
 8.27: Orchestral—Royal Opera Orchestra, "Sylvia Ballet" (Pizzicato and procession of Bacchus) (H.M.V. Record C1418).
 8.35: Tenor solo—Mr. A. E. Davies, "Thora" (Adams).
 8.39: Cello solo—Miss M. Wright, "Wie Einst in Schönen Tagen" (Popper).
 8.44: Talk—Mr. A. B. Chappell, M.A., "The Maori—His Fortifications."
 9.0: Relay of Majestic Theatre Orchestra, Entracte.
 9.9: Weather report.
 9.11: Soprano solo—Miss Marjorie Fair, "Waltz Song from 'Tom Jones'" (German).
 9.15: Instrumental—Studio Trio, Light Opera selection, "Princess Caprice" (Leo Fall).
 9.24: Baritone solo—Mr. Len Keven, "Ships" (Brett).
 9.28: Orchestral—National Symphony Orchestra, (a) "Bohemian Girl" (Balfe), (b) "Aida" (Verdi) (Zonophone Record A340).
 9.36: Presentation of Excerpts from "Lilac Domino" (Cuvillier), produced under the direction of Madame Irene Ainsley:
 Cast:
 Geogene: Mrs. Bond.
 Leonie: Miss Violet Harrison.
 Elliston: Mr. Len Keven.
 Andre: Mr. Leo O'Malley.
 Chorus and Duet, "True Love Will Find a Way."
 Song, "Let The Music Play."
 Duet, "Where Love is Waiting."
 Trio, "Lilac Domino."
 Entracte—Victor Concert Orchestra, "Amaryllis—Air Louis XIV" (Thys) (H.M.V. Record EA240).
 Song and Chorus, "For Your Love I'm Waiting."
 Ensemble, "Lilac Domino."
 Duet and Chorus, "Song of the Chimes."
 Entracte—Victor Salon Orchestra, "The World Is Waiting For the Sunrise" (Lockhart) (H.M.V. Record EA186).
 Duet, "What Is Done You Never Can Undo."
 Chorus, "King Carnival."
 Song and Chorus, "All Line Up In A Queue."
 10.0: Close down.

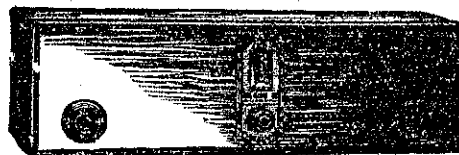
2YA, WELLINGTON (420 METRES).—TUESDAY, APRIL 16.

- 3 p.m.: Chimes of the G.P.O. clock.
 3.1: Selected gramophone items.

No Batteries and Only One Tuning Control

Radiola 17 is the last word in Radio EFFICIENCY and SIMPLICITY. Operates from your light circuit.
 :: SEND TO-DAY FOR FREE LITERATURE. ::

The World's Most Popular Radio Set



Price Complete with Radiotrons £45

RCA Radiola 17
 MADE BY THE MAKERS OF THE RADIOTRON.

Amalgamated Wireless
 (Australasia) Ltd.
 G.P.O. BOX 830. WELLINGTON.

- 4.30 and 4.55: Sporting results to hand.
 5.0: Close down.
 6.0: Children's session, conducted by Uncle Jim.
 7.0: News session, market reports and sports results.
 7.40: Lecturette—Representative, Agricultural Department, "For the Man on the Land."
 8.0: Chimes of the G.P.O. clock.
 8.1: Overture—Orchestra, "Crown of Chivalry" (Fletcher).
 Waltz—Orchestra, "Jolly Fellows" (Vollestedt).
 8.9: Baritone solo—Mr. Claude O'Hagan, "Shipmates o' Mine" (Sanderson).
 8.13: Saxophone solo—Mr. A. H. Wright, "Saxophobia" (Wiedoeft).
 8.18: Humour—Mr. Len Ashton, "The Fireman's Dream" (by request) (Roose).
 8.25: Musical comedy selection—Orchestra, "Fancy Free" (Barratt).
 8.33: Popular song—Miss Lily Charles, "Laugh, Clown, Laugh" (Florite).
 8.37: Hawaiian—Hilo Hawaiian Orchestra, (a) "Aloma" (Bowers) (H.M.V. Record EA310); (b) "Hawaiian Nights" (Roberts).
 8.43: Baritone solo—Mr. Claude O'Hagan, (a) "The Company Sergeant Major" (Sanderson); (b) "The Little Irish Girl" (Lohr).
 8.50: Male quartet—De Reszke Singers, (a) "Absent" (Metcalfe); (b) "My Lady Chloe" (Leighton) (H.M.V. Record EA32).
 8.56: Instrumental—Orchestra, Repeat Item.
 9.4: Weather report and announcements.
 9.6: Song suite—Orchestra and Chorus, "Haydn Wood's Songs."
 9.13: Humour—Mr. Len Ashton, "Our Village Concert" (Andrews).
 9.25: Popular song—Miss Lily Charles, "Get Out and Get Under the Moon" (Shay).
 9.30: "Columbia" Dance Programme:
 March medley—H.M. Grenadier Guards Band, "Martial Moments" (arrgd. Winter) (Columbia Record 9065).
 Foxtrot with vocal chorus—Park Central Hotel Orchestra, "Golden Gate" (Jolson) (Columbia Record 01350).
 Foxtrot with vocal chorus—Ambassador's Band, "Forty-seven Ginger Headed Sailors" (Sarony) (Columbia Record 01333).
 Vocal duet—Layton and Johnstone, "Just Like a Melody out of the Sky" (Donaldson) (Columbia Record 01339).
 9.43: Tenor solo—Seamus O'Doherty, "The Pride of Tipperary" (Lockhead) (Regal Record G28343).
 Band selection—H.M. Grenadier Guards, "In a Clock Store" (Orth) (Columbia Record 9029).
 9.50: Foxtrot—Ambassador's Band, "I Just Roll Along Having My Ups and Downs" (Trent) (Columbia Record 01336).
 Foxtrot with vocal chorus—Ipana Troubadours, "'S Wonderful" (Gershwin) (Columbia Record 01306).
 Hawaiian Guitar, Banjo and Ukulele Trio, "My Hawaii" (Lewis) (Columbia Record 3806).
 10.0: Monologue—Milton Hayes, "Meanderings of Monty—Monty Attends a Board Meeting" (Hayes) (Columbia Record 01106).
 Male quintet—Singing Symphonies, "My Ohio Home" (Kahn) (Columbia Record 01088).
 Organ solos—G. T. Pattman, (a) "Polly" (Zamecnik); (b) "Janette" (Williams) (Columbia Record 01144).
 Foxtrot—Debroy Somers' Band, "Without You Sweetheart" (De Sylva) (Columbia Record 01249).
 10.20: Tenor solo—Hubert Hisdell, "Parted" (Tosti) (Columbia Record 02598).
 10.24: Humoresque—Australian Commonwealth Band, "Slidin' Thro' the Rye" (Hawkins) (Columbia Record 01235).
 10.32: Male quartet—Shannon Male Quartet, "The Sidewalks of New York" (Lawlor) (Regal Record G20298).
 Piano solo—Gil Dech, "Hallelujah" (Youmans) (Columbia Record 01205).
 Vocal with novelty accompaniment—Ukulele Ike, "Chiquita" (Wayne) (Columbia Record 01265).
 Vocal duet—Jack Lumsdaine and Len Maurice, "That's My Mummy" (Perse) (Columbia Record 01191).
 10.45: Orchestral—Columbia Symphony Orchestra, "March of the Toys" (Herbert) (Columbia Record 02651).
 Foxtrot—La Nuove Orchestra, "Di Napoli" (Italian foxtrot) (Romani) (Columbia Record 3066).
 Waltz—Eddie Thomas's Collegians, "Beautiful Ohio" (Earl) (Columbia Record 02651).
 Waltz—Royal Serbian Tambouritzza Orchestra, "Kosovo Waltz" (Columbia Record 3066).
 Male chorus—Sheffield Orpheus Choir, "There is a Tavern in the Town" (traditional) (Columbia Record 01175).
 11.0: Close down.

3YA, CHRISTCHURCH (306 METRES)—TUESDAY, APRIL 16.

SILENT DAY.

4YA, DUNEDIN (463 METRES)—TUESDAY, APRIL 16.

- 3.0 p.m.: Town Hall chimes.
 3.1: Relay of instrumental music from the Ritz.
 4.25: Sporting results to hand.
 4.30: Close down.
 6.0: Children's session conducted by Big Brother Bill.
 7.15: News session.
 7.30: Lecturette, Pastor W. D. More, "Angora Rabbits."

- 8.0: Town Hall chimes.
 Concert by St. Kilda Band under the conductorship of Mr. James Dixon, and assisting artists.
 8.1: March—Band, "Flying Squadron" (Bosworth).
 Serenade—Band, "Moonlight" (Moret).
 8.12: Tenor solo—Mr. Geo. Crawford, "Take a Pair of Sparkling Eyes" (Sullivan).
 8.16: Recitals, Mr. Carl Moller, (a) "Bertram Talks About Cows", (b) "If" (Kipling).
 8.23: Selection, Band, "Gems of Harmony."
 8.33: Mezzo-soprano solos, Miss I. Heywood, (a) "Rain" (Curran); (b) "The Enchanted Forest" (Phillips).
 8.40: Male Quartet—Shannon Male Quartet, "On the Banks of the Wabash Far Away" (Dresser) (Regal Record G20298).
 8.43: Euphonium solo—Band, "Simple Aven" (Thorne).
 8.49: Baritone solos—Mr. Arthur Alloco, (a) "Eleanore" (Mallinson); (b) "Banjo Song" (Homer).
 8.57: Weather report.
 9.1: Humoresque—Band, "Coster's Courtship" (McKenzie).
 Vocal Duet—James Liddy and Elsie Geogely, "Deep In My Heart, Dear" (Romberg) (Columbia Record 02511).
 Overture—Band, "Zitella" (Hume).
 9.17: Tenor solos—Mr. Geo. Crawford, (a) "Linden Lea" (Vaughan-Williams), (b) "Believe Me If All Those Endearing Young Charms."
 9.25: Recital—Mr. Carl Moller, "The New Recruit" (Anon).
 9.30: Mezzo-Soprano solo, Miss I. Heywood, "She Rested By The Broken Brook" (Coleridge-Taylor).
 9.34: Song Waltz, Band, "Chiquita" (Gilbert).
 9.40: Baritone solo—Mr. Arthur Alloco, "When The King Went Forth to War" (Koenemann).
 9.47: Rio Marimba Orchestra, "Three O'Clock in the Morning" (Robledo) (Columbia Record 02685).
 Chorus—La Scala chorus, "Anvil Chorus" ("Trovatore") (Verdi) (Columbia Record 01032).
 March—Band, "Adventurer" (Seddon).
 10.0: Close down.

Wednesday, April 17

1YA, AUCKLAND (333 METRES)—WEDNESDAY, APRIL 17.

- 3 p.m.: Afternoon session—selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session, conducted by Uncle Tom.
 7.15: News and market reports.
 8.0: Chimes
 8.1: Vocal duet—Miss B. Smith and Mr. J. Simpson, "The Touch of A Woman's Hand" ("Going Up") (Hirsch).
 8.5: Baritone solo—Mr. Clinton Williams, "The Vagrant" (Mullinar).
 8.9: Soprano solo—Miss Alma McGruer, "Mother, You Know the Story" ("Cavalleria Rusticana") (Mascagni).
 8.13: Organ and vocal—Mr. Arthur E. Wilson and Mr. Clinton Williams, (a) "Concerto No. 12" (Corelli); (b) "Salut d'Amour" (Elgar); (c) Baritone solo, "Repaing" (Clarke); (d) "Swing Low, Sweet Chariot" (arrgd. Lemare).
 8.33: Tenor solo—Mr. James Simpson, "Ah! Moon of my Delight" (Liza Lehmann).
 8.37: Presentation of the opera, "Rigoletto" (Verdi) (second instalment) (H.M.V. Records D1486/90 (Libretto by Mr. Karl Atkinson):
 (Synopsis: The first instalment described the court of the Duke of Mantua. The Duke of Mantua is a Don Juan, against whose attentions no woman is safe. He is indebted for help in his schemes to his jester, Rigoletto. The courtiers have much reason to hate both Duke and Jester. Count Monterone utters a parent's curse upon both Duke and jester. The Duke is merely amused, but the jester is terrified. The courtiers plan revenge on Rigoletto. The portion of the opera dealt with this evening deals with the carrying out of the plan of revenge. Intimidated by the curse, Rigoletto makes a compact with an assassin, Sparafucile, whose help is henceforth to be his in case of need. Rigoletto now goes into his garden, where he finds his only daughter, Gilda. She conceals from him the fact that a young man is hidden on the premises. The young man (though she does not know it) is the Duke. The courtiers, resorting to a ruse by which they secure the help of Rigoletto, he not realising that his own daughter was the victim, abduct Gilda, and carry her off to the palace. Rigoletto discovers what has happened, and with horror recalls the curse. Prominent among the airs to be sung will be the great love duet, "Love is the Sun," and the famous solo, "Caro Nome" (Dearest Name).
 9.17: Weather report.
 9.20: Bass solos—Mr. Duncan Black, (a) "The Lute Player" (Allitsen); (b) "My Son" (Bennett).
 9.28: Organ and vocal—Mr. A. E. Wilson and Mr. Clinton Williams, (a) "Thanksgiving" (Hosme); (b) "Prayer and Cradle Song" (Gullmont); (c) baritone solo, "Thou art Passing Hence" (Sullivan); (d) "Minuet" from "Clock Symphony" (Haydn).

- 9.48: Contralto solos—Miss Beryl Smith, (a) "Grey Hills" (Lidgey); (b) "Like to the Damask Rose" (Elgar).
 9.56: Vocal duet—Miss McGruer and Mr. Black, "When Song is Sweet" (Sans Souci).
 10.0: Close down.

2YA, WELLINGTON (420 METRES).—WEDNESDAY, APRIL 17.
SILENT DAY.

3YA, CHRISTCHURCH (306 METRES).—WEDNESDAY, APRIL 17.

- 3 p.m.: Afternoon session—Selected gramophone items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session, conducted by "Mother Hubbard."
 7.15: News session.
 7.30: Addington stock market reports.
 8.0: Chimes.
 8.1: Presentation of opera "Rigoletto" (Verdi), Act 1, Scene 1, and part Scene 2, with introductory remarks by Mr. W. H. Dixon, Professor of Singing. (H.M.V. Records C1483/6).

CAST:

Gilda, daughter of Rigoletto—Soprano.
 Maddalena, Sparafucile's sister—Contralto.
 The Duke, a titled profligate—Tenor.
 Rigoletto, a hunchback jester to the Duke—Baritone.
 Sparafucile, a hired assassin—Bass.
 Count Monterone—Baritone.
 Count Ceprano—Bass.

(Synopsis: "Rigoletto" was first produced in Venice in 1851, and its composer died fifty years later. The plot is based upon a play by Victor Hugo, "Le Roi s'amuse" (The King's Diversion). Though in the older discontinuous style (with set songs, etc.), it is one of the greatest operas. It possesses beauties of melody, harmony, and orchestration, and subtleties in the presentation of character. The opera established the reputation of Verdi. It is very Italian in its type of tune, and in its expression of passion. The portion of the opera to be presented will comprise Act 1, Scene 1, and portion of Scene 2.

The scene and period of the plot is Mantua, Italy, in the sixteenth century. The Duke of Mantua is a Don Juan, against whose attentions no woman is safe. He is indebted for help in his schemes to his jester, Rigoletto. The courtiers naturally have much reason to hate both Duke and jester. In the opening instalment of this play, as covered by this programme, Count Monterone is introduced. He is angry on account of wrongs done to his daughter. Rigoletto jeers at Monterone, who utters a parent's curse upon both Duke and jester. The Duke is merely amused, but the jester is terrified. The courtiers plan revenge on Rigoletto.

The solos include the well-known "Questo o quella," sung by the Duke and Count Monterone; Rigoletto's monologue, "We are Equal," after meeting the assassin Sparafucile; and Rigoletto's pathetic duet with his daughter, "Recall not the Past." The second instalment of the play, telling how the courtiers abducted Gilda, will be given next Tuesday).

- 8.29: Soprano solo—Miss Lilian Hanham, "My Heart Flies Homing" (Valse Song, "Arcadians" (Talbot).
 8.33: Pianoforte solo—Mr. Sydney Francis Hoben, (a) "Caprice in E" (Paganini Schumann); (b) "Mandolinata" (Paladivle Saint Saens); (c) "Hark, Hark, the Lark" (Schubert Liszt).
 8.43: Tenor song—Mr. H. Blakeley, "An Evening Song" (Blumenthal).
 8.47: Entertainer—Will Gardner, "A Little Bit of Heaven" (Gardner) (Zonophone Record 5079).
 8.50: Instrumental quintet—The Bohemian Quintet, (a) "At the Theatre" (b) "Evening in the Forest"; (c) "A Country Dance" (Foulds).
 9.1: Weather report.
 9.8: Orchestral—Piccadilly Orchestra, "Waltz Dream" (Strauss) (H.M.V. Record B2684).
 9.14: Mixed vocal quartet—Salon Quartet, "An Evening Pastorale" (Shaw). Contralto solo—Miss Dulcie Mitchell, "Softly Awakes My Heart" (Samson and Delilah) (Saint Saens).
 9.22: Orchestral—New Light Symphony Orchestra, "Glow Worm Idyll" (Lincke) (Zonophone Record EF20).
 9.26: Baritone solo—Mr. J. Graham Young, "The Bedouin Love Song" (Pin-suti).
 9.30: Tenor and contralto duet—Salona Duo, "Yes! I Will Rest, for my Soul is Weary" (Il Trovatore) (Verdi).
 9.34: Chorus—Victor Chorus, "Anvil Chorus" ("Il Trovatore") (Verdi) (H.M.V. Record EA89).
 9.37: Instrumental quintet—Bohemian Quintet, (a) "Overture to Dioclesian" (Purcell); (b) "Minuet" (Haydn).
 9.45: Tenor solo—Mr. H. Blakeley, "Soul of the Spring" (Phillips). Soprano solos—Miss Lilian Hanham, (a) "A Little Twilight Song" (Clarke); (b) "Springtime" (Tirindelli).
 9.49: Orchestral—Royal Opera Orchestra, (a) "Sylvia Ballet" (The Huntress) (Delibes); (b) "Sylvia Ballet" (Intermezzo and Valse Lente) (H.M.V. Record C1417).
 9.57: Baritone solo—Mr. J. Graham Young, "The Deathless Army" (Trotter). Soprano and baritone duet—Salon Duo, "In a Little Old Garden" (Hewitt).

- 10.5: Instrumental quintet—Bohemian Quintet, "Vienna Life" (Strauss).
 10.15: Contralto solo—Miss Dulcie Mitchell, "Angus MacDonald" (Roceky). Mixed vocal quartet—Salon Quartet, "Cradle Song" (Brahms).
 10.22: Close down.

4YA, DUNEDIN (463 METRES).—WEDNESDAY, APRIL 17.

- 7 p.m.: Town Hall chimes.
 7.1: Request gramophone concert.
 7.40: News session.
 8.0: Town Hall chimes.
 8.1: Orchestral—Kauffman's Orchestra, "The Gipsy Baron" (Strauss) (H.M.V. Record C1393).
 8.9: Humorous sketch—Miss Anita Winkel and Major F. H. Lampen.
 8.19: Presentation of excerpts from "The Dancing Mistress" (Monckton), by the Serenaders' Quarter:—

CAST:

Soprano, Miss Florence Sumner.
 Contralto, Miss Dorothy Allan
 Tenor, Mr. W. Harrison
 Baritone, Mr. R. B. Macdonald.

- 8.30: Entr'acte—International Concert Orchestra, "Sari Waltz" (Kalman) (Zonophone Record EF18).
 8.40: Excerpts from "The Dancing Mistress" (Monckton).
 8.50: Entr'acte—Salon Orchestra, "Glow Worm Idyll" (Lincke) (H.M.V. Record B2169).
 9.0: Weather report.
 9.2: Waltz—International Concert Orchestra, "The Merry Widow" (Lehar) (Zonophone Record EF9).
 9.6: Humorous sketch—Miss Anita Winkel and Major F. H. Lampen.
 9.16: Excerpts from "The Dancing Mistress" (Monckton).
 9.31: "Columbia" dance programme: March—H.M. Grenadier Guards Band, "Twist and Twirl" (Kottaun) (Columbia 0987).
 Foxtrot with vocal chorus—Denza Dance Band, "Dance of the Blue Danube" (Fisher) (Columbia 01151).
 Foxtrot—Biltmore Hotel Orchestra, "Sweet Sue—Just You" (Columbia 01249).
 Foxtrot with vocal refrain—Paul Whiteman's Orchestra, "Just a Sweetheart" (Dreyer) (Columbia 07015).
 9.40: Tenor solo—Alfred O'Shea, "Love's Garden of Roses" (Wood) (Columbia 04117).
 Vocal duet—Layton and Johnstone, "Because my Baby Don't Mean 'Maybe' Now" (Donaldson) (Columbia 01339).
 Pianoforte duet—Constance Mering and Muriel Pollack, "High Hat" (Alter) (Columbia 01224).
 Foxtrot—Piccadilly Revels Band, "Dolores" (Kassell) (Columbia 01157).
 Waltz with vocal refrain—Paul Whiteman's Orchestra, "Where is the Song of Songs for Me?" (Berlin) (Columbia 07015).
 9.57: Soprano and male quartet—Norah Blaney and the Ramblers, "Just Like Darby and Joan" (Leslie) (Columbia 01170).
 Pianoforte solo—Gil Dech, "Sometimes I'm Happy" (Youmans) (Columbia 01205).
 Foxtrot with vocal refrain—Paul Whiteman's Orchestra, "Roses of Yesterday" (Berlin) (Columbia 07014).



Quality Radio Apparatus

1929 !

THE LATEST

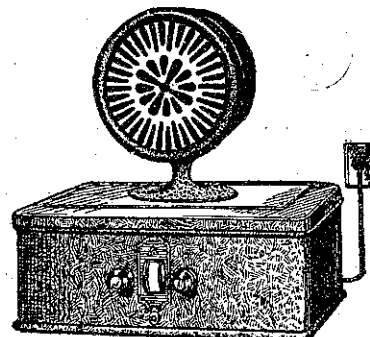
All-Electric Neutrodyne

HAS MADE GOOD

A New Tone---

FULL, but NATURAL always, is obtained by the combination of the New "APEX" A.C. Receiving Set with the "APEX" Magnetic Cone Speaker, which may be easily and effectively mounted on the lid, giving an IDEAL RADIO COMBINATION.

Write for our extremely attractive Double Offer.



BOND & BOND Ltd.

N.Z. "APEX" AGENTS.

- Novelty foxtrot—Debroy Somers' Band, "Laughing Marionette" (Col-lins) (Columbia 01341).
Waltz with vocal refrain—Paul Whiteman's Orchestra, "The Sidewalks of New York" (Lawlor) (Columbia 07014).
10.14: Tenor with orchestra—Alfred O'Shea, "Love, Here is My Heart" (Ross) (Columbia 03589).
Xylo-rimba Orchestra, "Along Miami Shore" (waltz) (Warren) (Regal G20328).
Marimba orchestra—Rio Marimba Orchestra, "My Isle of Golden Dreams" (Blauffuss) (Columbia 02685).
10.24: Humour—Flotsam and Jetsam, "Optimist and Pessimist" (Hilliam) (Columbia 0995).
Hawaiian—South Sea Islanders, "Dreamy Hilo Bay" (Clark) (Col-umbia 01162).
Hawaiian—King's Hawaiian Players, "Hilo March" (Berger) (Colum-bia 01226).
Pipe organ solo—Milton Charles, "Are You Happy?" (Ager) (Columbia 01184).
10.38: Tenor solo—Chas. Hackett, "The World is Waiting for the Sunrise" (Lochart) (Columbia 03596).
Vocal—Vaughan de Leath, "I Just Roll Along" (De Rose) (Columbia 01136).
Waltz—Xylo-rimba Orchestra, "My Sweetheart" (Nelson) (Regal G20328).
Vocal—Vaughan de Leath, "Watching for the Boogie Man" (Johnson) (Columbia 01136).
10.51: Piano-accordion solo—Guido Deiro, "Toselli's Serenade" (arrgd. Deiro) (Columbia 01168).
Duet—Layton and Johnstone, "Good News—Varsity Drag" (de Sylva) (Columbia 01308).
Vocal duet—Jack Lumsdaine and Len Maurice, "Good-night" (Wood) (Columbia 01191).
11.0: Close down.

Thursday, April 18

1YA, AUCKLAND (333 METRES)—THURSDAY, APRIL 18.

- 3 p.m.: Selected gramophone items.
4.0: Literary selection by the Announcer.
4.8: Further gramophone items.
4.25: Sports results to hand.
4.30: Close down.
6.0: Children's session, conducted by Peter Pan.
7.15: News and information session.
8.0: Chimes.
Vocal programme presented by "The Troubadours."
8.1: Overture—Orchestra, "Orpheus in Der Unterwelt" (Offenbach).
8.11: Chorus—The Troubadours, "Day Born of Love" ("The Keisha") (Jones).
8.15: Vocal duet, "None Shall Part Us" ("Iolanthe") (Sullivan).
8.19: Humour—Mr. T. T. Garland, "Mirth."
8.25: Tenor and chorus, "Sunshine Above" (Jones).
8.29: Vocal quartet, "Italia be Lingo" (Drew).
8.33: Orchestral—New Light Symphony Orchestra, "A Hunt in the Black Forest" (Volker) (H.M.V. Record C1308).
8.37: Chorus—The Troubadours, "Three Fishers" (Macfarren).
8.41: Instrumental—Orchestra, (a) "Minuet" (Beethoven); (b) "Kilauea" (Hawaiian Patrol) (Stewart); (c) "The Globe Trotter" (Leopold).
8.50: Solos, (a) "Titi-Torea" (Philpott); (b) "Matangi" (Eadys).
8.56: Chorus for ladies' voices, "Maybells and the Flowers" (Mendelssohn).
9.0: Evening forecast.
9.2: Suite—Orchestra, "A Children's Suite" (Ansell).
9.10: Soprano solo, "Se Saran Rose" (Arditi).
9.14: Baritone and chorus, "Tommy Atkins" (Jones).
9.18: Humour—Mr. T. T. Garland, "More Mirth."
9.23: Chorus, "Blue Danube Waltz" (Strauss).
9.27: Contralto solo, "The Glory of the Sea" (Sanderson).
9.30: Clarinet solo with orchestral accompaniment—Orchestra, "Slavonic Rhapsody" (Friedman).
9.39: Chorus, "Bonnie Laddie" (Philpott).
9.43: Programme of His Master's Voice Dance Music:
Overture—H.M. Coldstream Guards, "Der Freischutz" (Weber) (H.M.V. Record C1335).
Vocal duet—Jim Miller and Charlie Farrell, "The Grass Grows Greener" (Yellen) (Zonophone Record EE100).
Foxtrot—Ted Weam's Orchestra, "If You Want the Rainbow" (Rose) (H.M.V. Record EA433).
Foxtrot with vocal chorus—Rhythmic Eight, "You Don't Like it, Not Much" (Miller) (Zonophone Record EE96).
Waltz—Pennsylvania Orchestra, "Was It a Dream?" (Yellen) (H.M.V. Record EA335).
10.0: Tenor with violin and piano—Browning Mummery, "Had You But Known" (Denza) (H.M.V. Record B2756).
Hawaiian selection—Honolulu Serenaders, "Honolulu Stomp" (Filipo) (Zonophone Record EE92).
Foxtrot—Nat Shilkret's Orchestra, "Dainty Miss" (Barnes) (H.M.V. Record EA276).
Hawaiian selection—Hilo Hawaiian Orchestra, "Hawaiian Dreams" (Marple) (Zonophone Record EE56).

- 10.14: Male voices—The Revellers, "Was It a Dream?" (Coslow) (H.M.V. Record EA402).
Bass-baritone—Peter Dawson, "The Admiral's Yarn" (Rubens) (H.M.V. Record B2661).
Wurlitzer organ solo—Jesse Crawford, "Rosette" (Newman) (H.M.V. Record EA405).
Foxtrot—Pennsylvania Orchestra, "The Grass Grows Greener" (Yel-len) (H.M.V. Record EA335).
Hawaiian orchestra—Hilo Hawaiian Orchestra, "Song of Hawaii" (Bories) (H.M.V. Record EA276).
10.28: Male quartet—The Rounders, "Chlo-E" (Kahn) (H.M.V. Record EA402).
Foxtrot—Victor Orchestra, "What Do We Do on a Dew-Dew-Dewy Day" (Johnson) (H.M.V. Record EA244).
Foxtrot—Victor Orchestra, "The Doll Dance" (Brown) (H.M.V. Re-cord EA181).
Waltz—Bert Firman's Dance Orchestra, "Sunset Down in Somerset" (Evans) (Zonophone Record EE96).
10.41: Tenor solo—Joseph Hislop, "Mary" (Richardson) (H.M. Record DA901).
Hawaiian—Hilo Hawaiian Orchestra, "Honolulu Moon" (Lawrence) (waltz) (Zonophone Record EE56).
Foxtrot—Victor Orchestra, "Flapperette" (Greer) (H.M.V. Record EA181).
Foxtrot—Hamp's Kentucky Serenaders, "Is It Possible?" (Dixon) (H.M.V. Record EA244).
10.54: Comedian—Clarkson Rose, "I Want to be Alone with Mary Brown" (Gilbert) (Zonophone Record 5145).
Wurlitzer organ solo—Jesse Crawford, "For Old Times' Sake" (De Sylva) (H.M.V. Record EA405).
11.0: Close down.

2YA, WELLINGTON (420 METRES)—THURSDAY, APRIL 18.

- 3 p.m.: Chimes of the G.P.O. clock.
3.1: Selected gramophone items.
4.30 and 4.55: Sporting results to hand.
5.0: Close down.
6.0: Children's session, conducted by Uncle George.
7.0: News session.
7.40: Lecturette—Mr. W. J. Fergie, Publicity Branch N.Z. Railways, "The People's Railways."
8.0: Chimes of the G.P.O. clock.
Studio concert by the band of the 1st Battalion Wellington Regiment, under the conductorship of Lieut. B. J. Shardlow, and assisting artists.
8.1: Overture—Band, "La Militaire" (Raymond).
8.13: Quartet—The Mellow Fellows, "Since You Whispered 'I Love You'" (Mills and Carroll).
8.17: Baritone—The Baritone Fellow, "The Road to Loch Lomond" (Evans).
8.21: Recital—Mr. Norman Aitken, Recital of Third Prize Dramatic Poem of recent 2YA Poetry Competition, "Pania of the Reef" (A Maori Legend) (V. May Cottrell).
8.28: Cornet solo with band accompaniment—Sergt. W. Barke, "Beyond the Dawn" (Sanderson).
Waltz—Band, "Embers" (Lestrangle).
8.39: Bass solo—The Bass Fellow, "Good Cider for Me" (Arundel).
8.43: Soprano solo—Gladys Moncrieff, "Some Day" ("The Vagabond King") (Friml) (Columbia Record 01302).
8.46: Character sketch—The Yorkshire Fellow, "I Am Upset" (Foy) (Zono-phone Record).
8.50: Quartet—All the Fellows, "My Mother's Lullaby" (Sharp).
8.54: March—Band, "Irwell Springs" (dedicated to Irwell Springs Prize Band) (Greenwood).
9.0: Weather report.
9.2: Waltz—Symphony Orchestra, "Blue Danube" (Strauss) (Columbia Re-cord 9218).
Mezzo-soprano solo—Barbara Maurel, "In the Heart of the Hills" (Lee) (Columbia Record 01252).
9.8: Popular song—The Tenor Fellow, "What Does it Matter?" (Berlin).
9.12: Selection—Band, "I Puritani" (Bellini).
9.24: Humour—Mr. Norman Aitken, "The Four Sports" (Second Prize Poem of recent 2YA Poetry Competition) (Geo. T. Palmer).
9.31: Duet—Two Fellows, "Rose Time" (Hall and O'Hagan).
9.35: Euphonium solo with band accompaniment—Corporal J. Brittain, "Re-verie in B Flat" (Powell).
Serenade—Band, "Moonlight" (Moret).
9.46: Contralto with male quartet—Sophie Braslau, "Carry Me Back to Old Virginny" (Bland) (Columbia Record 04215).
9.50: Humour—The Funny Fellow, "Maori Tales" (Lawlor).
9.54: Quartet—All the Fellows, "I Just Roll Along" (Trent and De Rose).
9.58: March—Band, "Allendale" (Greenwood).
10.3: Close down.

3YA, CHRISTCHURCH (306 METRES)—THURSDAY, APRIL 18.

- 3 p.m.: Afternoon session—Selected gramophone items.
4.25: Sports results to hand.
4.30: Close down.
6.0: Children's session, conducted by Uncle John.
7.15: News session.
7.30: Talk—Mr. G. Lawn, M.A., under the auspices of the Canterbury Pro-gress Association.

- 8.0: Chimes.
 8.1: Overture—Rebroadcast of 2YA, Wellington.
 8.13: Contralto and tenor duet—Miss Dorothy Spiller and Mr. Ernest Rogers, "Once More Returning" ("Il Trovatore") (Verdi).
 8.18: Violin solo—Miss Irene Morris, "Adagio—Pastorale" (Handel).
 8.23: Baritone aria—Mr. James Filer, "O Star of Eve" (Wagner).
 8.27: Soprano recitative—Madame Gower Burns, "The Sad Years Roll By" (Lia) ("L'Enfant Prodigue") (Debussy).
 8.31: Wurlitzer organ—Reginald Foort, "Casse Noisette" (Suite) (Tschalkowsky). (a) Overture Miniature; (b) "Valse Fleur" (H.M.V. Record C1386).
 8.39: Contralto solo—Miss Dorothy Spiller, "Gentle Flowers with Your Spell" ("Faust") (Gounod).
 8.43: Tenor solo—Mr. Ernest Rogers, "Soft and Pure" ("Martha") (Flotow).
 8.47: Soprano and baritone duet—Grand Opera Duo, "Ah! Daughter Let Me Comfort Thy Sorrow" ("Rigoletto") (Verdi).
 9.2: Weather report.
 9.4: Orchestral—Philadelphia Symphony Orchestra, "Casse Noisette" (Suite) (Tschalkowsky); (a) Arab Dance; (b) Chinese Dance; (c) Dance of the Flutes (H.M.V. Record D1215).
 9.12: Contralto solo—Miss Dorothy Spiller, "Dear Friends, Farewell" ("Daughter of the Regiment") (Donizetti).
 9.17: Lecturette—Mr. H. F. Skey, Director of the Christchurch Magnetic Observatory, "Earthquakes, their Causes and Effects." With special reference to the recent disturbance.
 9.32: Instrumental—Christchurch Broadcasting Trio, (a) "Swedish Folk Song No. 2" (Svendsen); (b) "Romance" (Glinka); (c) "Waltz from Serenade" (Tschalkowsky).
 9.40: Aria—Madame Gower Burns, "Mia Picciarella" (My Little Darling) ("Salvator Rosa") (Gomez).
 9.45: Wurlitzer organ solo—Reginald Foort, "Schon Rosmarin" (Kreisler) (H.M.V. Record B2664).
 9.49: Waltz—Chicago Symphony Orchestra, "Wine, Women and Song" (Strauss) (H.M.V. Record D1452).
 March—Royal Opera Orchestra, "March Militaire" (Schubert) (H.M.V. Record C1279).
 9.57: Tenor solo—Mr. Ernest Rogers, "Ah, Si Ben Mio" ("Il Trovatore").
 10.1: Violin solo—Miss Irene Morris, "Hornpipe" (Mistowski).
 10.5: Baritone solo—Mr. James Filer, "She Alone Charmeth My Sadness" (Irene) (Gomez).
 10.10: Quartet—Grand Operatic Quartet, "What From Vengeance Yet Restrains Me" ("Lucia di Lammermoor") (Donizetti).
 10.14: Close down.

4YA, DUNEDIN (463 METRES)—THURSDAY, APRIL 18.
 SILENT DAY.

Friday, April 19

1YA, AUCKLAND (333 METRES)—FRIDAY, APRIL 19.

- 3 p.m.: Afternoon session—Selected studio items.
 4.0: Literary selection by the Announcer.
 4.3: Studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session conducted by Nod and Aunt Jean.
 7.15: News and market reports.
 7.30: Talk—Mr. C. E. Major (President, Auckland Rationalists' Association)—"The Gospel of Reason."
 8.0: Chimes.
 8.3: Overture—National Symphony Orchestra, "Light Cavalry" (Suppe) (Zonophone Record EE102).
 8.9: Vocal duet—Messrs. Lambert Harvey and Geoffrey Colledge, "The Lovers" (Lane Wilson).
 8.14: Instrumental trio—Studio Trio, "Melody in D" (Faure).
 8.24: Reading—Mr. J. F. Montague—"Devil's Rock" (Miss Betty Kerr, Timaru) (bracket winning play in recent 1YA one-act play competition).
 8.44: Waltz—Marek Weber's Orchestra, "Moonlight on the Alster" (Fetras) (H.M.V. Record C1407).
 8.48: Tenor solo—Mr. Lambert Harvey, (a) "I Hear You Calling Me" (Marshall), (b) "My Dearest Heart" (Sullivan).
 8.56: Violin solo—Miss Ina Bosworth, "Rondo" (Mozart-Kreisler).
 9.0: Weather report.
 9.3: Orchestral—Philadelphia Symphony Orchestra. (a) "Rakoczy March" ("Damnation of Faust") (Berlioz), (b) "Samson et Delilah"—"Bacchanale" (Saint-Saens) (H.M.V. Record ED7).
 9.11: Baritone solos—Mr. Geoffrey Colledge, (a) "Beating Up the Channel" (Sanderson), (b) "Broken-Hearted Bachelor" (Wallace).
 9.19: Pianoforte solo—Mr. Cyril Towsey, "Andante and Rondo" (Mendelssohn).
 9.24: One-act play—Auckland Comedy Players under the direction of Mr. J. F. Montague—"The Old Bachelor" (Frank H. Goodey, Wanganui) (bracket winning play in recent 1YA one-act play competition).
 9.44: Instrumental—Studio Trio, (a) "Ave, Maris Stella" (Grieg), (b) "Romance" (Mozart), (c) "Adagio" (Beethoven).
 9.53: Tenor solo—Mr. Lambert Harvey, "Celeste Aida" ("Aida") (Verdi).
 9.57: Baritone solo—Mr. G. Colledge, "A Hint" (Grey).

- 10.1: Choir—Russian State Choir, "Storm on the Volga" (Pastschenko) (H.M.V. Record C1498).
 10.9: Close down.

2YA, WELLINGTON (420 METRES)—FRIDAY, APRIL 19.

- 3.0 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, conducted by Big Brother Jack.
 7.0: News session, market reports, and sports results.
 8.0: Chimes of the G.P.O. clock.
 8.1: Overture—Orchestra, "Semiramis" (Rossini).
 8.9: Vocal quartet—Melodie Four, "Pilgrims' Chorus" ("Tannhauser") (Wagner).
 8.13: Soprano solo—Mrs. R. S. Allwright, "One Fine Day" ("Madame Butterfly") (Puccini).
 8.17: Violin solo—Fritz Kreisler, "Humoresque" (Dvorak) (H.M.V. Record DB1091).
 8.21: Humour—Mr. and Mrs. Albert Russell, (a) "Plantaganet" (Low); (b) "Molly Malone" (Cohen).
 8.28: Selection—Orchestra, "Rigoletto" (Verdi).
 8.38: Baritone solo—Mr. R. S. Allwright, "Waita Maori" (by request) (Hill).
 8.42: Grand organ solos—Reginald Goss-Custard, (a) "The Question"; (b) "The Answer" (Wolstenholme) (H.M.V. Record E415).
 8.48: Vocal Duet—Mrs. R. S. Allwright and Mr. Sam Duncan, "Miserere Scene" ("Il Trovatore") (Verdi).
 8.52: Instrumental—Orchestra, repeat number.
 9.0: Weather report.
 9.2: Tenor solo—Mr. Frank Bryant, "Where'er You Walk" (Handel).
 9.6: Instrumental—Orchestra, "Glory of Russia" (Kreen).
 9.17: Bass solo—Mr. W. W. Marshall, "The Pirate Song" ("Pirates of Penzance") (Sullivan).
 9.21: Humour—Mr. and Mrs. Albert Russell, (a) "Love, Wonderful Love" (Seyler); (b) "All By Yourself in the Moonlight" (Wallis).
 9.28: Tenor solo—Mr. Sam Duncan, "Take a Pair of Sparkling Eyes" ("The Gondoliers") (Sullivan).
 9.32: Vocal quartette—Melodie Four, "Soldiers' Chorus" ("Faust") (Gounod).
 9.36: Musical comedy selection—Orchestra, "Maid of the Mountains" (Simpson).
 9.46: Presentation of the opera, "Rigoletto" (Verdi) (second instalment). (H.M.V. Records D1486/90):—

(Synopsis: The first instalment described the court of the Duke of Mantua. The Duke of Mantua is a Don Juan, against whose attentions no woman is safe. He is indebted for help in his schemes to his jester, Rigoletto. The courtiers have much reason to hate both Duke and jester. Count Monterone utters a parent's curse upon both Duke and jester. The Duke is merely amused, but the jester is terrified. The courtiers plan revenge on Rigoletto. The portion of the opera dealt with this evening deals with the carrying out of the plan of revenge. Intimidated by the curse, Rigoletto makes a compact with an assassin, Sparafucile, whose help is henceforth to be his in case of need. Rigoletto now goes into his garden, where he finds his only daughter, Gilda. She conceals from him the fact that a young man is hidden on the premises. The young man (though she does not know it) is the Duke. The courtiers man (though she does not know it) is the Duke. The courtiers, resorting to a ruse by which they secure the help of Rigoletto, he not realising that his own daughter is the victim, abduct Gilda, and carry her off to the palace. Rigoletto discovers what has happened, and with horror recalls the curse. Prominent among the airs to be sung will be the great love duet, "Love is the Sun," and the famous solo, "Caro Nome" (Dearest Name).

- 10.26: Close down.

3YA, CHRISTCHURCH (306 METRES)—FRIDAY, APRIL 19.

- 3 p.m.: Afternoon session (selected gramophone items).
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session, conducted by "Storyman."
 7.15: News session.
 8.0: Chimes.
 8.1: Overture—Rebroadcast of 2YA, Wellington.
 8.9: Excerpts from opera, "The Quaker Girl" (Moncton). Opening choruses—Radiolian Quartet, (a) "Jarge, we've Such a Tale"; (b) "Quakers' Meeting" (Moncton).
 8.18: Soprano solo—Mrs. Claris Shaw, "O, Time, Time" (Moncton).
 8.21: March—Bailey Marston Dance Orchestra, "Les Notsram" (Marston).
 Dance music—Bailey-Marston Orchestra, "Lonesome in the Moonlight" (Baer).
 8.29: Contralto solo—Miss M. Russell, "A Quaker Girl" (Moncton).
 Chorus—Radiolians, "A Runaway Match" (Moncton).
 Bass Solo—Mr. W. J. Richards, "Just as Father Used to Do" (Moncton).
 8.37: Dance orchestra—Bailey-Marston Dance Orchestra, (a) "Out of the Dawn" (Donaldson); (b) "Laughing Water"; (c) "Stop Your Crying" (Wheeler).

- 8.45: Tenor solo and chorus—Mr. Greg. Russell and Radiolians, "Come to the Ball" (Moncton).
 8.49: Humorous talk—Mr. George Titchener, "The Modest Curate" (Walers). Chorus—Radiolians, "Barbizon" (Moncton).
 8.54: Dance music—Bailey-Marston Dance Orchestra, (a) "Just a Kiss Before the Dawn" (Perkins); (b) "You're a Real Sweetheart" (Friend).
 9.2: Weather report.
 9.10: Dance Music—Bailey-Marston Dance Orchestra, (a) "Happy Days and Lonely Nights" (Fisher); (b) "Where the Shy Little Violets Grow" (Warren).
 9.18: Chorus—Radiolians, "It's the Wedding Day" (Moncton).
 9.23: Soprano solo and chorus—Mrs. Claris Shaw and Radiolians, "Tip Toe" (Moncton).
 9.27: Dance music—Bailey-Marston Dance Orchestra, (a) "Just Like a Melody out of the Sky" (Donaldson); (b) "In a Bamboo Garden" (Donaldson).
 9.35: Humorousities—Mr. Geo. Titchener will entertain you in his inimitable style (M.S.).
 9.40: Chorus—Radiolians, "Love I have Met You" (Moncton).
 9.42: Dance Music by Bailey-Marston Dance Orchestra until 11 p.m.
 11.0: Close down.

4YA, DUNEDIN (463 METRES)—FRIDAY, APRIL 19.

- 3 p.m.: Town Hall chimes.
 3.1: Selected gramophone items.
 4.25: Sports results to hand.
 4.30: Close down.
 7.15: News session.
 7.30: Lecturette—Mr. H. Greenwood, of the Dunedin Athenæum, "Book Review."
 8.0: Town Hall chimes.
 8.1: Orchestral—Philadelphia Symphony Orchestra, "Casse Noisette" Suite (Tchaikowsky): (1) Overture Miniature and March; (2) Dance of the Sugar-Plum Fairy and Trepak (H.M.V. Record D1214).
 8.9: Tenor solo—Mr. A. R. Thompson, "The Last Watch" (Pinsuti).
 8.13: Instrumental trio—4YA Broadcasting Trio, "Dance Tune" (Neilson).
 8.18: Mezzo-contralto solos—Miss Irene Horniblow, L.R.A.M.: (a) "On the Banks of Allan Water" (Old English); (b) "Golden Slumbers" (Old English).
 8.24: Recital—Miss Tui Northey, "I Don't Care" (Anon).
 8.33: Pianoforte solos—Mr. Ernest Drake, (a) "Polonaise" (MacDowell), (b) "Prelude" (Schutt).
 8.42: Baritone solo—Mr. Arthur Lungley, "Pale Moon" (Logan).
 8.46: Soprano solo—Elisabeth Rethberg, "Elsa's Dream" ("Lohengrin") (Wagner) (H.M.V. Record D1420).
 8.50: Violin solos—Miss Eva Judd, (a) "Largo" ("New World Symphony") (Dvorak-Kreisler), (b) "Gavotte" (Gosse).
 8.58: Chorus—La Scala Chorus, "Ah Foscò Gielo" ("La Sonnambula") (Bellini) (H.M.V. Record B2624).
 9.2: Weather report.
 9.4: Orchestral—New Light Symphony Orchestra, "Merry Wives of Windsor" (Nicolai) (H.M.V. Record C1260).
 9.12: Tenor solo—Mr. A. R. Thompson, "Good-Night, Good-Night, Beloved" (Balfe).
 9.16: 'Cello solos—Mr. P. J. Palmer, (a) "Plainte d'Amour" (Jellier), (b) "Mazurka" (Squire).
 9.26: Vocal duet—Bori and Schipa, "Oh! Dio, Mimi" ("La Bohème") (Puccini) (H.M.V. Record DB911).
 9.30: Recitals—Miss Tui Northey, (a) "The Birth of the Opal" (Wilcox), (b) "Peter" (Cathy).
 9.35: Mezzo-contralto solo—Miss Irene Horniblow, "The Lady of the Lea."
 9.39: Orchestral—Victor Concert Orchestra, (a) "Amaryllis—Air Louis XIII." (Thys), (b) "Minuet in G" (Paderewski) (H.M.V. Record BA240).
 9.45: Baritone solos—Mr. Arthur Lungley, (a) "Fleurette" (McGeogh), (b) "I Know of Two Bright Eyes" (Clutsam).
 9.52: Instrumental trio—4YA Broadcasting Trio, "Ballet Music No. 4—Faust" (Gounod).
 9.57: Chorus—Light Opera Company, Gems from "Cavalleria Rusticana" (Mascagni) (H.M.V. Record EB27).
 March—H.M. Coldstream Guards, "Semper Fidelis" (Sousa) (H.M.V. Record B2647).
 10.4: Close down.

Saturday, April 20

1YA, AUCKLAND (333 METRES)—SATURDAY, APRIL 20.

- 3 p.m.: Afternoon session—Selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session, conducted by Cinderella.
 7.15: News and market reports—sports results.
 8.0: Chimes.
 8.1: March—Orchestra, "London Scottish" (Haines).
 Waltz—Orchestra, "Weeping Willow Lane" (Johnson).

- 8.11: Vocal duets—Mrs. Daisy Basham and Mr. A. Briggs, (a) "Croon, Croon, Underneath the Moon" (Clutsam); (b) "Hush-a-bye, Ma Baby" (arrgd. Eppell).
 8.19: Hawaiian—Hilo Hawaiian Orchestra, (a) "Hawaiian Nights" (Roberts); (b) "Aloma" (Bowers) (H.M.V. Record EA310).
 8.25: Contralto solos—Mrs. D. Basham, (a) "Robin Adair" (old Scottish); (b) "Rotheray Bay" (Scott-Gatty).
 8.32: Instrumental—Orchestra, (a) "La Paloma" (Yradier); (b) "Tales from the Vienna Woods" (waltz) (Strauss).
 8.38: Baritone solo—Mr. A. Briggs, "Remember Me No More" (M.S.).
 8.42: Recital—Mr. T. Harris, "The Glittering Gate."
 8.48: Vocal duet—Mrs. D. Basham and Mr. A. Briggs, "Venetian Song" (Tosti).
 8.52: Guitar and piano—Smeck and Kahn, "Itchin' Fingers" (Robison) (Zonophone Record BE119).
 8.56: Baritone solos—Mr. A. Briggs, "Peg Away" (Fred Bevan); (b) "Vanity" (Hall).
 9.3: Weather report.
 9.5: Novelty—Orchestra and voices, "Bells of St. Mary's" (Adams).
 9.14: Humour—Hebrew Two, "Happy Abe and Dismal Ike."
 9.23: Vocal—Mrs. D. Basham and Mr. A. Briggs, excerpts from "Patience" (Gilbert and Sullivan).
 9.31: Selection—Orchestra, "Popular Melodies" (1st. Selection) (Sullivan).
 9.41: Programme of dance music.
 11.0: Close down.

2YA, WELLINGTON (420 METRES)—SATURDAY, APRIL 20.

- 3 p.m.: Chimes of the G.P.O. clock.
 3.1: Selected gramophone items.
 4.30 and 4.45: Sports results to hand.
 5.0: Close down.
 6.0: Children's session, conducted by Uncle Toby.
 7.0: News session, market reports and sports results.
 7.40: Lecturette—Mr. N. R. Jacobsen, "Athletics."
 8.0: Chimes of the G.P.O. clock.
 Special vaudeville programme, featuring the revue, "Bits and Pieces," by the 2YA Revue Company.
 8.1: Musical comedy selection—Orchestra, "The Blue Kitten" (Friml).
 8.11: Introductory remarks and some sketches of private conversation.
 8.15: Comic song—"Is it Done in Suburbia?" (Harry Parr, adapted by S. Lloyd).
 8.20: Sketch in two scenes—"All the World's a Links" (Harold Simpson).
 8.24: Contralto solo—"He Met Her on the Stairs" (Levey).
 8.27: Sketch—"Honeymoon Hall" (Simpson).
 8.37: Novelty—Orchestra, "Voice of the Bells" (Thurban).
 Waltz—Orchestra, "Blue Danube" (Strauss).
 8.49: Soprano solo—"The Greatest Wish in the World" (del Riego).
 8.53: Sketch—"Lucky Jim" (Simpson).
 8.57: Comic song—"Gone Aloft" (Arpthorp).
 9.2: Instrumental—Orchestra, Repeat Number.
 9.10: Weather report.
 9.12: Suite—Orchestra, "Two Light Syncopated Pieces" (Coates), (1) "Magic"; (2) "Rose of Samarkand."
 9.20: Sketch in three scenes—"On the Journey" (Simpson).
 9.22: Comic song—"Breakfast in Bed" (Carr).
 9.28: Sketch in two scenes—"X-Ray Dialogue" (Jeans).
 9.32: Soprano solo—"Deep in My Heart, Dear" (Romberg).
 9.35: Sketch specially written for the 2YA Revue Company, "In the Taxi" (Surry-Dane).
 9.45: Song—"Jest Her Way" (Aitkin).
 9.48: Comic song—"Movie Mad" (Rome-Pryce).
 9.53: "Mrs. Arris Comes to Clear Up" (Poultenay).
 9.58: Instrumental—Orchestra, Dance Novelties.
 10.4: Dance programme.
 11.0: Close down.

3YA, CHRISTCHURCH (306 METRES)—SATURDAY, APRIL 20.

- 3 p.m.: Afternoon session—Selected studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session, conducted by Chuckle and Aunt Pat.
 7.15: News session.
 7.30: Sports results.
 8.0: Chimes.

VAUDEVILLE PROGRAMME.

"The Revellers" Concert Party in Music and Song.

- 10.0: "His Master's Voice" Dance Programme.
 March—Philadelphia Symphony Orchestra, "Rakoczy March" (Berlioz) (H.M.V. ED7).
 Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "In My Bouquet of Memories" (Lewis) (H.M.V. EA362).
 Foxtrot with vocal refrain—Waring's Pennsylvanians, "In the Evening" (Hanley) (H.M.V. EA363).
 Waltz with vocal refrain—The Troubadours, "When Love Comes Stealing" (Rapee) (H.M.V. EA410).
 10.14: Baritone solo—Lawrence Tibbett, "Drink to Me Only with Thine Eyes" (Calcott) (H.M.V. DA886).
 Waltz with vocal refrain—The Troubadours, "A Kiss Before Dawn" (Perkins) (H.M.V. EA410).

- Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "My Angel" (Pollack) (H.M.V. EA362).
- Foxtrot with vocal refrain—Nat Shilkert's Orchestra, "Get Out and Get Under the Moon" (Tobias) (H.M.V. EA368).
- 10.27: Orchestra—Philadelphia Symphony Orchestra, "Samson et Delilah" (Saint-Saens) (H.M.V. ED7).
- Male voices—The Revellers, "Mammy is Gone" (de Sylva) (H.M.V. EA384).
- Piano solo—Pauline Alpert, "The Doll Dance" (Brown) (Zonophone EE98).
- Waltz—Firman's Dance Orchestra, "I'm Away from the World" (Clare) (Zonophone 5099).
- Dance orchestra—Salon Orchestra, "My Blue Heaven" (Whiting) (H.M.V. ED18).
- 10.40: Organ solo—Edwin Lemare, "Aloha-Oe" (Lilikalani) (Zonophone EE93).
- Male voices—The Revellers, "Dream River" (Brown) (H.M.V. EA384).
- Foxtrot—Firman's Orchestra, "When I Ring Your Front Door Bell" (Lyn) (Zonophone 5099).
- Dance orchestra—New Light Symphony Orchestra, "Just a Memory" (de Sylva) (H.M.V. EB18).
- 10.53: Comedian—Sir Harry Lauder, "Just Got Off the Chain" (Lauder) (H.M.V. D1484).
- Waltz with vocal refrain—Geo. Olsen's Music, "King for a Day" (Lewis) (H.M.V. EA429).
- Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "Mississippi Mud" (Barria) (H.M.V. EA429).
- 11.0: Close down.

4YA, DUNEDIN (463 METRES)—SATURDAY, APRIL 20.

- 7.15: News session.
- 8.0: Town Hall chimes.
- 8.1: Relay of orchestral music from the Octagon Theatre.
- 8.11: Bass solo—Mr. Neil Black, "Off to Philadelphia" (Haynes).
- 8.15: Recital—Mr. Lester Moller, "If I Were in Parliament" (Roberts).
- 8.23: Light song—Miss Mona Melville, "Dream Kisses."
- 8.27: Wurlitzer organ—Leslie James, (a) "O Sole Mio" (Di Capua); (b) "Simple Aven" (Thome) (H.M.V. Record B2792).
- 8.33: Scottish humour—Mr. Buster Brown, (a) "Tobermory" (Lauder); (b) "Barly in the Morning" (Lauder).
- 8.40 (approx.): Relay from Octagon Theatre of overture under the direction of Monsieur Henri de Rose (Mus. Bach.).
- 8.50: Bass solos—Mr. Neil Black, (a) "True Till Death" (Gatty); (b) "A Perfect Day" (Bond).
- 8.57: Hawaiian—Hilo Hawaiian Orchestra, (a) "Hawaiian Sunset" (Vandersloot); (b) "Sweet Hawaiian Dream" (Coleman) (H.M.V. Record B2328).
- 9.3: Weather report and announcements.
- 9.5: Light songs—Miss Mona Melville, (a) "My Minosa" (b) "Eyes That Love."
- 9.11: Recitals—Mr. Lester Moller, (a) "Proverbs Up-to-Date" (Leacock); (b) "The Speech of Prouzax" (Drinkwater).
- 9.16: Tenor solo—Jno. McCormack, "The Far Away Bells" (Gordon) (H.M.V. Record DA914).
- Chorus—Light Opera Company, "Lady Luck" (Vocal Gems) (Hedley) (H.M.V. Record C1346).
- 9.23: Scottish humour—Mr. Buster Brown, "She Is My Rosie" (Lauder).
- 9.28: "Columbia" Dance Programme:
- Foxtrot with vocal chorus—Debroy Somers' Band, "The Toy Town Artillery" (Frederick) (Columbia Record 01306).
- Waltz—Eddie Thomas's Collegians, "Till We Meet Again" (Whiting) (Columbia Record 02553).
- Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "Constantinople" (Carlton).
- 9.42: Soprano and male quartet—Norah Blaney and The Ramblers, "Sweet Suzanne" (Leslie) (Columbia Record 01170).
- 9.45: Selection—Debroy Somers' Band, "Good News" (De Sylva) (Columbia Record 02720).
- Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "Last Night I Dreamed You Kissed Me" (Kahn) (Columbia Record 07002).
- 9.56: Tenor with orchestra—Alfred O'Shea, "Just a Little Love, a Little Kiss" (Ross) (Columbia Record 03589).
- 9.59: Instrumental—Paul Whiteman's Orchestra, "Jeannine, I Dream of Lilac-Time" (Gilbert) (Columbia Record 07505).
- Waltz—Rio Marimba Serenaders, "Dolores Waltz" (Waldteufel) (Regal Record G20344).
- Novelty foxtrot—Debroy Somers' Band, "Rag Doll" (Brown) (Columbia Record 01341).
- 10.10: Monologue—Milton Hayes, "Meanderings of Monty—Is Lipstick Nourishing?" (Hayes) (Columbia Record 01293).
- 10.14: Foxtrot (with incidental singing)—Stellar Dance Band, "Just Imagine!" (De Sylva) (Regal Record G20338).
- Foxtrot with vocal chorus—Denza Dance Band, "Varsity Drag" (De Sylva) (Columbia Record 01151).
- Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "Get Out and Get Under the Moon" (Shay) (Columbia Record 07001).
- 10.24: Tenor solo—Alfred O'Shea, "Then You'll Remember Me" ("The Bohemian Girl") (Balfe) (Columbia Record 03613).
- 10.28: Wurlitzer organ solo—Milton Charles, "Cheerie-Beerle-Be" (Wayne) (Columbia Record 0914).
- Waltz—Ben Selvin's Orchestra, "Ramona" (Wayne) (Columbia Record 01137).

- Foxtrot with vocal chorus—South Sea Islanders, "Hanalei Bay" (Alo-hikea) (Columbia Record 0737).
- 10.38: Spoken novelty—Flotsam and Jetsam, "The Business Man's Love Song" (William) (Columbia Record 0995).
- 10.42: Vocal duet with piano—Gus, Van and Joe Schenck, "Skadatin Dee" (Tobias) (Regal Record G20336).
- Foxtrot with vocal chorus—Paul Whiteman's Orchestra, "Evening Star" (Turk) (Columbia Record 07001).
- Waltz—Eddie Thomas's Collegians, "The Missouri Waltz" (Logan) (Columbia Record 02553).
- Foxtrot—Ben Selvin's Orchestra, "In My Bouquet of Memories" (Akst) (Columbia Record 01137).
- 10.55: Whispering solo with violin—Jack Lumsdaine, "Like a Bird that's on the Wing" (Tobias) (Columbia Record 01185).
- 10.58: Foxtrot with incidental singing—Stellar Dance Band, "Dream House" (Cowan) (Regal Record G20338).
- 11.0: Close down.

Sunday, April 21

1YA, AUCKLAND (333 METRES)—SUNDAY, APRIL 21.

- 3 p.m.: Afternoon session—Selected gramophone items.
- 4.0: Literary selection by the Announcer.
- 4.8: Further gramophone items.
- 4.30: Close down.
- 6.0: Children's session conducted by Uncle Leo.
- 6.55: Relay of Divine Service from Pitt Street Methodist Church (Preacher, Rev. Lionel Dalby; Organist, Mr. R. B. Bickerton; Choirmaster, Mr. W. Leather).
- 8.30: Selection—Band of H.M. Grenadier Guards, "The Meistersingers" (parts 1 and 2) (Wagner) (Columbia Record 02697).
- 8.38: Baritone solo—Mr. W. Brough, "Thus Saith the Lord" ("Messiah"—Handel).
- 8.44: Orchestra—Court Symphony Orchestra, Rubinstein's "Melody in F" (Columbia Record 147).
- 8.48: Contralto solo—Miss Hilda Stansfield, (a) "My Prayer" (Squire), (b) "Vale" (Rus. M).
- 8.56: Violin solo—Albert Lynch, "Nobody Knows de Trouble I've Seen" (Negro Spiritual) (Columbia Record 01237).
- 9.0: Baritone solo—Mr. W. Brough, (a) "Calvary" (Brown), (b) "Blind Ploughman" (Clarke).
- 9.8: Selection—Court Symphony Orchestra, "The Gondoliers" (Columbia Record 079) (Sullivan).
- 9.16: Contralto solo—Miss H. Stansfield, (a) "An Emblem" (Russell), (b) selected.
- 9.24: March—Australian Commonwealth Band, (a) "Entente Cordiale" (Douglas), (b) "Australia Forever" (arr. Baile) (Columbia Record 01232).
- 9.30: Close down.

2YA, WELLINGTON (420 METRES)—SUNDAY, APRIL 21.

- 3 p.m.: Afternoon session—Selected gramophone items.
- 4.30: Close down.
- 6.0: Children's Sunday service, conducted by Uncle George.
- 7.0: Relay of evening service from St. Andrew's Presbyterian Church. Preacher, Rev. R. J. Howie, B.A. Organist and choirmaster, Mr. Frank Thomas.
- 8.15 (approx.): Relay from His Majesty's Theatre of Band Recital of the Wellington Municipal Tramways Band, under the conductorship of Mr. T. Goodall.

3YA, CHRISTCHURCH (306 METRES)—SUNDAY, APRIL 21.

- 3 p.m.: Afternoon session—Selected studio items.
- 4.30: Close down.
- 5.30: Children's song service.
- 6.15: Hymn tunes.
- 6.30: Relay of service from Church of the Good Shepherd, Phillipstown (Church of England). Preacher, Rev. C. A. Fraer. Choirmaster, Mr. W. Blacklock. Organist, Mrs. J. R. Hewland.
- 7.53 (approx.): Studio concert.
- Orchestral—Philadelphia Symphony Orchestra, "Symphony in D minor" (Franck) (1st. Movement Lento Allegro) (H.M.V. Records D1404/5).
- (Synopsis: The movement opens with a pregnant phrase uttered by the lower strings. This phrase, which seems to have a mythical questioning character, is an important one, for it is again used later in the movement under differing circumstances. In the sixth bar there is a characteristic little touch, simple enough in itself, but quite divine in its effect; the violins enter with a wistful descending phrase like a caress. The beauty of each successive phrase, the originality and yet the logic of their sequence is such that a great deal might be written on them.
- The allegro opens, after a few bars, with startling forcefulness with the phrase with which the movement began. It is infused with fierce vigour, and the strings, as they announce it, seems to throw a challenge to the wind instruments. This episode is brief, however, for it is merely a "false start," and a return is made

to the earlier tempo. When the Allegro proper is reached, however, there is a brief resume of the preceding material before proceeding with fresh themes. A caressing phrase from the wood-wind, which is to be used again, elsewhere, ushers in a new theme of great beauty. There is something like the Sword of an Archangel in this theme; it is so fiercely bright, yet so spiritually tender. The tumultuous and triumphant utterance subsides as suddenly as it came, in an atmosphere of calm redolent of a deserted cloister. The rest of the movement requires little comment, but the last bars in which the opening phrase returns in a grandiose manner is most impressive.)

- 8.9: Mezzo-soprano solo—Miss Myrtle Towse, "God Touched the Rose" (Brown).
 8.12: Baritone solos—Mr. Bernard Rennell, (a) "The Blind Ploughman" (Copingsby Clarke); (b) "The Rosary" (Nevin).
 8.19: Instrumental trio—Christchurch Broadcasting Trio, "Trio in G Major" (1st. Movement—Andante) (Haydn).
 8.23: Contralto solos—Mrs. McKenzie Muirson, (a) "The Rose" (Johnson); (b) "The River and the Sea" (Johnson).
 8.28: Tenor solo—Mr. Bradleigh Crowhurst, (a) "Serenata" (Toselli); (b) "My Task" (Ashford).

- 8.34: Orchestral—Philadelphia Symphony Orchestra, "Symphony in D Minor" (Franck) (2nd Movement—Allegretto) (H.M.V. Records D1406/7).
 (Synopsis: The second movement is, perhaps, the loveliest of the three. There is a diversity and contracting style and tempo, so that the movement might almost be considered to represent the "conventional" slow movement and scherzo of the symphony-form telescoped into one. The use of the harp is particularly felicitous. The melody with which the movement is begun is played by the harp, reinforced by plucked strings. The harp becomes silent for a period, and in its place the cor anglais sings a beautiful melody to an accompaniment of plucked strings. The harp presently enters, and joins the other instruments. As this melody comes to an end, the clarinets and horns play another, in which they are presently joined by the flutes. As the next portion opens, we reach the "scherzo" like section of the movement. The strings are muted, and, after a preliminary passage, we enter what must be the music of a fairies' meeting. It is soft, mysterious, scurrying, and remote, until at last Titania herself appears in the shape of a ravishing melody played by the clarinets. A return is made to the first melodies of the movement, though the strings do not at first cease their scurrying. The final pages are a miraculous thing.)

- 8.46: Mezzo-soprano solo—Miss Myrtle Towse, "With Verdure Clad" ("The Creation") (Haydn).
 8.51: Instrumental trio—Christchurch Broadcasting Trio, "Trio in G Major" (Poco adagio—rondo all' Ongarese) (Haydn).
 9.3: Baritone solo—Mr. Bernard Rennell, "Invictus" (Huhn).
 9.7: Orchestral—Philadelphia Symphony Orchestra, "Symphony in D Minor" (Franck) (3rd Movement—Allegro) (H.M.V. Records D14071/8).

(Synopsis: The last movement is an extraordinarily virile thing. It opens with pulsating strings, and the principal new theme is announced almost at once from bassoons and cellos. The violins snatch a fragment of this, and build a new theme with which a climax is made. There is a sudden return of the beautiful first melody of the Second Movement. Later further reminiscences appear, especially after a tumultuous climax built from a simple phrase of five consecutive notes on the scale. When the climax has died down, there is a feeling of unrest in the music, as if the spirit of unrest were striving to break its bonds, only to be continually repressed. Later, an important feature is the reappearance of the great theme of the first movement, which at the very moment when it is expected as a triumphant peal melts into the theme.)

- 9.21: Contralto solos—Mrs. McKenzie Muirson, (a) "I Know a Lovely Garden" (D'Hardelot); (b) "Soul of Mine" (Barns).
 9.27: Tenor solo—Mr. Bradleigh Crowhurst, "A Farewell" (Liddle).
 9.31: Close down.

4YA, DUNEDIN (463 METRES)—SUNDAY, APRIL 21.

- 5.30 p.m.: Children's Sunday Service conducted by Big Brother Bill.
 6.30: Relay of service from St. Paul's Cathedral (Preacher, Canon Nevill; Organist, Mr. E. Heywood, F.R.C.O.).
 8.5: Relay from St. Kilda Band Rotunda of concert by the St. Kilda Band under the conductorship of Mr. James Dixon.
 Close down.

Children's Sessions

AT 1YA.

TUESDAY, APRIL 16.—This evening Uncle George will be assisted by Miss Taylor's Orchestra, who will keep us entertained with cheery airs from 6 to 7.

WEDNESDAY.—More stories and ditties from Uncle Tom and cousins playing the piano, and singing.

THURSDAY.—Peter Pan in charge, cousins present joining in the fun—catches, tongue twisters and conundrums.

FRIDAY.—A happy hour with Nod and Aunt Jean, who will have stories, songs and jokes, Cousin Moya will have her fiddle, and give some items.

SATURDAY.—Here is Cinderella with various good things in the glass slipper for the Radio family. There will be birthday greetings, and Postie kept busy.

SUNDAY.—Children's Song Service conducted by Uncle Leo, assisted by cousins from the Beresford Street Sunday School.

AT 2YA.

MONDAY, APRIL 15.—Recitations from some clever little pupils of Miss Halliday. Songs from cousin Marjorie, and Cousin Cedric will read a story. Uncle Jeff will ask puzzles and the good-night song will be sung.

TUESDAY.—Uncle Jim to-night. Cousins Ella and Gladys will entertain with piano solos and recitations. Big Cousin Teddie will be continuing his very interesting short lectures. Last, but not least, there will be Cousin Zac with his steel guitar.

THURSDAY.—A musical treat this evening. The programme will be given by pupils of Mrs. E. Mackay. Uncle George's night.

FRIDAY.—Uncle Stewart is taking all for another of his delightful train trips. Cousin Madge will play mandolin solos and Cousin Marjorie will sing. The "Story Book Lady" and Big Brother Jack will be present.

SATURDAY.—Uncle Toby to-night. Perhaps he will play his mouth organ. Cousin Joan will recite and Cousin Gwenda has some new songs to sing. Cousin Betty's stories are always very much enjoyed.

SUNDAY.—The Children's Song Service will be conducted by Uncle George, assisted by the Kilbirnie Church of Christ, under Mr. A. Thomas.

AT 3YA.

MONDAY, APRIL 15.—"Oh, to be in England now that April's here"—"To go in among the hedgerows and woods and gather the wild flowers." So come along with Scatterjoy and we will all visit the woods of England, to-night.

WEDNESDAY.—To-night Mother Hubbard will sing you songs, and the Grammar School boys will entertain you with part-songs and music.

THURSDAY.—Uncle John, with his chatty stories and fun, some yodeling songs and whistling solos.

FRIDAY.—Oh, Mr. Storyman, what is in your bag to-night? Stories from far and near. Choruses and songs from the little band of choristers from Riccarton.

SATURDAY.—Aunt Pat in charge, and making merry this bedtime hour with some little cousins from Tai Tapu. Don't you remember what a lovely time we had when they came before? So listen in, everyone.

SUNDAY.—The children's song service, conducted by the Phillips-town Sunday School.

AT 4YA.

TUESDAY, APRIL 16.—Miss Noeline Parker teaches children to sing dainty little songs, and recite perfectly stunning little recitations. Listen to them to-night and see. Big Brother Bill will be there with some stories, and the radio postie will go his rounds as usual.

FRIDAY, APRIL 19.—Big Brother Bill doesn't know how old Mr. Palmer is, and it is very dangerous to guess people's age. Also, he is headmaster of a very big school, which doesn't make it easier, does it? But his heart is as young as a happy boy's; anybody who saw him at our picnic could tell that much. And he conducts the best school choir in Dunedin. Listen to them, and him, to-night.

A Precaution

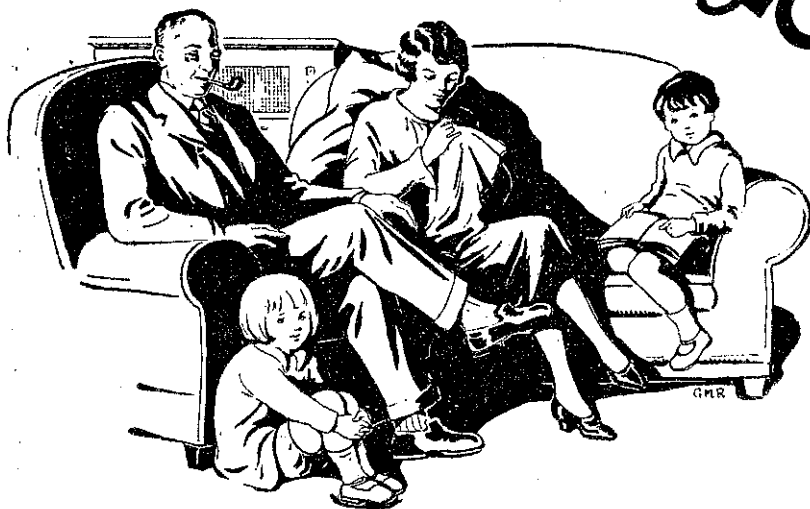
THE pole supports or guy wires attached to the aerial have to be watched, and where a number of steel wires are employed, they must be broken at top and bottom with insulators. Some say, "Why the necessity to insulate at both top and bottom?" Well, with an iron or steel pole any induced currents will flow upward through the wire and down the central pole if only insulators are used at the

bottom of each guy wire. More attention is paid to this stay wire insulation on a transmitting aerial than on one employed for reception only. It should always be remembered when erecting the aerial installation to sink a foot, which may consist of several bricks or a piece of totara wood on which the aerial pole stands. Otherwise after one or two windy nights the guy wires will be found to be getting loose due to the pole working further into the ground. Once a guy wire becomes loose, the pole is in great danger of falling during a storm.

YOU CAN'T BUY A BETTER VALVE THAN

Mullard
THE MASTER VALVE

EXPORTER £50 RADIO COMPETITION



'The N.Z. Dairy Produce Exporter,' a monthly paper, with a circulation of 60,000, has launched this novel competition to stimulate rural interest in Radio. Entry from readers of the "Radio Record" is permitted.

COMPETITION OF SKILL.

Who can write, by skill and ingenuity, the longest sentence or series of sentences having some general reference to radio and rural interests, using the most words beginning with the letter R? (Use of the following four supplementary words only is permitted: "a," "and," "the" and "but.") The words used must be good dictionary words, and the sentences must make sense from the point of view of being readable as English, even though the situation conveyed might be nonsensical as an actual happening.

A word already used may be used again (without restriction) to achieve sense, but no such repetition of any word may be counted in the total claimed. All repeated words must be circled (i.e., draw a ring round them) to facilitate checking, and show they are duplicates.

Here are Examples of the Possibilities of the Competition.

Robert the rabbit revolted. Rough red rocks ranged round but Radio rewarded the rural retreat.

Or:

Right round the rutted road rushed Rupert Reynolds. Robert Robbins rapped the rafter rapidly, remarking: "Radio and rural repose ring responsive." Rupert retreated rumbling resonantly, "Rap, radio, rats and refuse!"

HANDSOME PRIZES FOR SKILL

Closing Date, May 17

(Entrance Fee of 1/- postal note)

1. An order for £25 to be spent in the purchase of a Radio Set or apparatus from "Exporter" radio advertisers or their agents.
2. An order for £10, on the same conditions.
3. Ten prizes valued at £1 each—10/- in cash and 10/- subscription (one year prepaid) to "Radio Record."
4. Ten annual subscriptions of 10/- each to "Radio Record."
[Note.—If prize-winners are already subscribers to "Radio Record," money will be paid out in lieu of subscription.]
5. If entries permit, extra prizes will be awarded.

CONDITIONS.

(Closing date, May 17).

1. Write plainly in ink one side of paper only.
2. Put name and address on top of entry, together with number of separate words beginning with "R" claimed.
3. Post, with entry fee of 1/- postal note, to "Radio," P.O. Box 1001, Wellington.
4. Entries close May 17. Results published, if possible, in May issue of "Dairy Exporter," and in "Radio Record."
5. First and second prize-winners must select their prizes from radio goods advertised in the "Exporter," or from radio firms or their agents advertising therein.
6. The judge of the competition is the Managing-Editor of the "Exporter," and his decision is final.

Notes and Comments

By
"SWITCH"

MR. J. H. OWEN, ex-president of the Amateur Radio Society of Wellington, is back again after a wonderful tour through Canada, Europe and England. He regards the broadcasting in Great Britain as the finest in the world; both in the quality of transmission and the nature of the programmes. "But," he said, "it must be remembered the British Broadcasting Corporation has a revenue of over a million pounds a year."

MR. OWEN states that a wonderful little church service is broadcast by 2LO, London, at 10 o'clock every weekday morning, but from which church it is relayed is kept a close secret. He says that in thousands of homes the service is looked forward to as part of the daily routine.

MR. OWEN was present at the studios of 2LO, London, and watched a studio concert being broadcast. He says the artists have become regular broadcast experts. They advance and retreat from the microphone when singing to prevent overloading of the microphone, without any signal from

the studio director. This renders monitoring almost unnecessary. Mr. Owen states it is a revelation to watch these performers.

MR. OWEN has brought back to Wellington a four-valve high-grade portable set, which he purchased in England. It is fitted with low-flament consumption valves and one screened grid. The full B battery potential is 120 volts. There is a neat 18-inch "loop" aerial attached to the set. On the return voyage from England, Mr. Owen, travelling on the new motor-liner Rangitiki, picked up broadcast station WLW, Cincinnati, Ohio, United States, at a distance of 1900 miles, reception being of loudspeaker volume.

MR. OWEN will give an address at the annual meeting of the Wellington Radio Society, dealing with his experiences and observations of broadcasting abroad. He may be induced to bring his portable receiving set with him to give the members a demonstration. This will be Mr. Owen's second address of the kind, having entertained the members of the society on his return from a previous trip to England.

THERE was one circumstance in particular which impressed Mr. Owen on his return to Wellington, and that was the admirable quality of the transmission by 2YA Wellington. He listened-in at a friend's residence, where a good set was operated. He declared that the tone of 2YA was well-nigh perfect.

MR. OWEN related that long-distance listeners in England enjoy a veritable feast of broadcasting from dozens of stations on the Continent every night. A seven-valve set, such as he had heard on his return to Wellington, if it were in England it would bring in dozens of Continental stations at good loudspeaker volume. The programmes from the Continental stations included grand opera from the theatres.

THE steady progress of the new A.C. type of set was noticed by Mr. Owen when he was in England. Owing, however, to the large number of stations well scattered over Great Britain, he found that the ordinary battery type three-valve set was the most popular, as three valves were quite sufficient to bring in the finest programmes that could be desired. There was now a marked demand at Home for purity of tone in reception.

TALKING about the Continental broadcast stations heard in England, Mr. Owen states that the slightest movement of the tuning dials brings in another station. So thick are they that despite the Geneva Conference to prevent heterodyning there are still some Continental stations whose wavelengths are so close to one another as to cause a heterodyne whistle. This is seemingly due to some stations being slightly off their allotted wavelengths. The variety of foreign languages heard, too, is simply bewildering.

A STRIKING esprit de corps is apparent among all members of the staff of the B.B.C. was noticed. "Everyone," he says, "seems to take a special personal pride in that wonderful broadcasting service, from the message boys up to the managing director."

TUESDAY evening, April 23, will be of special interest to lovers of Shakespeare, for on that evening the day very appropriately being St. George's Day and the birthday of Shakespeare. Mr. Byron Brown, president of the Amateur Radio Society of Wellington, will give an address on Shakespeare's plays in between the items of a Shakespearean programme. Mr. Byron Brown has been a Shakespearean student since his boyhood, and is recognised as one of New Zealand's most prominent authorities on the greatest of all playwrights.

WELLINGTON listeners obtain excellent reception of 4YA, Dunedin, regularly on Wednesday evenings, when 2YA, Wellington, is off the air on the usual silent night. "Switch" notices the good tone of 4YA, which appears to have become thoroughly rejuvenated.

NOW the autumn is with us the Australian stations have been coming in excellently. Even 5CL, Adelaide, which has been under a cloud for many months, is asserting itself after 11 o'clock nightly. 2BL, Sydney, is just about the loudest Australian heard in Wellington, with 2FC, Sydney, a good second, 4QG, Brisbane, next, 3LO, Melbourne, and 3AR, Melbourne, being fourth and fifth, respectively. The best low-power station in Australia heard by "Switch" is 2UE, Radio House, Sydney, which has lately received ahead of 2GB, Sydney.

MENTION was made in these notes recently of a whistling competition held by a Sydney broadcast station, and heard in Wellington. A prize of £2 2s. was offered for the listener who not only placed the five competitors in the order of merit allotted by the judges, but also whose envelope was opened first. The latter condition was desirable, as no fewer than 82 listeners placed the competitors in the correct order. The number of listeners who attempted to win the £2 2s. was only 2023—a surprisingly small number.

THE famous 2BL, Sydney, cannot escape the inevitable critic, but, of course, no one expects to please everyone. Here is what a Sydney listener writes in the Sydney "Wireless Weekly":—"No wonder people go 'crook' about the music from 2BL. It is very bad. There is too much of this classical stuff nowadays. We people look forward to a bit of lively music through the day—not all this classical stuff. We are always glad when station 2UE comes on at night and in the day. It is a pleasure to listen into the station. They have a good selection of records, which I think 2BL could get if they liked. Even stations 2GB and 2KY have a better selection of records. When 2UE comes on you can put away your phonograph for one night. Hoping

2BL will wake up to itself and put on some popular music."

A BEGINNER recently asked "Switch" for a list of the chief Australian stations with their wavelengths and power. The writer trusts the following will suit his request:—

Stations.		Metres.	Power.
Melbourne	3LO	371	5KW
	3AR	484	5KW
Sydney	2FC	442	5KW
	2BL	353	5KW
Adelaide	5CL	409	5KW
Perth	6WF	1250	5KW
Brisbane	4QG	395	5KW
Hobart	7ZL	516	3KW

The power given in each instance is according to the Australian system of rating, which, as compared with the New Zealand system, is in actual practice over-estimates the power, in some cases by as much as threefold. The New Zealand system gives the actual aerial power of each station. A full list will be published in the new "Guide."

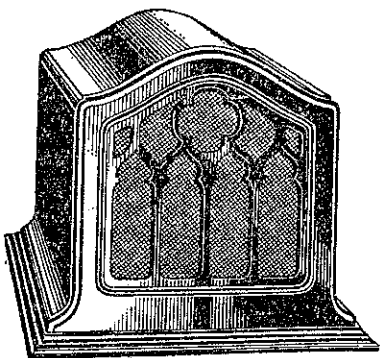
WRITING upon radio plays an Australian writer says:—"I have heard plays in which several people, with the same type and pitch of voice, were taking parts. The result has been nothing but confusion. Indeed, I think there is no way in which producers err so much as in indiscriminate choice of voices. I have also noticed that most attempts at character-sketching over the air have resulted in a meaningless flow of jargon-like diction through my loudspeaker, of which I could distinguish, perhaps, one word in each sentence. Moreover, I have found that uncouth bellowing into the microphone, although it may seem to suggest a turbulent nature, does nothing but reproduce the effects of a thunderstorm on my loudspeaker. I have listened-in to hours of this."

A FRIEND asked the other day: "Where are all the wonderful circuits the American and English radio journals brought out each month in years gone by?" Yes, oh, where are they? With the arrival of the A.C. set it seems that they have all been concentrated to the super-heterodyne, the neutrodyne and the tuned radio-frequency circuits.

AN epidemic, which takes the form of the question, "What station was it I heard, etc.", appears to have broken out among listeners. These folk cannot as a rule give even the approximate wavelength, and as for the "call," they are not infrequently unable to state even one letter. It could be only guesswork to answer these questions.

"MUSICAL" (Kilbirnie) has sent in to the writer a plea for the inclusion of some choice grand opera records in the late-in-the-evening weekday gramophone programmes. He says: "If the dance records can be obtained, why cannot some grand opera items be included? People do not want to dance continuously. They prefer to rest between times, and I am sure some good operatic numbers would be generally acceptable occasionally between dances."

"Fada-4" SPEAKER



£9/10/- Retail

PLEASEINGLY designed cone speaker contained in an ornamental metal case finished in handsome Dark Brown. Complete range of reproduction, new design and magnificent tone quality. Supplied with usual 20ft. of cord. Dimensions: Width, 13½in., height 11½in., depth 9½in.

The NATIONAL ELECTRICAL & ENGINEERING CO., LTD.

Auckland, Wellington, Christchurch, Dunedin, Hamilton, Wanganui, Timaru.

THE D.X. CLUB

Views and News.

The Week's Reception.

MR. S. R. ELLIS (Okato) sends his report.

Monday, 25th: At 5.30 p.m. tuned in MFOX on 239 metres on their studio frolic. Held them till 6 p.m., and they were on a very amusing talk called the Egyptian Tombats. 6.15: KXO were just audible on 'phones on 249 metres.

KNX, 285 metres, were coming through at half-speaker strength at 6.30 p.m. on a musical number with violin, piano and 'cello, with prolonged fading. 7 p.m.: I heard a station on 290 metres, but could not get his call, but could hear San Jose, California (probably KQW). 7.30: WENR, 340 metres, were just audible on speaker. Then static was heavy at this period, so closed down.

Tuesday, 26th: The usual stations were heard—KFOX, KNX, WENR, KGO; static was just a nightmare.

Wednesday, 29th: I heard another new station—KOL, 326 metres—at 7.5 p.m.; held them till 7.15 p.m. till 1YA opened up, and this drowned out KOL completely. This station was describing a boxing or wrestling contest. The noise of the people was very loud. Did any D.X. enthusiasts hear this one?

Thursday, 28th: The following stations were heard at good strength: KFOX, KEX, KNX, KFKB, KGO, and a station on 270 metres—sounded like an Australian—with a call 2AU (not quite sure of call time), 9.15 p.m., on musical numbers. I hope some listener can log in this station more successfully than I did.

Friday, 29th: 2ZM was testing at 4.50 p.m. at good speaker strength; very clear and steady. 2FC was at full speaker strength at 5.15 p.m., relaying organ recital, Pitt Street Congregational Church. 4QG carrier just audible at 5.30; also KGO just audible on 'phone strength 5.35 p.m. and 2BL at weak 'phone strength 5.40 p.m. I heard a station at 6 p.m. on 260 metres heterodyning with some other station on a dance programme, probably KFSG. KGO, at 7 p.m. came in at full speaker strength, steady but spoilt by static.

A Good Log.

THIS may interest D.X. listeners. This is my log to date on four valves:—New Zealand: 1YA, 2YA, 3YA, 4YA, 3ZC, 1ZQ, 4ZM, 2ZM, 1ZB, 4ZL, 2ZE, 2AQ, 2XS. Australia: 2BL, 3LO, 2FC, 2GB, 3AR, 2UB, 5CL, 2KY, 7ZL, 4QG, 3UZ, 5DN, 2UW, 5KA, 3DB, 3BY, 3EF, 3RI. America: KFON, KGO, 9XF, KPO, KFI, KZRM, KNX, KEJK, KFKB, KIM, WENR, KWKH, FOX, OIN, KRDL, KVOO, WAPI, KSL, KFWB. Japan: JOHK, JOAK, JOIK, JOBK; and the C. A. Larsen, totalling 55 stations. WENR, Chicago comes in at good volume at 6.30 any night.—A. E. IRELAND (Napier).

Can Anyone Enlighten?

COULD anyone enlighten me as to the correct call sign of an American station broadcasting from Paramount Studios, Hollywood, California? I have had this station for several nights running, but have not been able to make sure of his call. It sounded like KVNK. Reception at times reached loudspeaker strength, but persistent fading, coupled with static, prevented me hearing the full announcements. The set used was a three-valve regenerative.—"LISTENER" (Waverley).

[There is no reference to KVNK in the latest publications. Try to ascertain his wavelength.]

Broadcasting Norwegian.

I HAVE NOTICED inquiries in "D.X." notes about stations broadcasting in Norwegian. About a month ago I heard a station talking just above 2YA, and after they stopped I heard a station on the same wave as 4QG, calling what sounded like "Hullo, 'Prizes' or 'Prizess'!" then a man spoke for a while in a foreign language (not Japanese). A woman then talked for a few minutes, and when she stopped I went back to "Prizes" and a man was calling, "Hullo, C. A. Larsen," several times; then he spoke in English, wishing the C. A. Larsen good luck and a pleasant trip home. He played a short tune on a flute, then spoke, and when he stopped I heard the C. A. Larsen start up on 385 metres in Norwegian. He then sent Morse, so I tuned off.—"G.A." (Hastings).

Southern Cross Fliers Not for Britain

Widespread Interest

Advertising Over the Air

VERY widespread and general interest is naturally being taken by all radio listeners in news concerning the fate of the Southern Cross fliers. All New Zealand stations, each evening that they are on the air, give out such news as is available, and in addition many listeners remain in direct touch with the Australian stations, who are naturally broadcasting every possible scrap of news, surmise or criticism concerning the position.

Mr. R. Leslie Jones, of Lyall Bay, Wellington, has made a special point of keeping touch with Sydney stations up to a late hour each evening, in order to secure the latest advices. As a result, he has heard much of interest that has not been published in the daily papers. For instance, a special article quoted from the "Sydney Sun" on Friday evening, entered into strong criticism of the aviation authorities in Australia in that there was available only one amphibian machine capable of undertaking search in such a case of emergency. Other amateurs working morse have also been in touch with amateurs in Australia on the same point.

In discussing the position with one experienced amateur, the view was expressed by him that the absence of news from the fliers seemed to indicate disaster. Such an experienced radio man as Mr. T. H. McWilliams would speedily have been able, in the event of the plane landing without undue damage, to rig up in a very short space of time a transmitter based upon nothing more elaborate than a 45-volt B battery and an ordinary receiving valve. The aerial would not need to be more than 10 or 20 feet in height, and with such an impromptu equip-

A FORMER New Zealand journalist, Mr. F. W. Doidge—once engaged on the Auckland "Star" and now a director of Lord Beaverbrook's group of London newspapers—had something to say on the question of advertising as developed by American radio stations in addressing the International Advertising Convention recently held in Detroit, U.S.A.

Mr. Doidge did not hesitate to call radio advertising over the air pernicious. "I gather," he said, "that there are 900 stations in this country broadcasting to 10,000,000 receivers, and the national advertiser spends almost as much on this form of publicity as he does on newspaper advertising." The effect of this on the listener did not appeal to this newspaper man. He pointed out that, while advertising in the newspaper had its place, it could be ignored by the reader solely concerned with securing the news. The position with advertising on the air was not comparable; the advertising was intruded upon the listener with unpleasant results. In the light of your experience, as it has developed, I am certain we never shall have it."

ment it would be possible to get communication up to approximately 1000 miles. Assuming that the plane landed, the batteries would be available, and the foregoing course could have been followed. The absence of any such communication leads to the suspicion that the machine and men in landing may have been heavily damaged.

Every good wish will go out to the daring men who successfully conquered the Pacific and Tasman, that they will speedily be found.

DEPARTMENT OF TOURIST AND HEALTH RESORTS

When Travelling in New Zealand book your tour with

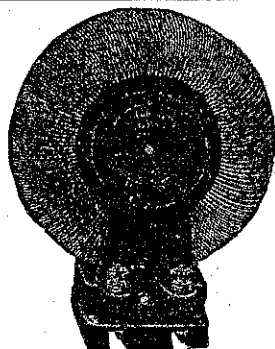
The Nearest Government Tourist Bureau

BOOKING BUREAUX AT:—

AUCKLAND Government Life Insurance Bldg., Queen St.
TE AROHA Whitaker Street
ROTORUA Fenton Street
WANGANUI Rutland Buildings (Opp. G.P.O.)
WELLINGTON Dominion Building, Wakefield Street
NELSON Hardy Street
CHRISTCHURCH 82 Cathedral Square
GREYMOUTH Mackay Street
DUNEDIN Rattray Street
INVERCARGILL Esk Street
NAPIER Hastings Street
WESTPORT Next Bank of N.Z.

AUSTRALIAN OFFICES:—

SYDNEY London Bank Chambers, 20 Martin Place
MELBOURNE Dominion Chambers, 59 William Street
ADELAIDE Director South Australia Intelligence Bureau
BRISBANE King House, Queen Street
PERTH 285 Queen's Buildings, Murray Street



DUBILIER TOROIDS

For D.X. Amateurs

INTERCHANGEABLE

Price 17/- each

22.5 to 45 metres
44 to 90 metres
65 to 175 metres

Price 13/6 each

140 to 275 metres
230 to 600 metres
Ditto tapped 14/0

Complete with base.

A. E. STRANGE

404 WORCESTER ST., CHRISTCHURCH

The "Combination" Receiver

A Small Set with Wide Application

By "PENIODE"



THE small crystal receiver and a single stage amplifier will always be popular among those desirous of listening to the local station only, but after a while a little discontent is sure to arise when it is desired to reach a little further on the local's silent day, even though it be only on the headphones. Then, again, there may be a time when all but one member of the family do not wish to listen to the loudspeaker, and the crystal and amplifier has to be partly unassembled in order to use the 'phones only. The little set to be described has several uses and can be changed from one to the other merely by changing the 'phone or speaker plug or throwing over a miniature switch.

Using but a crystal and valve the following combinations are available:—

1. Crystal receiver alone.
2. Crystal set and amplifier.
3. Single valve detector employing regeneration.

To build, it is quite inexpensive; in fact, only a few shillings more than if designed for crystal and amplifier alone, and the construction calls for no great skill or previous experience.

When completed, the front panel contains a tuning dial and reaction or volume control. Mounted in the centre is the crystal detector and just below is a double pole double throw switch. At each corner at the bottom is a jack and these are arranged so that to use the valve in either capacity one has merely to insert the plug to switch on the filament. When inserted in the crystal set plug the filaments are not connected and the batteries not being run down. Controls have been reduced to a minimum, and if built into a cabinet can be totally operated from the front.

Considerable latitude can be given in the choice of components and the only parts that require care when buying are the two jacks. Small diagrams are given and the constructor will be able to tell by the appearance whether he is getting the correct article.

The Coil Construction.

DETAILS for the construction of the coil are given, which has to be made before any assembly can be attempted. If of cardboard, the coil former will have to be thoroughly dried and given one or two coats of shellac varnish or celluloid solution in amyl acetate and acetone. This drives out all the moisture which is often present in heavy proportions in cardboard. The secondary and reaction coil are wound as one coil, and a tapping taken for the connection to the filament of the valve. Starting half an inch from one end, wind on 55 turns and make a loop in the wire. Continue to wind on a further 25 turns in the same direction, and about 1-8in. from the first coil before the loop. Finish off the ends, either by a soldering lug or passing the wire in and out of two small holes drilled conveniently. The aerial coil has to be wound over the lower end of the secondary coil, and consists of twenty turns separated from the inner coil by several layers of empire cloth or paper. Reference to the diagram will make the position of this coil quite clear.

Arrange the leads to this coil so that the three from the reaction and grid coil run out from one side, and the aerial and earth leads run out from the opposite side. This facilitates wiring.

To avoid any absorption of moisture the whole can be given a thin coat of celluloid solution and allowed to dry in a warm place.

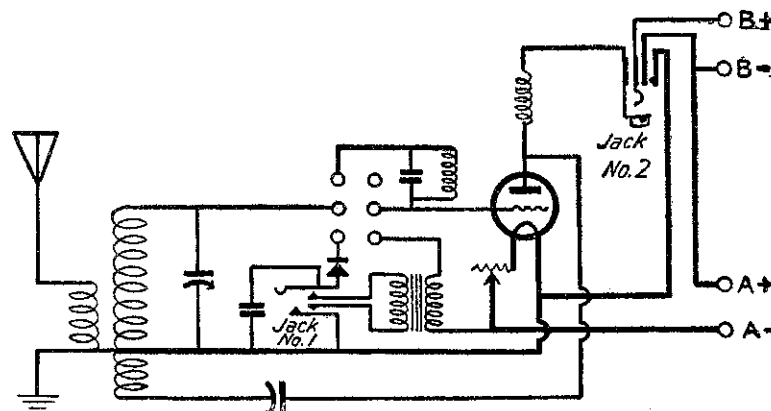
The easiest way in which to mount this component is by using two strips of 1-8in. ebonite or fibre 4 1/2in. long, and drilling holes 1/4in. from each end. One side of the coil can now be clamped when two screws are passed through these holes and screwed to the baseboard, a block being used to keep the coil away from the wooden base.

Unless the builder wishes to make his own R.F. choke, the coil is the only component that requires actual construction. As the choke is used only to throw back sufficient radio frequency energy to get reaction it need not be very efficient and may consist of two or three slots wound full of No. 36 s.c.c. wire. In fact, the writer used an ord-

inary cotton reel filled with this gauge wire, with a screw passing through the centre hole to mount to the baseboard.

switch, but the aim was to cut down all unnecessary controls. In front of this rheostat lies the inter-valve transformer. One should be chosen having a high ratio, as distortion is unlikely to be noticeable in a single stage of amplification. The R.F. choke and valve socket complete the fixed components, as the grid leak and condenser can be made self-supporting by using bus wire.

The rheostat has been fixed to the baseboard, and a suitable one will have to be chosen when buying the parts. It could, of course, have been fixed to the front panel, and used as a



inary cotton reel filled with this gauge wire, with a screw passing through the centre hole to mount to the baseboard.

The Assembling.

ASSUMING that all the individual components are on hand, the next procedure is to mount them in their respective places on the baseboard and front panel. It is always best to start with the panel first as the amount of available room at the back can better be judged with the variable condensers, etc., in position. Screw the front panel to the front edge of the baseboard, and see if, when the condensers are mounted with the centre spindle 3in. from the top of the panel, the fixed or moving plates foul the baseboard. If so, then the variable condensers will have to be mounted a little above the centre of the panel.

A suggested place for these two components so that the whole will give a symmetric appearance when finished can be obtained by drilling the spindle hole 3in. from the top and 3in. from each end. This gives sufficient room between the dials for the crystal and switch. At each of the lower corners of the panel are mounted the two jacks, while between the dials are below, the six connections to the D.P.D.T. switch and—above, the crystal detector.

The diagram given represents a plan of the receiver as it would appear if

switch, but the aim was to cut down all unnecessary controls. In front of this rheostat lies the inter-valve transformer. One should be chosen having a high ratio, as distortion is unlikely to be noticeable in a single stage of amplification. The R.F. choke and valve socket complete the fixed components, as the grid leak and condenser can be made self-supporting by using bus wire.

The Wiring Connections.

FOR the wiring, No. 18 or 20 tinned copper wire, with lengths of insulating sleeving, is recommended. It is quicker and easier to use, and chances of short circuits are less possible.

In wiring any set it is a good plan to complete the filament and battery systems first and then go on to the wiring of the coils, etc.

The point-to-point method of describing has helped many to better understand little points not made clear by the diagrams.

Join left-hand terminal, on the strip of four, marked A— to one end of rheostat and to C— on transformer. (This C— terminal may be marked F—, C—, or G.B.) Join the free end of the rheostat to one of the filament terminals on the valve socket. Join the two middle terminals on the strip together, and carry the wire to one of

The "Combination" Set.

1 Ormond L.L. Condenser	
.0005, each	10 0
1 Ormond L.L. Condenser	
.0003, each	10 0
1 Dubilier Fixed Condenser,	
.001, each	2 6
1 Dubilier Fixed Condenser,	
.00025, each	2 6
1 Ormond Crystal Detector,	
each	2 6
(Or 1 Wavelength Permanent Detector)	1 6

1 Dubilier H.F. Choke	2 6
1 Parkin UX Socket	2 6
1 Transformer, prices from,	
each	10 9
1 Unity 25 ohm Rheostat with	
Switch	4 0
1 Trolite Panel, 12 in. long	5 0

Ebonite Tube, Terminal and Wire, also in stock.

THOS. BALLINGER & CO., LTD.
58-62 VICTORIA STREET :: WELLINGTON.
"WHERE THE QUALITY GOOD ARE SOLD."

the top lugs of the jack No. 2. Join the lug on the same jack with which the previous makes contact when the plug is inserted to the following points. Remaining terminal on valve holder; the loop made in the tuning coil; the moving vanes of the first, or left-hand, variable condenser; one of the outer

run, as shown, to various points—namely, (1) terminal marked G on transformer, (2) free end of crystal detector, (3) free end of grid condenser and leak.

The fixed plates of reaction condenser are formed to plate terminal of the valve and also to the free end

tain amount of C bias is available across the rheostat resistance.

Components Necessary

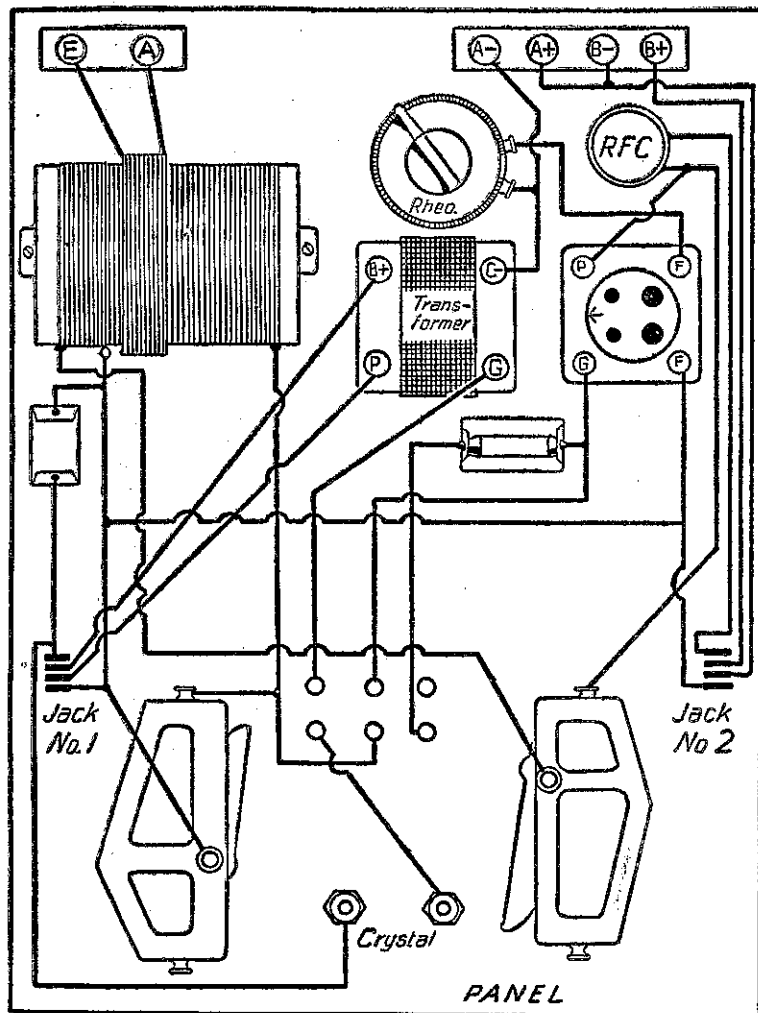
- 1 variable condenser .0005 mfd.
- 1 variable condenser .0003 mfd.
- 1 fixed condenser .001.
- 1 fixed condenser .00025, with grid leak and clip.
- 1 crystal detector.
- 1 double pole double throw switch.
- 1 valve socket.
- 1 R.F. choke.
- 2 jacks as specified.
- 1 intervalve transformer.
- 1 rheostat 20-30 ohms.
- Panel 12in. x 16in. x 3-16in.
- Ebonite or cardboard tubing. 2½in. diameter, 3½in. long.
- ½lb. 24 S.C.C. wire.
- 1 doz. terminals.
- Connecting wire, baseboard, etc.

When operating this set care must be taken not to allow it to oscillate, as it is capable of radiating and dis-

turbing neighbours' reception for miles around unless carefully handled. Finally, there is no necessity to disconnect the batteries or cutting off the rheostat when closing down. Merely take out the speaker or 'phone plug from jack No. 2 as this automatically cuts off the filament supply.

Tone of Speakers

VERY often the tone of a small cone speaker can be vastly improved by using a baffle board. Obtain a square of wallboard and cut a hole in the centre slightly smaller than the diameter of the cone. Now, with three small clamps fastened by screws or bolts, the rim of the speaker can be fastened into place. It is not generally known that the moving coil speaker is no better than ones costing one-tenth the price if used without a baffle. It will then be realised that even the cheapest speaker needs some sort of a baffle if any of the lower register are to be reproduced.



lugs of jack No. 1, and also to one side of a .001 m.f.d. fixed condenser. Join the remaining two lugs on the jack No. 2, one to one end of the R.F. choke, and the other to right-hand terminal on the strip of four, marked B+.

Join the remaining outer lug on jack No. 1 to the free end of the .001 fixed condenser, and also to one end of the

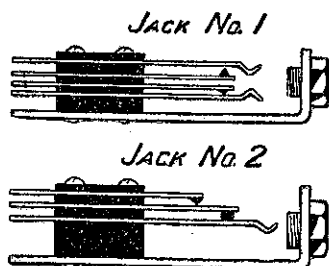
of R.F. choke and the moving vanes of this condenser to the free end of the reaction coil.

The aerial and earth wires, joined to their respective terminals, complete the wiring of the set.

Connecting Up.

THE most interesting part lies ahead, and this comes after the batteries have been connected up and all is ready to try out.

Commence first of all with the switch arm thrown over to the left and plug the 'phones into jack No. 1. Adjust the crystal and tune in the local station with the reaction condenser at zero. Now plug the 'phones or speaker into the right-hand jack. If everything is in order the station will roar in at speaker strength. With the 'phones still in jack No. 2 throw the switch to the right and we have a single-valve detector, the crystal and transformer being thrown out of commission. Gradually increase the reaction condenser and with the receiver on the verge of oscillation search for distant stations on the left-hand dial. Adjust the rheostat at the back until the valve operates successfully in the capacities of both detector and amplifier with the minimum of A voltage. This is done with a purpose, as no C battery is provided and a cer-



crystal detector. Join the two centre lugs of jack No. 1 to the P and B+ terminals of the transformer.

Connect the fixed plates of the left-hand variable condenser to the free end of grid coil and to one of the centre lever arms on the D.P.D.T. switch. The opposite switch arm goes to one end of the grid leak and condenser and also to the grid terminal of the valve. The various other switch terminals

RADIO DIRECTORY

What to Buy and Where

CITIES

- | | |
|--|---|
| ALTONA & HAMMARLUND-ROBERTS SETS. | Johns, Ltd.
Chancery Street, Auckland. |
| ATWATER-KENT RADIO | Frank Wiseman, Ltd.
170-172 Queen Street, Auckland. |
| BREMER-TULLY RADIO | Superadio, Ltd.,
147 Queen Street, Auckland. |
| BURGESS RADIO BATTERIES, | All Radio Dealers. |
| CROSLEY RADIO | Abel, Smeeton, Ltd.,
27-29 Customs St. E., Auckland. |
| CROSLEY SETS | Lewis Eady, Ltd.,
Queen Street, Auckland. |
| FERRANTI RADIO COMPONENTS | A. D. Riley and Co., Ltd. Anzac Ave., Auckland, and all leading dealers. |
| GREBE RADIO | Howie's,
Dilworth Building, Custom st., Auckland. |
| MULLARD VALVES | All Radio Dealers. |
| PREST-O-LITE. Car and Radio Battery Service | L. J. Purdie & Co., Ltd.
97 Dixon Street, Wellington. |
| RADIOLA RECEIVERS and Expert Radiola Service. | Farmers' Trading Co., Ltd.,
Hobson Street, Auckland. |
| T.C.C. CONDENSERS | A. D. Riley and Co., Ltd. Anzac Ave., Auckland, and all leading dealers. |

COUNTRY TOWNS

- | | |
|-------------------------------------|--|
| CROSLEY RADIO | J. C. Davidson,
Main Street, Pahiataua. |
| CROSLEY SETS | F. H. Jellyman, Ltd.,
Devon Street, New Plymouth. |
| CROSLEY RADIO | D. A. Morrison & Co.,
Victoria Avenue, Wanganui. |
| PHILIPS VALVES AND APPARATUS | All Good Radio Dealers. |

The Finer Details of Radio

Matching Impedances for Dynamic Cones



RECENTLY the writer has been experimenting with moving coil speakers, and his practical experience, gained after many sad failures, may prove of interest to others.

In the case of dynamic cone speakers, impedance of the moving coil has to be matched to suit that of the valve. While in England fully 90 per cent. of speakers of this class are wound with high resistance windings suitable only for use with a 1-1 output transformer or a choke filter system, Americans adopt only the low resistance windings. Output transformers of various ratios are available from 25-1 to 4500 to 1, and it depends upon this ratio as to how many turns are required for the moving coil.

It has been stated that the moving coil and valve impedance must be matched. This is quite correct, whatever the method of output, but in the case of a step-down transformer the ratio of the transformer must be given consideration. A mistaken idea seems to exist in some quarters that the valve has to be matched to the transformer primary, and the moving coil to the secondary of the transformer. This is quite wrong. So long as the impedance of the transformer primary is well above that of the valve its value is not critical, and as far as

By "PENTODE"

efficiency is concerned, the higher the impedance the better. It is the load on the transformer that matters, and in this case it is the moving coil. Assuming that a reliable make of transformer is used, it is the ratio that counts. The number of turns on the

Several correspondents have written to the R.R. asking for a few articles of a more technical nature, now and then. Judging by the text of their letters, they are keen amateurs, and, having passed their ABC stage in radio, want to keep fully abreast with the times. In an attempt to interest this ever-increasing number of real enthusiasts, a small article of technical value and interest will be given regularly.

moving coil multiplied by the transformer ratio give the impedance of the load in the anode of the last valve.

In the case of a single valve in the last stage, the output transformer must

have an impedance of 5000 to 6000 ohms, and all commercial speaker manufacturers in both countries base their speaker design upon the characteristics of their more or less national valves. It will now follow that it is inadvisable to use English valves upon an American speaker or visa versa.

There are, however, ways out of the trouble, and the following list of turns will not only be of use to any who are designing moving coil speakers, but will help in the selection of a more suitable output valve for either an English or American speaker.

Data For Moving Coils.

Valve, or impedance.	Turns for H.R. coil.	Turns for 25-1 step-down transformer.
Ohms.		
2500	1000	50
2750	1300	55
3500	1650	65
5000	2100	105

These figures show that a moving coil of 105 turns in conjunction with a 25-1 transformer would not give anything like efficiency if used after a valve with an impedance of 2500 ohms. In actual fact a marked predominance of the low tones would occur with an absence of the many harmonics that are the timbre of most string instruments.

Valves in Parallel.

THIS data concerns only a single power valve. When two valves are worked in parallel the impedance

Working with Europe

Two-way Communication

THE "Radio Record's" technical correspondent writes:—"What must rank as a wonderful achievement in shortwave transmission occurred on Easter Monday evening. Mr. Roy Clarke, Apu Crescent, who operates under the call-sign of ZL2AW, Wellington, carried out seven separate and distinct transmissions between the hours of 4 p.m. and 5 p.m. (New Zealand time)."

"Working on about 100 watts, on a band of 20 metres, Mr. Clarke succeeded in working the following amateurs. The report for volume is given, after each station, that is, the volume at which Mr. Clarke received the respective stations, and in Mr. Clarke's case, the overseas amateurs reported having received 2AW for the most part at R7 and not below R6, which is, in itself, a splendid achievement."

EAR96 (Spain) R7.
F8HO (France) R6.
5BZ (Croydon, England) R5.
6AVL (Hawaii) R5.
9DLY (South Dakota, U.S.A.) R5.
3BD (Melbourne, Australia) R5.
1AX (Mr. Jack Orbell, Auck.) R7.

To carry out this feat in one solitary hour is good, solid working, and only a detector and one stage of audio was used.

tion of the valves used by the average constructor are of similar types and characteristics as prevail in Europe. Power valves having low impedances are sold, more so than for those for which available speakers are designed.

Perhaps it has already been realised that an ideal arrangement, for anyone desirous of getting the best from his outfit, is obtained by the use of a push-pull amplifier using two low impedance valves fed to the speaker through a centre tapped choke to the transformer usually incorporated in the speaker itself. No by-pass condensers are necessary, and if a choke is not available the primary windings of a push-pull output transformer will meet the case, leaving the secondary terminals free. The diagram given indicates the method.

FOR SALE.

8-VALVE Fada Receiver, in new condition, with Valves. Also good Radiola Speaker, P.B. Eliminator. Apply "VALVE."
Box 1032, Wellington.

PORTABLE GRAMOPHONES

(All Carry Records)

Piccolo - - £5
Caswell 12 - £5/10/-
Caswell Melody £6/15/-

ROYDS-HOWARD CO., CHCH.

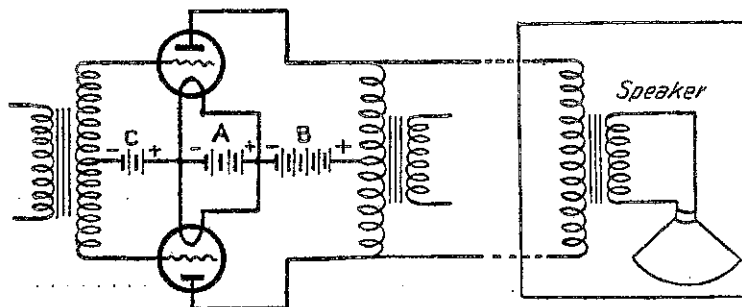
"YOUR ESTATE"

Free

A most interesting booklet—one that has been found of valuable guidance by hundreds of people—is published by the Public Trust Office with the title, "Your Estate."

Its forty-eight pages are packed with useful information about the Making of a Will, the Choice of a Trustee, and the many unique functions and services of the Public Trust Office.

If you haven't read it, get your copy to-day. Obtainable from any office or agent of the Public Trustee, or free by post from the Public Trustee, Wellington.



be of reliable make and liberal in both iron and wire.

D.C. current to the order of 20 to 25 milliamperes is flowing through the primary, thereby lowering its impedance, and lowering the efficiency as a whole, and if insufficient iron is used, saturation occurs, and insufficient wire lowers the impedance whatever the current flowing.

English and American Methods.

COMPARISONS were given of the English and American methods. One must not get into difficulties through working to specifications of the construction of an English moving coil speaker, and attempting to run it on the average American valve. Let me explain more fully. In England the standard valve upon which most of the speakers are designed to be used is the LS5A, with an impedance of 2750 ohms. The equivalent American valve is the UX 210, having an im-

pedance of 5000 to 6000 ohms, and all commercial speaker manufacturers in both countries base their speaker design upon the characteristics of their more or less national valves. It will now follow that it is inadvisable to use English valves upon an American speaker or visa versa.

There are, however, ways out of the trouble, and the following list of turns will not only be of use to any who are designing moving coil speakers, but will help in the selection of a more suitable output valve for either an English or American speaker.

These figures show that a moving coil of 105 turns in conjunction with a 25-1 transformer would not give anything like efficiency if used after a valve with an impedance of 2500 ohms. In actual fact a marked predominance of the low tones would occur with an absence of the many harmonics that are the timbre of most string instruments.

THIS data concerns only a single power valve. When two valves are worked in parallel the impedance

of the output of the two is a half of that of one valve. Similarly, when two valves are used in push-pull the output impedance is double that of either valve singly. This, then, adds more complications, especially if one operates a speaker designed for a single LS5A type valve from an amplifier employing two 210 type valves in push-pull. Surely something would need correction, and in this case a 4-1 step-down transformer would be indicated. An advantage is gained if a speaker, designed for a 210 valve can be worked from a push-pull amplifier using two low impedance valves, and this brings us to the best methods to adopt in a country whose radio gear comprises half English and half American manufacture.

Certainly most of the M.C. speakers in New Zealand are of American make, designed for an output valve of 210 characteristics, while a large propor-

The Crystal Corner

Full Wave Circuit

I HAVE constructed your "full-wave" crystal set described in the "Radio Record" of December 14, 1928, and I must say that I am more than pleased with the results. The circuit was adhered to with two exceptions, as follows:—In place of the two fixed detectors I employed two complete carborundum units with potentiometers and small dry cells. The earth and aerial terminals were placed on a strip at the back. Ebony was used for the front panel—an excellent material and very easy to drill out and shape.

Three miles from 2YA, using an 80ft. aerial and an earth consisting of three 1½ in. water pipes driven down about 3ft. 6in. into rock and clay, reception on the speaker is of sufficient volume to be comfortably heard in a large room, particularly during night transmission. Connected to a two-stage amplifier and a speaker attached to a good gramophone, the tone and volume are amazing, and the condensers have to be turned down (almost closed) for restful reception. In fact, the volume is so great that I frequently disconnect my earth wire altogether, open the condensers about ten degrees and turn my detectors up about one quarter of their travel. The volume is still good and of remarkable purity.

Some weeks ago I transported the set complete with amplifier to a place about twenty miles away from 2YA, connected up to a good aerial and earth, used a large cone speaker (which belongs to a five-valve set) and received the station at as great or greater volume than at the shorter distance. A very satisfying performance.

Housed in a polished blackwood cabinet, which I constructed for it, the set has all the appearance of a three-valve outfit and is a source of endless pleasure to all who hear it. The two detectors appear to be evenly matched, as volume is increased by both dials being turned to read the same. Variations in volume can also be obtained by turning the dials in opposition to one another, that is, opening one and closing the other condenser. The purity of tone remains the same until the variation is more than half the range, when a slight blurring is noticed. Again expressing my appreciation of an excellent circuit.—William J. McKeon (Wellington South).

Another Success.

IN the issue of the "Radio Record" of December 14, 1928, you gave particulars of construction of a two-crystal set. I have carefully followed the directions and the completed set gives quite 75 per cent. increase in volume.

In my set two catwhiskers are used in preference to semi-permanent or permanent detectors. My experience has been that the former gives best results for the distance we are from 2YA, viz., 15 miles. Two dry cells are coupled to a bar amplifier. The results over my old single crystal set, which also used the bar amplifier, is as stated above. A low range of hills intervenes between us and 2YA. Length of aerial 100ft., height 35ft. The earth wire is divided into four branches. This feature, also a suggestion from the "Radio Record," has improved reception considerably.—A. P. Godber (Silverstream).

The "Six Sixty" Products

Reviewed by "Observer"

IN England the "660" products have a wide renown, but to the present they have not been introduced in New Zealand. In endeavouring to secure a New Zealand agency, the Australian agents, Segal and Co., Limited, have submitted to us for test and report samples of their valves and speakers.

Of the valves, three types were forwarded, HF 4075, P410, and SP 425. These are high frequency, power and super-power valves. They have been tested under working conditions, and compared with the generally accepted standards, and found in every case to equal them in performance.

HF 4075 is a high frequency or detector working at 4 volts, and drawing .075 of an ampere. It was found to compare favourably with valves customarily used. There was no tendency for microphonic reaction. As a single-stage amplifier to handle the output as such as a crystal set, it proved highly satisfactory. Normally the valve is of DC operation, but in one stage worked perfectly on AC.

P410 is a power valve of the 112A type. Four volts are required on the filament, 150 on the plate, and 1 ampere for the filament consumption. The valve will handle considerable output without distortion and impart a sweet tone without reducing volume.

S.P.425 is a power valve requiring 4 volts filament, 150 volts plate, and .25 amperes filament consumption. As a power valve for a 6-valve receiver operated in the Wellington district, it was found to handle perfectly the output from 2YA without any trace of distortion or suppression of either low or high frequency. There was not any suggestion of harshness, and it was found on more distant stations that volume was only imperceptibly reduced.

The "660" speaker is of the smaller cone type, standing about 12 inches high, and is artistically finished in dark brown. It was found to be capable of handling a medium output without distortion, and thus compares quite favourably with the generally accepted standard for small cone speakers.

To Overcome Dead Spots

THE endeavour to increase the field area of a powerful station by operating two synchronised transmitters on the same wave-length and programme, to cover the "dead spots" which attend reception in any modern city area, has led to the licensing of a supplemental three- to five-kilowatt transmitter for KYW, Chicago. This is owned by the Westinghouse Company, which has operated WBZ at Springfield, Mass., and WBZA at Boston for three years on this plan; and is evidently satisfied with the general results obtained. WGN has also been authorised to use a one-kilowatt transmitter to supplement its present 15-kw. station near Elgin, Ill., covering the Chicago territory.

News Items

JEWELLERS in America report a recent increase in trouble from magnetised watches. In many cases this can be traced to the strong magnetic field of an electro-dynamic speaker. This trouble may eventually require the use of a magnetic screen around the speaker. Of course a watch can readily be demagnetised by placing it inside a coil through which an alternating current is passing, but it is liable to be remagnetised when again exposed.

HERE are some English schoolboy "howlers": "Talligraphy is Morse but radio is listening-in to music and other sounds." "An accumulator is a heavy sheet of lead soaked in acid and they charge 1 and 6 to charge it." "A dry cell is in a flashlamp with two brass strips and several volts." "Telephony is two sorts, wireless and ordinary. Ordinary costs twopence but wireless many £s and then perhaps you hear nil." "Hertz invented sparks but Marconi went to New South Wales and flew a balloon, thus bridging the Atlantic with a faint S.O.S."

THE American Academy of Arts and Letters is to award a gold medal for good diction by a radio announcer. "This," says a writer in the London "Popular Wireless," "is, I presume, intended as an encouragement of 'talkies.' In this connection I

should like to draw to the notice of the Academy the claims of the Prince of Wales, who, by speaking to the microphone for a few minutes, succeeded in collaring £55,000 for the miners within a few hours. If it is true that 'money talks,' then our Prince has the diction which should please an American academy."

AN interesting power plant has recently been assembled in Australia, consisting of a four-cylinder Fordson tractor engine, direct coupled to a 250-volt 500 cycle alternator and a double current 240-volt D.C. 160-volt, 60-cycle generator, the whole being mounted on a heavy girder bedplate. Special features comprise the fitting of impulsator ignition and a governor, the first for easy starting and the last-mentioned for consistent speed under varying loads. A starting motor is fitted in order that the engine may be started at a distance by means of a switch from the operating table at the wireless station, another switch being provided to stop the engine when required. The object of the plant is to generate power for operating the wireless transmitters at coastal radio stations. Power units of this description have already been fitted at the coastal radio stations at Thursday Island, Brisbane, and Suva—at the last-mentioned station duplicate power equipment is installed. These power units are shortly to be installed at the coastal radio stations at Broome and at Darwin.

RADIO LISTENERS' GUIDE.

1929-30 Edition will be on Sale Shortly---Features for all---Construction, Servicing, Reference and General Radio Sections.

Order Your Copy Now!

(Available from dealers and booksellers at 2/6 or 2/9 Post Free from the publishers.)

(Postal Coupon for Country Readers.)

"N.Z. Radio Listeners' Guide, 1929-30."

"RADIO RECORD,

P.O. Box 1032, WELLINGTON

Please post me immediately on publication copy [ies] of your 160-page illustrated reference work "The N.Z. Radio Listeners' Guide, 1929-30," at 2/9 per copy post free. I enclose herewith postal notes for (Add exchange to cheques).

Signed.....

(Write address clearly)

Round the World on Short Wave

Notes of special value to short-wave enthusiasts are contributed weekly to the "Radio Record" by Mr. F. W. Sellens, Northland, Wellington. Observations from others are welcomed.

MR. F. W. SELLENS, our short-wave correspondent, sends the following observations for the week:—

7LO, Nairobi, is now reported to be transmitting on 42.5 metres between 3.30 a.m. and 6.30 a.m. (N.Z. time), and relays G5SW occasionally from 6.30 a.m. till 7.30 a.m.

The Bandoeng (Java) broadcasting station has, according to "World Radio," discontinued their Wednesday midday (midnight N.Z.) concerts. This station now broadcasts two or three gramophone records, generally from 12.10 to 12.30 a.m. each day before the telegraphic messages to Holland begin.

During 1928 the Chelmsford short-wave station, G5SW, transmitted for 1386 hours 18 minutes, with a total break down period of 0.91 per cent.

I was out of town for Easter, therefore my log does not cover the holidays.

Wednesday, April 3.

G5SW was R8—9 with a talk at 6.35 a.m., but spoilt by Morse QRM. KGO was tuned in at 6 p.m., very clear and steady at R9. Cliff Moore's Rhythmic Band and the Melodett's entertained listeners till 6.43 p.m., the station signing off at 11.13 Pacific standard time.

2ME, Sydney, were playing records at 10 p.m. while waiting for PLG, Java. Strength at best was R9, but fading was bad. PLG was heard at R8—9 very unsteady.

Thursday, April 4.

Q5SW opens at 6.25 a.m. with tuning note, giving their call, wavelength, etc. Big Ben strikes, followed by a "Health Talk" by Dr. —. Strength R8, 90 per cent. readable.

RFM at 10 p.m. was R8 with talk. 10.15 music at R4 on about 16.5 metres, also on about 15.5 metres at R5, increasing to R8. Calls were not heard, but probably Java stations.

Friday, April 5.

G5SW at 5.20 a.m. were playing records, R3—4, very unsteady. Talk to America was heard, but readability very poor. The American could not be heard. At 6.30 a.m. strength had increased to R7, the announcement from 5SW being then 100 per cent. readable. A debate between a lady and gentleman relayed from London was badly received. By 7 a.m. volume was R8, and another talk perfectly audible.

PCJ commenced at 5.34 a.m. at R6, increasing to R8 at 6.30, going off a little by 7.30 a.m. A mushy background spoilt reception. RFM at 9.30 p.m. was R8, when a man and woman were talking. Singing followed, but static was bad. ZL2BE, Hastings, and

ZL2AX, Palmerston North, at 10.30 p.m., were R9.

Saturday, April 6.

PCJ were heard from 6 a.m. till 7.30 a.m., strength varying from R7 to R8. Mushy at first, but better after 7 a.m.

KGO at R4 with musical items was not as good as usual.

G5SW: 6.30 a.m., Big Ben, R8. Talk following, not readable except odd words. Orchestra at 7.20 a.m. was much more clear, but weaker volume.

The stranger on 31 metres, after relaying London, was heard again. This time it was certainly not the London programme, as a lecturer could be faintly heard, while music was being transmitted through 5SW. PCJ was R1-2 at 2 p.m., increasing to R6 at 3.37 p.m., when they announced that they were signing off till 6 GMT, when a special programme would be transmitted for Australia and New Zealand until 8 GMT. They were on the air again at 5.30 p.m. at R8, decreasing to R4 by 7.30 p.m.

KDKA put over their usual talk by a Senator, the Secretary of War being the speaker heard this time. From 3.30 till 4.30 p.m., the "slumber hour" programme by the National Broadcasting Co. was enjoyed. 2XAD was the clearest station on the air during the afternoon.

On the Other Side

AFTER many months' discussion there now seems to be some possibility that the Ontario Government (Canada) will follow the lead of the Province of Manitoba and establish a broadcasting station. Suggestion that the operation of a Government radio station could be used for political purposes has, it is stated, been one of the chief factors in preventing the Government from taking this step. If such a station is constructed, it will be used entirely for educational purposes.

ONE of the most eventful careers in the United States radio world was brought to a close when Mr. Charles Broadwell Popenoe, treasurer of the National Broadcasting Company, died on January 10. A pioneer in broadcasting, Mr. Popenoe was the manager of the second broadcasting station in the United States, established in 1921, by the Westinghouse Electric and Manufacturing Company. He piloted it through the early experimental stages, and in 1923 was appointed manager of the Broadcast Division of the Radio Corporation of America.

The Transmission of Pictures

New Wireless Triumph

"THE day when the transmission and reception of telegraph messages in facsimile instead of by the Morse system will become the normal procedure has been brought appreciably nearer," states the "Morning Post," England.

Recently a number of pictures and hand-written messages were flashed across the Atlantic on a short-wave beam circuit, in operation between New York and Somerset. The pictures, which included cartoons and views of American buildings, reached England almost simultaneously with their transmission from America. They were received with astonishing ease and quickness.

The system is remarkable for its clarity. A "facsimile" service is in preparation which may in time make it the normal procedure for telegrams to be received in the actual handwriting of the sender—an advantage evident in the transmission of elaborate columns of figures, where absolute accuracy is assured.

The system at present employed enables two images, each eight inches by ten inches, to be received from America in less than 20 minutes, and may actually reduce costs as compared with present methods. In commercial operations, one of the channels could be used for ordinary telegrams, and the other reserved for urgent messages.

The Method.

THE telegram or drawing to be transmitted is placed over a cylinder and is traversed by a point of light. This light is provided by a motor headlamp bulb which is focussed into a spot, and this is rotated so that the light passes through a slot in the metal cylinder over which the message is slowly drawn.

Every part of the image is, therefore, illuminated by the spot of light at a speed which is very accurately controlled. A photo-electric cell is so arranged that the reflection of the light, which varies in intensity with the degree of whiteness or darkness of the image, falls upon it, and electric currents are therefore produced. These are magnified and radiated by the "beam" transmitter.

The receiving gear comprises the usual receiver and apparatus for reversing the process carried out at the transmitter. A sheet of photographic paper is placed over the receiving cylinder and is held down by a cover of celluloid through which the spot of light may be observed. As at the transmitter, this spot of light rotates and passes through a slot in the cylinder over which the sensitised paper is drawn, and it is controlled by a Lerr cell.

This operates as a light shutter, which allows a spot of light to fall on the paper only when a current is passed through the cell, and is therefore one of the vital parts of the apparatus.

The light is normally cut off from the paper, but when a current is received the cell operates and allows the light to fall on the paper, with the result that the light and dark portions of the message are reproduced at the receiver.

As the image at the transmitter is traversed by the light, so the light at the receiver is tracing out a copy with complete accuracy, and except for bad atmospheres or other disturbances the copy will be as clear as the original.

The copy may be in the form of a photographic positive or negative, and is quickly fixed.

An advantage of the system is that the receiving machine may be located many miles from the receiving station, and this is equally true of the transmitter, although at the moment sufficiently good telephone lines are not normally available at the American end. Errors through mistakes on the part of operators are avoided by this system, and when greater speeds are possible there may be a great saving in the cost of telegraphic transmissions.

Years of Experiment.

ALMOST ever since the inception of the telegraph, the problem of picture transmission has fascinated electrical engineers. As early as 1842 Alexander Bain invented a highly ingenious system, and many others have followed more or less in his footsteps with widely varying results.

The first telegraphic picture service opened to the public, however, was that which has been in commercial operation between Radio House, the Marconi main telegraph office in London, and New York since May, 1926. Some hundreds of news pictures, cartoons, fashion plates, signatures, cheques, and plans have been transmitted commercially across the Atlantic by this system.

During the recent facsimile tests, Bryan Davis, the young son of the English engineer in charge of the American end of the experiments, was able to send a picture of himself in a new hat, with a New Year message, to his grandparents at Chelmsford.

He also persuaded the engineers to transmit favourite pages of his picture-books and adventure stories across the Atlantic for test transmissions, and the engineers say that, with their simple pictures and clear type, these make ideal facsimilegrams.

Exide

BATTERIES

MEAN DEPENDABILITY.
Installed at 2YA Wellington.

All sizes. From 9/- each

EXIDE SERVICE STATION
79 Kent Terrace, WELLINGTON

COMRIE, SMITH & WARDLE LTD.

Phone 23-323. 77 KENT TERRACE, WELLINGTON.

MOTOR REPAIR SPECIALISTS.

All Makes of Radio Batteries, and Motor Accessories Stocked.

Whippet Service Station.

Authorised Chevrolet Station.

Printed and published for the New Zealand Radio Publishing Company at the registered office, Wakefield Street, Wellington, of the Wellington Publishing Company, by Archibald Sando, of 47 Freyberg Street, Lyall Bay, FRIDAY, APRIL 12, 1929.