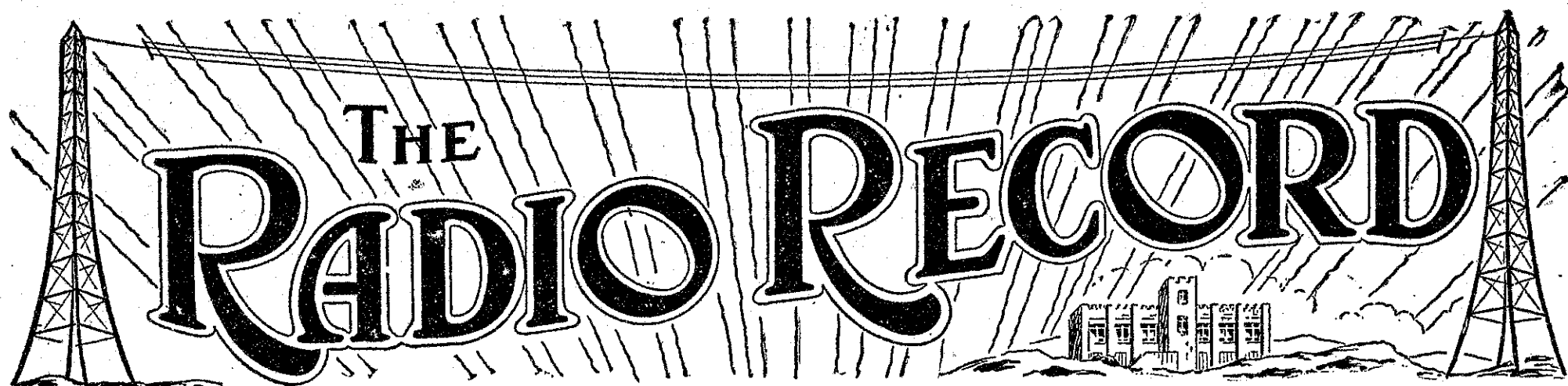


How Sporting is Broadcast -- Imperial Lectures Introduced--A Valuable Location Map



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Sporting "On the Air" Racing : : Trotting Football

Broadcasting is giving a new service to sports' enthusiasts in an instantaneous description of the race, match or contest. From "they're off" to the hard fought finish there comes pulsing through the air a running story of the thrilling struggle, so that, through the eyes of another and the unobtrusive "mike" distant listeners follow every phase.

Comparatively few of the many thousands who have heard a sporting event described have seen the narrator, or know how his work is done. As things go in this young game of broadcasting, the company's sports organiser and observer is an old hand.

He was a sporting narrator before 3YA was born. He knew 3YA's father, 3AC, who had a pitancy of 50 watts, but used it to some advantage, to the eminent satisfaction of all his clients (for in those days people, though greater connoisseurs, were not so critical as they are to-day).

Grand National week in Christchurch sees the sports organiser of the Radio Broadcasting Coy. celebrate his jubilee as a sports narrator. He has fifty creditable performances to his name. It is therefore a fitting time for a review of broadcasting conditions, so far as sports are concerned. The fear of some sports bodies that broadcasting would affect their "gate" are proving to have no foundation, but on the contrary, greater interest is created.



MR. A. R. ALLARDYCE,
sports organiser of the Radio
Broadcasting Coy., who celebrated
his fiftieth broadcasting description
during the Christchurch races.

It is through these eyes that you will "see" the Christchurch racing this week. For the fiftieth time, Mr. A. R. Allardyce, sports organiser for the Radio Broadcasting Company, this week faces the microphone to put on the air his cool and collected account of the sporting event before him.

CONTRETEMPS AT PIONEER BROADCAST

The first sports event to be broadcast in New Zealand was the Rugby football match, Christchurch v. Old Boys, for the Charity Cup, in May, 1926. This stunt was carried through very successfully. It was, of course, a great novelty in Christchurch, and instantly found favour with all owners of listening-in sets. But little did the public know of the trials of the announcer. He incurred the displeasure of the Rugby Union officials, for they said he made too much noise, and interfered with the game. The announcer was greatly perplexed. He had been safely ensconced in a tower well above the field of play, and he could not understand how his voice could be heard by the referee, as was alleged. He thought he had spoken in a confidential manner to his friend "Mike," and that he had not become unduly excited. He puzzled over the matter for several days, and made many inquiries. Then the mystery was solved. A friend explained that a zealous "fan," proud of the reception he was getting, had put his loudspeaker on to the park fence and, with all stages of "audio" doing their best, it was hurling a description of the game back on to the ground, to the dismay of the players and referees on all the grounds.

THEY GAVE IT ANOTHER GO!

This little contretemps was explained away, and the Rugby Union officials were again persuaded to let 3YA have another try. The expression on the faces of the officials seemed to say: "Poor fellow. How long has he been like this?"

The next event broadcast from Lancaster Park was the Ranfurly Shield match, Canterbury v. Hawke's Bay. With the new station going at its best, the transmission was heard all over New Zealand, as far north as Taranaki and Gisborne, and as far south as Invercargill. These were the pioneering days of radio broadcasting. Now, relays from Lancaster Park are regular features on 3YA programmes.

THE MASTERTON MATCH VERY TRYING.

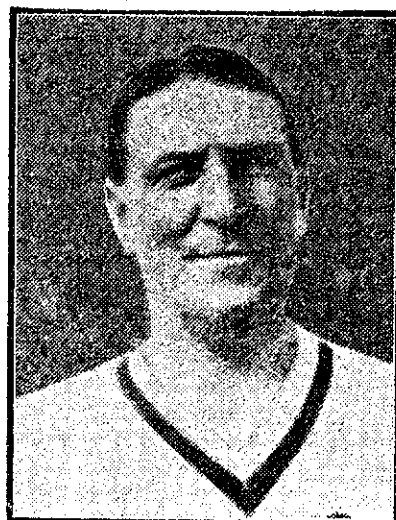
So far as football is concerned, the zenith in achievement came in the recent broadcast by 2YA of the Ranfurly Shield match at Masterton. Although already a matter of history, this description is too fresh in people's minds to need any further reference. The spectators on that occasion gave a little trouble, but the announcer has now completely forgiven them. After all, he says they were justified in becoming a little excited. Onlookers are usually most considerate and tolerant, but at Masterton they encompassed him about and then crowded on to the touch line, so that the announcer, though six feet two in his socks, could see only half of the field. A little more provocation like that and he would add a periscope to his impedimenta, and would be imagining himself back in the trenches on Gallipoli.



—Jauncey, photo.

MR. T. FLETCHER.

Descriptions of the leading matches in Wellington are put on the air from 2YA by Mr. T. Fletcher, and are proving a popular service. Results of football matches in all centres are a regular feature of Saturday night broadcasts.



MR. MEREDITH.

Broadcast descriptions in Auckland come from Mr. Meredith, a well-known figure in Rugby circles. An interesting recent event was his description of the Association match, Canada v. Auckland, played on the League ground—a happy case of sporting camaraderie.

The Pros and Cons of Samoa.

Here is given in a nutshell the facts concerning our administrative problem in Samoa. From official information supplied by the Prime Minister's Department, the following authoritative summary of the Samoan situation was given listeners by the editor-announcer from 2YA on Friday evening last.

the only good harbour at Pago Pago (pronounced Pango Pango—all g's in Samoa being sounded ng as in "singer"), while Western Samoa, including the large islands of Upolu (pronounced Oo-pol-oo, the central o as in pole) and Savaii and the town of Apia were left to Germany. The German administration continued with periodical outbursts of native unrest until the islands were taken by the New Zealand Forces in 1914, held under military occupation until 1920, and since then under mandate from the League of Nations.

THE PENALTY OF TEMPERAMENT.

The outstanding point to be noticed is that almost as far back as the record goes the Samoans have been quarrelling and fighting among themselves. They are a brave and honourable people, loveable and excitable, with the faults and the virtues of a child. Political intrigue is bred in their history and in their blood, their resentment is easily roused and difficult to appease, and they are quick to seize upon any cause that can be made the subject of the endless debates and disputes that are to them almost a national pastime. Stevenson suggested as a motto entirely suitable to Samoa: "Enter rumour painted full of tongues."

New Zealand's administration of the territory has not been free from examples of the unrest that is characteristic of the people, and it is only a few years ago that the Faipule (pronounced Fy-pool-ee) of Samoa, who are

George Richardson, who is advised by two bodies dealing respectively with the concerns of the natives and the Europeans. On native affairs the Administrator is advised by the Fono of Faipule, consisting of chosen representatives of the 33 districts into which the territory is divided, and on European matters the Administrator is advised by the Legislative Council, which consists of six official members nominated by the Administrator and three unofficial members elected by the European constituency. The elected members on the Legislative Council are the Hon. O. F. Nelson, Hon. G. E. L. Westbrook, and Hon. A. Williams.

COMPLAINT AND ANSWER.

The committee which is acting as the mouthpiece of the present movement consists of the Hon. O. F. Nelson as chairman, Hon. G. E. L. Westbrook, Hon. A. Williams, Messrs. S. H. Meredith, R. W. Gurr, and A. G. Smyth, and six native Samoans, some of chiefly rank. Their complaints and the answers of the Administration thereto, put as shortly and as fairly as possible, are as follow:—

- (1) The committee content that both natives and Europeans should equally be elected to the Legislative Council, which they say should have authority to deal with all the affairs of the territory, both European and native. To this the Administration reply: (1) That the Samoans themselves in their Fono of Faipule have repudiated this suggestion, and (2) that native af-

fact that New Zealand subsidises the Samoan Treasury to the extent of some \$20,000 per annum, equal to about one-seventh of the total annual expenditure of the territory.

- (3) The committee next complain of the cost of the medical administration. To this the Administration reply (1) that this service has resulted in an increase in the population, better health, better sanitation and a large decrease in infant mortality, and that the results are sufficient to justify an even greater expenditure, and (2) that the natives in their Fono have themselves agreed to the imposition of a tax for medical purposes of £1 per head on all adult natives.
- (4) The committee allege that the Fono of Faipule is not truly representative of the Samoan people. To this the Administration reply that no Faipule has ever been appointed or removed by the Administrator except with the approval of his people, and that no request for the removal of a Faipule has ever been refused.
- (5) The committee complain of the power taken and exercised by the Administrator to order the banishment of a native from one part of Samoa to another, and to deprive a Chief of his titles. The reply of the Administration is that this is an ancient custom of the Samoan people, its continuance was considered necessary by the Germans and is still considered necessary as a disciplinary measure by the present Administrator, and that the Fono of Faipule have approved the course adopted.
- (6) The committee criticise the Administration's prohibition of the



—Photo, Publicity Dept.

1919; that it is on all fours with the policy adopted in the other island dependencies of New Zealand, and that so far as the natives themselves are concerned, prohibition is imposed in accordance with the terms of the Mandate.

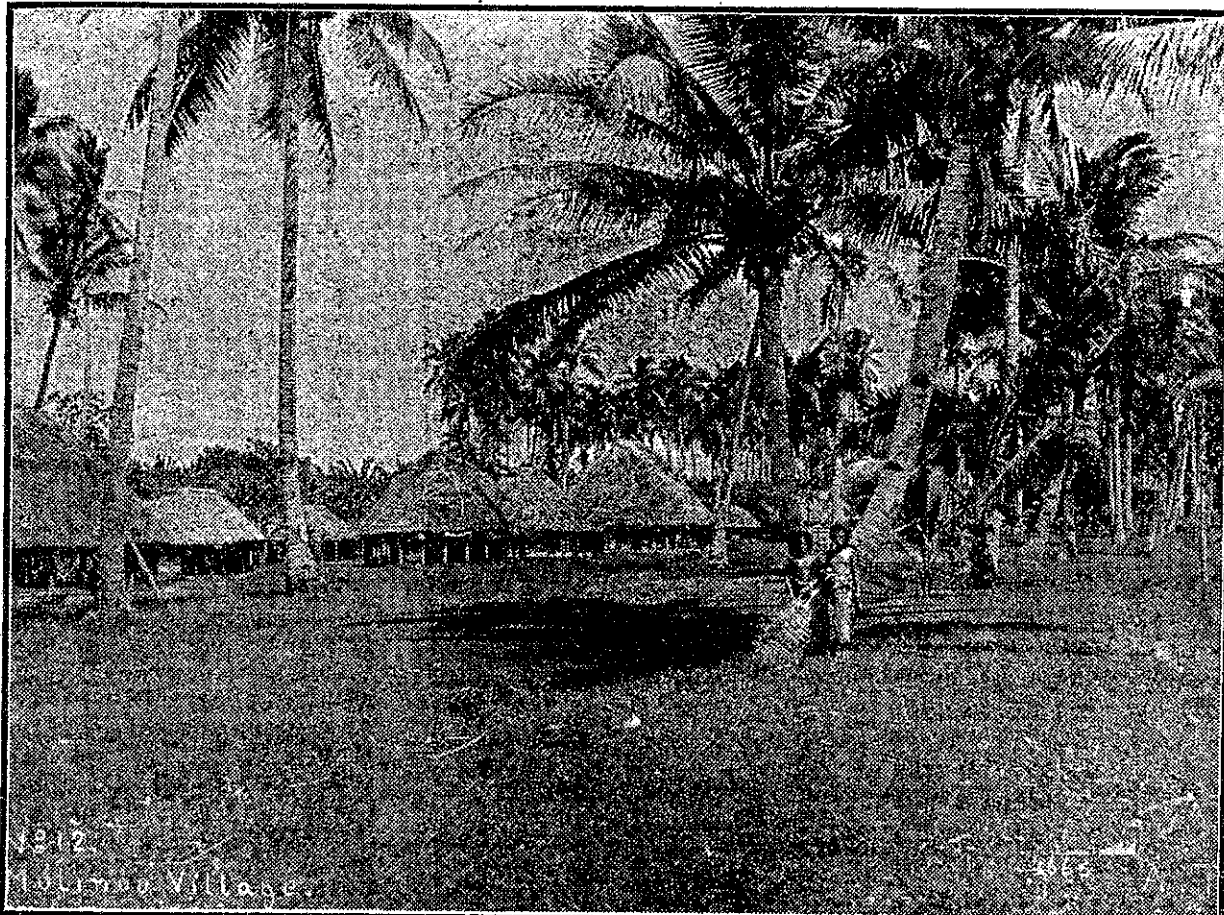
THE BASE FOR CRITICISM.

The committee base their case on what they regard as reasonable criticism of the Administration and on the principles of British justice, which they say place no restriction on such criticism, while the Administration in reply call attention to the admittedly great progress that has been made in Samoa since the inception of New Zealand administration, to the undesirability of interfering with that progress, and to the effect that the Administration's assistance in disposing of native copra has had upon the interests of certain of the European traders. The Administration further contend that whatever may be the rights or wrongs of the questions in dispute, any means by which native unrest and disaffection are aroused must be detrimental to the Samoans' own interests, which the Administration and the people of New Zealand have entirely at heart.

APPEAL TO PARLIAMENT.

A petition from Samoa has been lodged with Parliament, and, on the other hand, a Bill introduced by the Prime Minister has been passed by both Houses of Parliament authorising the deportation of Europeans from the territory or the removal of Samoans from one portion of the territory to another if, after a hearing, it is clear that the performance of the duties imposed upon New Zealand by the mandate or of the functions of the Administration has been hindered. The Hon. Mr. Nelson and Mr. Smyth are at present in New Zealand to support the petition, which is now being considered by a Select Committee of both Houses.

Opinion of all shades will agree in regretting the present state of affairs. No one who has visited these lovely islands can fail to be charmed with their beauty and with their people. Calm sunny days; cool still nights; the rolling surf of the Pacific breaking over the white reefs; the green coconut palms contrasting with the vivid scarlet of the hibiscus; luxuriant vegetation; pretty running streams and waterfalls; shady streets and paths covered with foliage as an avenue; and the picturesque open houses, or fale (pronounced fa-lav), of the natives dotted about the green sward, make an unforgettable picture. The people themselves are normally the happiest and cheeriest souls, brightly and cleanly dressed; moving quietly and happily through their easy lives, contented with little, easily amused; pleased merely to be alive, and passionately fond of singing. In the evenings the whole island resounds with the songs of little groups—hymns and simple melodies—voices delightfully true and harmonically blended. As the next item the studio orchestra will play to you as an example of Samoan melody the plaintive song of farewell which is as characteristic of Samoa as is Aloha-oe of Hawaii.



ONE OF THE PICTURESQUE VILLAGES OF SAMOA.

—Photo, Publicity Dept.

the selected representatives of the whole people, addressed a petition to His Majesty the King praying that the administration of the islands should be removed from the control of New Zealand. On this occasion the Faipule have repudiated the criticism of the Administration.

UNDER OUR ADMINISTRATOR.

Samoa is at present governed by an Administrator, Major-General Sir

fairs can be better dealt with by a Fono of 33 members than by a minority of Samoan members on the Legislative Council.

- (2) The committee complain of extravagant financial administration of the territory, giving numerous details in support of their allegations. The Administration in reply traverse these details, deny extravagance, and assert that even if there were extravagance New Zealand's bona fides in the matter are perfectly clear by reason of the

"fine mat malaga" (pronounced ma-lunga), which is a ceremonial visit of one village to another. The Administration contend that these visitations resulted in the hosts being eaten out of house and home, and that their prohibition was requested by the Fono.

- (7) Finally, the committee complain of the prohibition of alcoholic liquor in Western Samoa. To this the Administration reply that the policy was approved by the National Government of New Zealand in

20,000,000 LISTEN!

WORLD'S BIGGEST AUDIENCE

RECORD-MAKING PROGRESS

How distant is the day when all New Zealand will listen to one speaker—uttering direct to the people important views on policy or performance?

The fullest present-day development of radio broadcasting obtains in the United States, which contains not only the greatest number of listeners but the greatest number of operating stations. Developments there make it possible to foresee something of the

developments of the future in relation to linking the whole community into one and placing it in direct touch with an important pronouncement.

By wireless, President Coolidge, a few months back, spoke directly to an audience estimated to total twenty millions. The organisation necessary to the accomplishment of this feat is outlined in the July "Scientific American." The occasion was the payment on February 23, 1927, of a tribute to George Washington. Through a network of 42 broadcasting stations, scattered throughout the territory from Portland, Maine, to San Francisco, President Coolidge spoke directly to not less than twenty million people. In addition to the regular broadcast, special short-wave length transmission enabled the voice to be heard in London, Paris, and South Africa. The British Broadcasting Corporation rebroadcast the American waves from station 2LO, so that listeners throughout the British Islands heard the President and the playing of "The Star-spangled Banner" by the United States Army Band, despite occasional interference and fading.

The special wire circuits used to link the stations for this occasion covered approximately 10,000 miles, and required the attention of 200 telephone engineers. In addition, more than 200

radio engineers were on duty, since five or more men were occupied with the transmission of the programme at each of the 42 stations. The circuits utilised for the broadcast action consisted of telephone lines specially adapted for the purpose; as, while ordinary long-distance telephone wires may carry at the same time four or five telephone messages and numerous telegraphic communications, a special circuit for radio broadcasting must be cleared of all other traffic. Also, the broadcast circuit must be equipped with special vacuum tube repeaters or amplifiers since the ordinary repeaters have not a sufficiently wide range to cover the frequencies that are involved in the broadcasting of music and speech.

Important Predecessors.

While this is the most notable feat so far attained by broadcasting in placing an important speaker in direct touch with a nation-wide audience, it has had several important predecessors. The first occasion was when President Harding delivered an address at St. Louis at the World Court. This was in June 1923.

A little later in the year ex-President Woodrow Wilson spoke over a trio of stations upon the course of events since Ar-

mistice Day and its significance. This was recognised as a very important occasion, and every precaution was taken to avoid interference, the stations not broadcasting the speech agreeing to keep off the air during the time occupied. The broadcast was quite successful. At first the voice of the ex-President was a trifle husky, but grew better as he proceeded in what proved to be the first and last address by him, as he died a few months later. His reference to the American attitude since the war will be interesting to New Zealand listeners. He said that the attitude of America since the World War had been "deeply ignoble, cowardly, dishonourable"; that they "had withdrawn from the affairs of the world in sullen and selfish isolation," after their soldiers had aided in winning "the war for right," and that the happy memories of those "never-to-be-forgotten days of November of 1918" were for ever marred and embittered for America by her refusal to bear any responsible part in the administration of peace and the establishment of the rights won by the war.

Effect on the People.

Many observers have tried to analyse the effect upon the economic life of

the peoples of the world that various improvements in the art of communication and transfer of news and thought have had. The most important advance along that line yet made is unquestionably the art of radio broadcasting, by which the leader of a nation, or any important, thoughtful, writer or lecturer, can make immediate contact, unhampered by perverted or second-hand versions of his statements, with the widest possible audience. New Zealand is just entering upon that era, and it remains to be seen exactly what modifying and moulding influences radio broadcasting will have upon our national life. The plans hoped to be developed through 2YA, Wellington, provide for a due balance between education and entertainment, and, as we are a moderately serious people, will incorporate into the broadcasting service a due proportion of thought-provoking matters.

Following on the example given by President Coolidge, it may be considered likely that, in the course of the coming years, important speeches of political and other leaders will be put upon the air for the benefit of listeners unable to be bodily present.



"They're Off"--How you get the Sporting Results

This article, continued from the cover, describes the establishment and progress of the Broadcasting of sporting events in New Zealand. Mr. A. R. Allardyce, the company's sporting organiser, has now described over fifty first-class events. From the first uncomfortable perch on a haystack, depicted below, the service has expanded, till now all facilities are courteously afforded by sporting authorities.

TROTTING VETERANS BORROW ALLARDYCE'S EYES.

On being approached, Mr. A. I. Rat-tray, the secretary of the Metropolitan Trotting Club, Canterbury Park Trotting Club, and New Brighton Club, was only too pleased to grant permission to the company to broadcast descriptions of the trotting meetings from Addington, and allotted a dress circle position in the stewards' stand at their excellently appointed course. The first transmission from the racecourse created a great deal of interest, and one of the greatest difficulties to be contended with was to keep inquiring sportsmen from asking numerous questions while the station was on the air. They are now thoroughly educated, and behave really well.

A little coterie of old members are among the most interested outlookers. Their eyesight is not what it once was, and they encircle the announcer and listen to the description of the race. They are thus able to follow the fortunes of their respective investments. On the occasion of the Duke's visit they must have felt lost, as on this occasion the announcer's position was moved into the main stand.

EDUCATED UP TO THE "MIKE."

The appearance of the microphone at these events always creates a great deal of public interest, and gives rise to many animated discussions on the wonders of wireless. To-day the "mike" at Addington is an accepted fact, so much so, that on one occasion when it was decided not to broadcast the announcer went for a tramp through the country. Arriving at a

wayside inn about midday, he was interested to see someone tuning in a set. On inquiring what the fan was trying to pick up, he was told that a congregation of local residents had assembled to hear the races at Addington. It was quite impossible to convince the listeners that there was no transmission without disclosing his identity, and this he had no desire to do. The disgust of these sports can only be imagined when they tuned in at 8 p.m. and heard a selection of gramophone records from the studio.

PIONEERING EXPERIENCES AT RACING.

The first transmission from Riccarton racecourse took place a year ago this week, when a description of the races was broadcast on the occasion of the winning of the Grand National by Peter Maxwell.

This first transmission has almost become historic in Christchurch on account of the difficulties to be overcome before it could be accomplished. Firstly, the C.J.C. would not allow the broadcasters to have a position in the grandstands, as they might interrupt some of their officials or patrons, but they gave permission to work from any part of the course outside the enclosures.

The next difficulty arose over a suitable telephone line, as at that time Riccarton was not very well supplied with lines. This difficulty was overcome by the generous action of Mr. J. McCombe, the well-known Riccarton mentor, who placed his private 'phone at 3YA's disposal during the time the races were on. Then a position had to be secured, and after a thorough investigation it was decided that the most suitable place would be on top

of a half-eaten haystack, which was situated round by the scraping sheds, or nearly three furlongs from the finishing post, at the beginning of a back straight.

SUCCESSFUL FIRST VENTURE.

Only those who know the size of Riccarton racecourse can appreciate the distance the announcer was away from the horses. As things were not so far advanced as they are now in the broadcasting world it was necessary for the announcer to go out alone, and, armed with diagrams for the connecting up of

the amplifier, he left for the course. Assistance was given to haul the heavy batteries and gear connected with relays on to the top of the stack by the driver who went out, and then the announcer was left to his own devices. It was necessary to run three furlongs across the course to see the starters and jockeys on the board in front of the stand, then another run back to give this information, describe the preliminaries, and the actual running of the race. Without glasses this was no easy matter, but the announcer was lucky enough to be able to place every

winner and second horse throughout the meeting without making a mistake. Of course, these difficulties were explained to listeners, with the added information that the placings were not to be regarded as official until he had time to go over and check them on the judge's box.

"A DIPPY MAN ON A HAYSTACK."

The weather had been very wet and the stack was very cold and damp, and the only way to scramble on top was with the assistance of an old hurdle laid against the side of the stack, which wobbled ominously on every occasion it was used. Fortunately, the relay was voted a great success, and the announcer felt that all his labour had not been in vain.

The microphone on top of the stack may be seen in the accompanying photograph, and it certainly created much diversion among the few who had crawled through the fence to see the events. One such group crowded underneath the stack and indulged in much speculation as to whether the apparatus was a moving picture machine, electric timing gear, or just a perch for the staid steward. They were sublimely unconscious that their conversation was being carried to the ends of the earth. The riders in the various races also evinced the greatest curiosity in the contrivance, and one on returning to the birdcage reported that there was "somebody sitting on top of the haystack who was quite dippy, as he was speaking to himself."

A year has made a great difference in the conditions under which a sports announcer works. He has now a snug seat in the grandstand, and every consideration shown to him by officials and patrons alike.



Location of the first sporting broadcast in New Zealand. Mr. Allardyce perched on a haystack at Riccarton, August, 1926.

THE CHIT CHAT CLUB

Being a record of some of the dissertations of members of the X Club, on wireless matters of moment in New Zealand.

Gathered round the great open fireplace in one of the well furnished, cheery rooms of the X Club was a little coterie of members. Anyone who was a frequenter of the club would know that this same half-dozen was to be found there regularly between five and six in the evenings. Here, in front of the blazing open fire, reinforced with glasses of something conducive of good fellowship, these self-same members nightly discussed problems small and big connected with wireless.

"Wireless bugs, poor devils," was the description applied to them by many of the other club members, and visitors were often taken into the room just to have the phenomena shown to them. No one thought of entering the little circle unless he had had his baptism "on the air" for, as Boodle, one of the wealthiest and stingiest members, so aptly remarked, "You never know when you might catch it."

At times, this little circle was joined by the oldest member, who, though detesting wireless and all connected with it, felt called upon to give his views, "for the benefit of those cheeky young devils who need keeping in their place, sir!"

To-night the conversation had drifted from squealing valves, and the particular corner of Hades reserved for their owners, to a general discussion of the programmes of the week, and, as usual when programmes were under discussion, there were heated patches.

"I rather liked that address of Morrison's from 2YA on the 'Economics of Business,'" said Larton—commonly known as "Blinks," because of his huge American goggles, and his habit of blinking fiercely at you in order to clinch a remark. "It's the sort of thing a chap needs these days, with the fierce competition we have."

"I didn't hear that one," said Brenton, "what was it all about?"

"Well," said Blinks, planting his feet more firmly on the mantleshelf, "it was a dry subject, rather well clothed with illustrations. Instead of starting off in the usual way with the

'fundamentals of economics' he took us for a trip round Wellington, showed us the sights, spoke of the splendid homes seen on the route, and then pointed gently, but firmly, to the fact that all these represented money, and that all these people made a living somehow.

"Then he took us further afield to the dairyfarm, the forest and the sheep station, and showed us how delicately interwoven are the details of business. Even the fat middleman"—and here Blinks looked slyly at Winton Thribs—"was shown to be necessary. He said that business was the means used to supply the needs of humanity, and in supplying those needs business was also the way by which people earned their living. He likened the world of business to a great machine, which, though considered ugly and unwieldy by some, was generally accepted, in the hope that we could further improve it. Everyone, whether he were a common labourer, a bushfeller, a skilled worker, or a professional man, was needed, and it was up to everyone to try and make themselves as efficient as possible through introducing modern methods of thought and work."

"Hrmph!" said the oldest member, clearing his throat. "Bosh, sir—pure bosh! It's easy enough to prattle about modern methods, young man, but in my day we succeeded without them. Look at me, sir, look at me. Retired at fifty through hard work. Modern methods be—"

"That's all right sir," replied Blinks, with a twinkle, "but you see, you had the advantage over us. Cash registers weren't invented in your young day."

At this, the oldest member looked as though he were going to have an apopleptic fit, "the look of guilt," as Blinks afterwards described it—and Larton hurriedly changed the subject.

"One of the best addresses I've heard for a long time," he said, "was one from 3YA, by a missionary from China—a Dr. H. G. Anderson."

Blinks yawned prodigiously, and proceeded to take another sip from the glass, in order, as it were, to fortify himself against boredom.

"You can look bored if you like," continued Larton, "but I tell you it

was something out of the ordinary, and," he added maliciously "an eye opener for the ignorant."

"This doctor said that tourists and travellers who visit only the treaty ports consider themselves authorities on Chinese affairs and give vent to opinions which are supposed to give a true picture of China as a whole, but which in reality do nothing of the sort. While many of the treaty port business men consider that the big stick is the only way of settling the Chinese problem, this missionary says that in his opinion Britain will reap a rich harvest of good-will from her present attitude of patience and tolerance."

"This missionary has been many years in the province of Szechuan, close to the Tibetan border. In this province, about twice the size of New Zealand, there are about 60,000,000 and 70,000,000 people. More than half the population of the world lies within a radius of 1200 miles of the city! Outside the capital is the West China Union University, in which Dr. Anderson is working. The city, from his description is a true meeting place of East and West, and in the last four years has been revolutionised through the introduction of electric light, motor cars and motor roads, telephones, and a postal system and this 2000 miles East of Shanghai."

"His chat put a different complexion on missionary matters too, for he says that there really is not the antagonism which the papers would have us believe. For years his province has been subject to the looting of a nondescript army, and the poverty-stricken inhabitants cruelly taxed."

"Only a mob of Chinks would stand for it anyway," growled the oldest member who could contain himself no longer.

"Yes, he went on to ask us to be spared from the fools who talked of all Chinese as 'ignorant Chinks,'" said Larton bitingly.

The oldest member subsided muttering.

"What a gigantic task is ahead of the missionaries. He went on to say that there are 400,000,000 people in China, and the peaceful reforming of such a population is almost impossible. The people in his province are changing from a 200-year-old culture to a brand new one in a single generation—and they are doing it without much friction."

"That all seems all right," said Blinks, "but don't you think the Chinks, er... I mean Chinese, just pull the legs of the missionaries in order to get medical aid and other things."

"No, he dealt with that too. He said that many of the Chinese were standing up against the persecution to which they were being subjected, and that, sure enough, is a pretty sound test. 'Remember,' he concluded, 'the Chinese aren't just Chinks, they are people, different from rather than inferior to you and me. When critics of the East cease to mix up inferiority and difference the racial

problem will be well on its way to solution.' And for myself," concluded Larton, "I believe the missionary's right."

"Call them Chinks, or whatever you like," said the oldest member, "but you can't handle them any way but with a big stick. Keep 'em down."

"It's in the younger generation of Chinese that our hope would seem to lie," said Larton, "and praps its from the younger generation of Englishmen that we're going to get that sympathy which will constructively help."

"I was a bit disappointed with that address on physical culture from 1YA by W. N. Kerr," said Brenton who prides himself on a knowledge of Jiu Jitsu, Swedish drill and the like. "It seemed to be a bit too much general stuff about what a decrepit lot we are—and of course we know it's true—and too little about what we should do."

"Yes, I thought that too," said Drexter, commonly known as "Silent George" because of the few contributions he made to the general conversation. "Modern life makes it pretty hard to keep up physically, and we want to know the things we should do to put Nature at rights."

"What line did he take?" asked Blinks.

"He pointed out that disease was a coward, striking a chap only when he was run down, and that we all are carrying around germs of diphtheria, tetanus and tuberculosis."

"Good God," said the oldest member rising suddenly, "you pack of blessed disease carriers! I'm off, for I'm damned if I want to catch any of your infernal diseases at my time of life," and with that he stamped heavily out of the room.

"I don't think he need worry much," said Drexter, "even if he has got a bit of a corporation."—"Well, to continue, this chap Kerr reckoned that it was particularly during the winter months that we should go in for physical exercise."

"What about football," said Blinks, "surely that's strenuous enough for anyone?"

"Yes, that's all right, but his talk was really directed to the older crowd who have passed the football age. He said that a Harley St. specialist, Dr. Leonard Williams, had said that if we got ill we shouldn't be pities as victims, but should be condemned as fools. Kerr reckons that the normal life of man should be from 120 to 140 years, judging from the comparison between the time it takes for animals and for human beings to mature. His slogan is that 'the man who cannot spare time to look after his health, usually holds the averages good in taking time to be sick,' and I think there's something in that. He's a great believer in the use of the flesh glove, and almost the only practical hint he gave was to use this freely. He says that it is a very valuable exercise not only for the skin, but also for the muscles, reacting on the internal organs. You have to be careful, apparently, in the way you apply it, and it should not just be

rubbed any way, but should always be up and down towards the heart. And it ought to be easy for you, Blinks," concluded Drexter, "for you must never hold your breath—so you could still keep on talking."

"What about another?" said Brenton, a remark that met with instant approval. Glasses replenished, the talk drifted from wireless momentarily, to the subject of motor cars. Larton had just purchased a brand new Doshter, and was dilating on its many virtues, and the way it would climb on "top," which reminded Blinks of a trip he had had in one of the earliest models round about 1900.

"There was an interesting address on the history of motor cars from 4YA a week or so ago," said Harrison, another member of the magic circle, "and it made one think of the astonishing advances that have been made in only a few years. When you think that the first internal combustion engine wasn't made till 40 years ago, and then see the types of cars we have to-day, for carting bloated aristocrats like Larton about, you can see there's a history, and a jolly interesting one, to the motor car business."

"This bird, who called himself 'Gargoyle,' said that the first internal combustion engine using petrol, was invented by a German, Gottlieb Daimler in 1885, and was used for propelling a bicycle, later being fitted to a river boat. A Frenchman, M. Levassor, saw the possibilities of using the engine for propelling carriages, and fitting the engine to the front of the carriage, made the drive through the clutch to a set of reduction gears and thence to the back wheels. Although details have been altered, the principal of transmission remains exactly the same to-day. He went on to tell of the advances that had been made following on motor races disclosing weaknesses in different models. The first race from Paris to Bordeaux was won in a car which averaged 15 miles an hour."

"Another point I liked in that address was the way in which he traced the growth of motor manufacturing in England, and he showed that we have taught the Yanks a few things about cars, and invented such things as the spare wheel, and the six cylinder engine. Feared as instruments of the Devil in the first place, all sorts of restrictions were placed on the use of motor cars, but these have been surmounted by time, and now we have the low-powered high-efficiency engine developing as much power as engines three and four times their size developed in the early days of motoring."

"Another point stressed by 'Gargoyle' was the need for correct lubrication. If old Larton, for instance, doesn't give his fancy bus a good brand of oil, and plenty of it, she will seize up or peter out on him without so much as a 'by your leave.' Correct lubrication is a great thing and it is no longer considered sufficient to buy the cheapest brand of oil you can get, and dump it into the oil sump."

THE NEW ZEALAND Radio Record

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A. J. HEIGHWAY,
Managing Editor,
"The N.Z. Radio Record,"
P.O. Box 1032,
WELLINGTON.

WELLINGTON, AUGUST 12, 1927.

Broadcasting matters were prominently before Parliament last week, when debate arose over the action of the Government in loaning £15,000 to the Radio Broadcasting Company with which to finance the erection of 2YA. The Labour Party seized upon the incident with avidity, and attempted to flog the Government. In attempting this its speakers were anything but accurate or consistent, as is shown in our summary of the discussion elsewhere. Listeners perusing the debate will wonder at the small concern for their interests shown by the speakers. First, Mr. Holland condemned the loan "when money was so hard," and would have been satisfied apparently to have given listeners a much less efficient station. But a few moments later—away, economy, and on a new track! Mr. Holland urged the Government to take over broadcasting altogether—and of course find not only £15,000 as a loan, but outright, and the balance of £50,000 as well, and maintain the service on a basis that would suit the most extravagant! Quite palpably the whole debate was of artificial origin, staged only as an item in the pin-pricking political game. Mr. Holland showed a joint in his armour when he complained that the Prime Minister was put "on the air" and he wasn't!

The Prime Minister had no difficulty in defending the action of the Government in assisting the company to give service to the widest possible circle of listeners. The fundamental reason was national and Imperial; the obvious advantages of having a daylight range over the whole Dominion and a night range over the Southern Pacific. This, of course, transcended the agreement originally entered into, and in those circumstances a new basis had to be arrived at between the Government and the company. If one party to an agreement wishes, as in this case, the provision of an extra service, a new financial basis must be arranged. In this case the company originally planned to find £20,000. Including the Government loan of £15,000, it has now committed itself to £50,000, in order to give listeners an improved service. That indicates a more than generous desire on the part of the company to give service and satisfaction to listeners. We believe the majority of listeners appreciate the facts in the situation and are prepared to give the company a reasonable chance and a fair field. Already improvements in programmes and service are becoming apparent, and we would seriously advance that the time is ripe for the development at any rate of a period of suspended judgment. At the moment, on the point of State control, the listeners would seem to have quite convinced the Prime Minister—judging by his reply to Mr. Holland—that he would be a much happier man without responsibility for radio broadcasting than with it! The same thought impresses any who really contemplate the magnitude of the task presented by the provision of programmes satisfactory to all. Steady improvement, however, is being made, and an increasingly good range of selection made available.

With the provision of afternoon sessions from 2YA in the immediate future, a big step forward will be made, which will certainly have its effect all over New Zealand. The relaying of the Christchurch sporting events this past week proved most popular, and serves but to whet the appetite of listeners for more.

HELPING THE CHURCHES

SERMON BROADCAST

EXPERIENCE OF OTAGO.

How radio is assisting rural churches is illustrated by the fact that on two occasions when the service has been broadcast from this church, the Methodists at Kaitangata, in the absence of a local clergyman, have arranged for the installation of a receiver in their church and have joined in worship with the Central Mission congregation. Reports from time to time indicate that such is not an isolated case. The use of radio in similar ways in other districts is being adopted to spread the Gospel.

When the Gipsy Smith mission services were broadcast from Dunedin by 4YA, his messages were heard in churches and homes all over Otago.

The delay in passing U.S.A. radio legislation, and the resulting confusion in broadcasting, cost the radio industry 100,000,000 dollars (£20,000,000), says I. B. F. Raycroft, vice-president of the National Electrical Manufacturers' Association.

TRACKING OSCILLATORS

A BRITISH SLEUTH.

The latest addition to the twentieth century wonders is a van, like an undersized Black Maria, with a circular frame aerial on the roof. It is used as a Post Office sleuth in tracking down wireless oscillators. A band on an innocent-looking dial inside the van is able to point with unerring certainty to the actual house in which the mysterious annoying oscillator resides, after which the officers enter, and gentle persuasion and expert guidance follows. It is truly an ingenious system. Bearings are taken on three sides of an area visited and plotted down on a large scale map. If the lines intersect each other, the location of the oscillator is known, and the van proceeds immediately in the indicated direction. As the house is approached the oscillations become gradually fainter, till zero point is reached, when the van gets immediately before the house.

Novice: One who listens to a programme without getting the name of the station. Expert: One who gets the name of the station without listening to the programme.

BROADCASTING

DEBATE IN THE HOUSE

SUMMARY OF THE FACTS

During the week, debate occurred in the House of Representatives upon broadcasting matters in general, but particularly upon the loan of £15,000 by the Government to the Radio Broadcasting Company for the purpose of meeting the Government's desires, for Imperial and national reasons, to have a higher powered station at Wellington, that originally contemplated at the time of the agreement being reached between the company and the Government. This debate ran to some length.

THE £15,000 LOAN.

At the opening of 2YA, the Postmaster-General, the Hon. W. Nosworthy, said that £15,000 had been loaned to the company to provide a station of a power much superior to that originally planned. On this being raised in Parliament, the Leader of the Opposition (Mr. H. E. Holland) said that the Broadcasting Company was in competition with the Post Office, and it was objectionable to lend such a sum of money without the authority of Parliament. He wanted to know why the money was lent. Was the company in such a bad position that it must go to the Government for a loan of £15,000 to enable it to carry on with its work? He would like to know whether further loans were likely to be made. Why should such a loan be made when people who were waiting for loans for houses and other things were told that the money was not available? Mr. Holland also objected to the Prime Minister's speech being broadcast from Christchurch when his own was not.

Mr. J. A. Lee (Auckland East) said that if the Broadcasting Company was in such a bad position, why should not the Government accede to the request of listeners-in and make broadcasting a State monopoly? What was the return for such an example of political patronage?

Other Labour members spoke on similar lines.

WHY THE LOAN WAS MADE.

In the absence of the Postmaster-General, the Prime Minister capably replied to the discussion. The money was lent because the Government's technical experts recommended that it would be desirable for the Wellington station to be of such capacity as to have a daylight range over the whole of New Zealand and a night range over the whole of the South Pacific.

This necessarily altered almost entirely the financial arrangements with the company, because it introduced new factors and new costs. The big station was of the prime importance as a national and Imperial factor. The company had met fully its original commitments, but it was only fair on extending the company's obligations to extend some temporary aid in meeting those obligations.

The Government had precedent for this from the national point of view in the advances made to coalmining and goldmining companies. The Government had security for the advance made and he could see no danger provided the company gave good service to the listeners.

GOVERNMENT CONTROL?

Mr. Holland suggested that the Government should take over the control of the service.

Mr. Coates replied that if Mr. Holland had had as much to do with the matter as he had, he would be very glad to leave the control in the hands of somebody else. It was a pioneering business and like all pioneering businesses certain difficulties were inevitable. The Government was just as anxious as anyone else to see broadcasting properly carried out and regulated. The day might come when the Government might take over the company.

THE COMPANY'S FINANCES.

In regard to the remarks of Mr. Holland and other Labour members relative to finance, the general manager of the company states: The facts are—(1) In addition to our original undertaking to find £20,000 for capital expenditure we have found and entered into commitments for £50,000, including this loan of £15,000 from the Government; thus we have ourselves already found £15,000 beyond our original undertaking and are responsible for £30,000 beyond the original sum. (2) All capital expenditures have been found by us and not one penny of revenue has been diverted towards capital, but every penny of revenue has been returned to listeners in programmes and service. (3) Our books are open in full detail to the Post and Telegraph Department and have been examined from time to time.

At the opening of 2YA, the Postmaster-General on this point said: "I have, on different occasions, had the finances of the company looked into and have satisfied myself that everything is in order, that there has been no unnecessary expense in administration and that the company gave as good a service as I could expect in the circumstances."

THE COPYRIGHT OF PROGRAMMES

Mr. R. McKeen in the debate said the company's "latest dodge" was to produce its own publication; to refuse to hand forthcoming broadcast pro-

grammes to the newspapers for publication; and so to compel listeners-in to pay a high price for the company's paper.

The official reply is: The facts are: (1) The "Radio Record" is separate from the Radio Broadcasting Company, is separately financed and separately administered. It exists to give a programme and news service to listeners and further the general cause of broadcasting. It is on a separate and independent commercial basis. (2) There has been no refusal to hand programmes to the Press for publication. Two free copies of each issue of the "Record" are posted to each newspaper that desires the programme service so that they may continue their former practice of giving daily programmes. (3) No paper formerly published programmes weekly in advance, although the opportunity was theirs to take. (4) There is no compulsion whatsoever to buy "The Record," and the price is not high.

COPYRIGHTS AND COUNTRY HALLS

The Hon. D. Buddo complained about restrictions on country halls through copyrighting.—The official reply is: The hon. gentleman must be under some misapprehension. There is no such restriction as he imagines. It is not true that the Broadcasting Company declined to allow wireless to be used in country halls unless the secretary held a license from the copyright holder. The question of the copyright of music was controlled by the owners or publishers, and once the Broadcasting Company met the royalties and copyright fees for transmission it was not concerned with what happened.

IN COMPETITION WITH THE POST OFFICE

Mr. Holland said "The company is in competition with the Post Office."—The company's reply is: We are not in competition with the Post Office. On the contrary, the Broadcasting Company materially enhances postal and telegraphic revenue. There is nothing that it helps more than it does the Post Office. Its ramifications extend from the North Cape to the Bluff. Listeners are continually writing and the company replies to all. It has a very large incoming and outgoing mail bag. It spends a lot on telegrams and on toll calls, and it receives many telegrams and telephonic communications. It pays a large sum every year for telephones and relay lines. In a hundred different ways it augments the revenue of the P. and T. Department, but not in one particular does it deprive the Department of revenue. Nothing that it sends "over the air" makes it unnecessary for anyone to send anything by mail or "on the wire." The Broadcasting Company is not in competition with the P. and T. Department.

LEADING PAPER SPEAKS OUT

IRRATIONAL "CONSTANT CARPING."

A commonsense view of the broadcast situation in New Zealand and a deserved rebuke to the policy of constant carping maintained in some quarters was contained in an editorial in "The Dominion" newspaper following on the recent discussion in Parliament upon the £15,000 loan granted to the Radio Broadcasting Company. As we show elsewhere, this loan was made to facilitate the erection of 2YA, which the technical experts of the Government recommended should be made more powerful than originally planned in the agreement with the company. The company originally undertook responsibilities for £20,000, and far exceeded its obligations in the financial commitments entered upon. To provide a £27,000 plant chiefly for Empire reasons was, however, beyond the original proposal, and hence it was only reasonable that the Government, to satisfy its own considered plans, should extend a temporary loan of £15,000 to the company. Upon this peg the Official Opposition fastened, and the discussion evoked this editorial comment, which is worth reproduction:

A good deal of interest attaches to the discussion on broadcasting which took place in the House of Representatives on Wednesday evening. The number of listeners-in in New Zealand is rapidly increasing, and it is only a matter of a few years' time before something like 20 or 30 per cent. of the population may be expected to have their sets and find instruction and pleasure from wireless news and entertainments.

Most of the criticism indulged in by members was of the carping nature we have grown so accustomed to in these days. It is most wearisome and uninspiring. The Government has assisted the Broadcasting Company with a loan

to enable it to develop its services to the country. Therefore, the Government is damned. Had the Government refused this assistance then the same people would have risen in their places and doubly damned the Government. How stupid it all is. How unhelpful.

There has been ground for complaint amongst listeners-in on account of the quality of some of the programmes broadcast. The inferior service given was almost entirely due to lack of funds. More funds were necessary to secure the best type of broadcasting plant, and also in order to place the whole service on a stronger footing. The Government assisted by way of loan to secure some of the plant required, and to-day the service is in all respects greatly improved. As the Prime Minister stated, it has been, and still is, in its pioneering stage, and those who set out to build up the service faced the risks necessarily involved. The Government left those risks to private enterprise, and wisely so. At the proper time, should occasion arise, the Government can take over the charge of broadcasting. But that is for the future to decide.

In the meantime it is only right and just that the Broadcasting Company should be given a fair trial. In recent weeks it has made great improvements in the service given, and to-day, considering all the circumstances, listeners-in should be very well pleased with the progress recorded. There is a tendency in some quarters to expect too much. With four stations to support and four separate entertainments to provide, the Broadcasting Company is set a heavy task with a comparatively small population such as New Zealand possesses to look to for support. As the number of listeners-in increases more money should be available for improving matters. Helpful criticism should be welcomed, but the constant carping by disgruntled factions merely causes irritation and ill-feeling.

NEW YANKEE WAVE-LENGTHS

The mail just to hand brings details of the new wavelengths allocated to the United States broadcast stations by the recently appointed Government Radio Commission.

The following will particularly interest New Zealanders:—

Station	Location	Metres	Power
KFWI	San Francisco	287	500
RGO	Oakland, Calif.	384	5000
KPO	San Francisco	422	1000
KYA	San Francisco	309	1000
KFWI	San Francisco	267	500
KLX	Oakland, Calif.	503	500
KFON	Lg. Beh., Calif.	241	750
KPSG	Los Angeles	275	500
KNRC	St. Monica, Calif.	374	1000
KOMO	Seattle	306	1000
KHO	Spokane, Wash.	370	1000
KMTR	Hollywood, Calif.	526	500
KHI	Los Angeles	468	5000
KNX	Hollywood	337	1000
KOIN	Sylvan, Ore.	310	1000
KHJ	Los Angeles	405	500
KGW	Portland	491	1000
KTBI	Los Angeles	283	750
KPSG	Los Angeles	275	500
KFOA	Seattle	447	1000

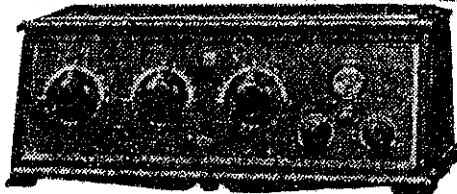
At present, owing to daylight saving in America, midnight in California synchronises with 8.30 p.m. in New Zealand.

CHICAGO STATIONS

The Chicago broadcast stations have been allotted the following new wavelengths by the U.S.A. Radio Commission:—

WNBA	208.8
WEHS, WHFC	215.7
WFKB, WCRW, WFCC	223.7
WSBC, WWAE	232.4
WGRS, WEDC	241.8
WMBB, WOK	253
WMRI, WJAZ	263
WORD, WTAS	275.1
WBCN, WBNR	283.3
WGN, WLB	305.9
WLS, WCB	344.6
WJJD, WEBH	365.0
WBBM	389.4
WHT, WBO	416.4
WMAQ, WOJ	447.5
WCFL	493.6
KYW	526

In trans-Atlantic telephone service the energy of the human voice is amplified 2,000,000 times for its journey by radio. The little trickle of that energy received on the other side is then amplified as much to make it audible.



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A RADIO EXPERT**RESEARCH APPOINTEE****A SERVICE TO LISTENERS.**

The "Radio Record" has pleasure in announcing that an appointment of outstanding interest to all radio enthusiasts has been made: that of Dr. Miles A. F. Barnett, M.Sc., Ph.D., Ass. I.R.E., as physicist to the Dominion Laboratory. Dr. Barnett, who is now carrying out investigations in England for the New Zealand Department of Scientific and Industrial Research, is highly qualified as a radio scientist.

The services of Dr. Barnett will be available to radio in the Dominion and his advice on problems in which scientific research is necessary will be invaluable.

Dr. Barnett has had a brilliant scientific career. He is a son of Sir Louis Ederard Barnett, C.M.G., of Dunedin, and took his M.Sc. degree at Otago University in 1924, gaining first class honours in electricity, magnetism and mathematics. While attending the Research Station at Clare College, Cambridge, he won the Denham Baynes Research Scholarship, and since then has been engaged as a qualified investigator under the Radio Research Board in England. He also worked at the Cavendish Laboratory, Cambridge, under Sir Ernest Rutherford.

Dr. Barnett has had a highly interesting radio career and has succeeded in solving a number of problems that were baffling investigators. He was one of the scientists who went with an expedition to Greenland to carry out research work into the question of the fading of radio signals, and has taken prominent part in a number of other investigations of the scientific side of radio.

Dr. Barnett is at present working at the National Physical Laboratory in England on problems associated with New Zealand's export produce, but will later be returning to New Zealand.

EMPIRE BROADCASTING**AN OFFICIAL STATEMENT****DIFFICULTIES OF RECEPTION NOT TRANSMISSION.**

Empire broadcasting has been the subject of an important statement by the British Broadcasting Corporation. This denies that the corporation is definitely committed to play a rightful part in that connection, but declares that it declines to accept premature and unsound proposals, which would certainly retard and prejudice the full attainment of the objective.

The relaying of London programmes on a short wave-length would arouse temporary interest, but would inevitably be followed by keen disappointment and disillusionment. The corporation is relying on the zest of available scientific opinion and research at home and abroad, and is pressing forward plans for regular Empire transmissions.

The problem is one of reception rather than transmission. If the eventual service is to reach the majority, it will have to be rebroadcast through the existing Dominion stations.

Meanwhile the corporation wishes amateurs every success in their efforts, which it hopes will contribute to a solution of a baffling problem. Though continuing the work of Empire broadcasting, the corporation is not disposed to give it priority of service. A greatly-improved system of distribution to English listeners is at present being perfected.

INTERNATIONAL CRISIS**VALUE OF 2YA, WELLINGTON****BROADCAST STATION IN CHINA SENDS TIMELY WARNING.**

The Prime Minister, the Hon. J. G. Coates, recently stated that the Government would regard Wellington's superstation, 2YA, as a potent asset in time of a national crisis. Foreign residents in China received a timely warning from a broadcast station in Shanghai when the great upheaval occurred there recently.

The Shanghai broadcast station KRC provided the means whereby thousands of missionaries and other foreigners were warned and their lives saved during the recent serious troubles in China. The story was told in a letter just received by the Kellogg Switchboard and Supply Company, of Chicago, sent to them by a group of missionaries, relating the part played by the lone Shanghai station in saving their lives.

The hampered facilities of communications and the broken-down telephone and telegraph lines and the control of the available lines by the Chinese military made the task of notifying foreigners in the remote sections of China almost an impossibility.

Station Offers Services.

It was then that the manager of the broadcasting station in Shanghai offered to help out the American naval and consular authorities, by sending out warnings over its microphone.

While there were not many receiving sets in operation in the interior—since radio equipment is classed as munition of war in China, and therefore contraband—there were quite a few receivers known to be scattered throughout the troubled area. The warnings sent out over the Shanghai station and picked up by the lucky listeners, who spread the news to their friends and neighbours, made it possible to save thousands whose fate would have remained unknown.

Built Four Years Ago.

The broadcasting station, operating under the call letters of KRC, is run jointly by the Shanghai office of the Kellogg Switchboard and Supply Company, of Chicago, and "The Chinese Free Press," a Chinese-American newspaper. The entire apparatus, except the microphones, tubes, and other equipment sent from Chicago, is home made, having been put together four years ago in Shanghai by Roy E. De Lay, a Kellogg radio engineer. This was necessary, because of the embargo on the importation into China of foreign radio equipment.

Warned in Two Languages.

Little Miss Ai-lie Wu, who is the regular announcer of the station, was the one who broadcast the daily messages of warning which were picked up by thousands scattered in the interior. She announces in both Chinese and English.

The station has been broadcasting a regular daily programme in the two languages and on Sundays religious services in three or four languages have been broadcast. The station is of 500 watt power, and has a wave length of 370 metres. It has been heard in British Columbia and in San Pedro, California. It will continue at the disposal of the authorities until all danger is past.

We are on the verge of still more wonderful things in radio. A valve of higher sensitivity than heretofore known was demonstrated recently in New York. The valve, which is termed a "grid-glow" relay, being filled with neon, is said to cause a modification in the plate current 100,000,000 times as great as that on the grid; or, in other words, it will respond with a 25-milliampere current to the most infinitesimal change in its adjustment.

SHORT WAVE RECEPTION**NOW POSSIBLE TO ALL****WONDERFUL NEW DEVICE.**

Until recently reception of short wave broadcast programmes was confined to amateurs and experimenters who could build their own short-wave equipment for the purpose. Now, through the invention of W. M. Bruce, Jr., consulting engineer of the Crosley Radio Corporation, Cincinnati (U.S.A.), and expert on submarine cable, the field has been widened so all radio fans who can afford the cost may use their ordinary receiving sets and enjoy the new form of entertainment.

Short Wave Feats.

Short wave programmes, incidentally, already are being broadcast by KDKA, Pittsburgh; WGY, Schenectady; and WLW, the Crosley radio station at Cincinnati. Remarkable records have been achieved in receiving short wave broadcasts. Stations of but a few watts power have been picked up thousands of miles away.

The New Device.

The history of Mr. Bruce's new device, known as the "Lowave," is extremely simple. The unit consists essentially of a small short-wave receiving set with detector and one stage of audio frequency amplification and an oscillator tube adjusted to operate within the broadcasting range.

Short to Ordinary Waves.

Signals are received by the short-wave set and are detected and amplified by the two valves provided for this purpose. The amplified signals are then impressed on the oscillator valve, which is modulated by them and which

SOS**INFORMATION WANTED**

We have received the following incomplete subscriptions, and would like the necessary data to enable us to send the paper:—

A P.N., 7/6, from Hastings, dated August 2; no name or address.

E. W. Meek.—No address (7/6 enclosed); August 1.

A. H. Hayes; no address. 7/6 from Morrinsville, dated August 5; no name or address.

reproduces the signals on a longer wavelength, for example, 300 metres, so that they can be heard on an ordinary broadcast-receiving set attached to the device. It is merely necessary, then, to connect the output of this oscillator valve to a radio set, tune the set to 300 metres (or whatever wavelength the oscillator valve is adjusted to), and listen to the short-wave signals. In brief, the signals are picked up on the short wave, used to modulate an oscillator valve, and rebroadcast into the radio set at ordinary broadcast wavelengths.

Simple, But Ingenious.

Simple as the unit is in theory, ingenuity of design has been used by the inventor in order to reproduce units in large quantities which would have uniform characteristics. The small capacities and inductances which must necessarily be used in the short wave portion of the circuit make it important that precision methods be used in its design and manufacture. As produced by factory methods, the new invention is both compact and rugged. The cabinet is about one-third the size of an ordinary five-tube radio set.

Connects to Ordinary Set.

To install the Lowave, the aerial lead wire is disconnected from the radio set and attached to the aerial terminal of the Lowave. The terminal on the Lowave marked "Set" is then connected to the aerial post of the radio set. The "A" plus and "A" minus terminals of the Lowave are connected to the regular "A" battery used with the radio set, while the "B" battery terminals of the unit are connected to a separate "B" battery.

Easy Operation.

Short wave tuning is accomplished by means of a control knob and a second dial adjusts the amount of regeneration of the short-wave detector valve. In order to shift from short-wave reception to long wave reception, or vice versa, a push pull switch is provided. When this switch is pushed in, the antenna is connected direct to the antenna post of the radio set, cutting the Lowave out of the circuit. When the switch is pulled out, the incoming signals pass through the Lowave circuit before reaching the switch without disturbing the connections, in order to shift back and forth from short waves to ordinary broadcast wavelengths.

To avoid mental shock to a patient who is undergoing an operation with the aid of only local anaesthetics, it is desirable to keep his mind engaged. Surgeons in St. Luke's Hospital, Chicago, now place a radio set beside the operating table and carve the conscious patient to the accompaniment of music. Such items as "Nearer, My God, To Thee," should not be tuned in.

STATIONS LINKED**SIMULTANEOUS BROADCASTS**

It is only a matter of time when the New Zealand broadcast stations will be linked together by land lines, so that a special programme or announcement from one of the stations will be simultaneously broadcast from each of the other three. In the United States this system has been in vogue for some time, and now one big combination operates three huge chains of stations.

HUGE AMERICAN CHAINS.

The National Broadcasting Company, with its three networks, covers the entire United States. There are at present on the Red Network 22 cities, while eight are associated with the Blue. The Pacific coast network, which reaches from Los Angeles to Spokane, includes seven stations. It has been over these three comprehensive radio systems that the nation has heard President Coolidge and other speakers of national importance, as well as the Chicago Civic Opera broadcasts last January and other musical, political, and sports events of outstanding interest.

AUDIENCE OF 20 MILLIONS

Officials of the National Broadcasting Company have estimated that an audience of 20,000,000 persons listen when the three networks are transmitting, which is indicative of the tremendous number of radio enthusiasts to whose enlightenment and entertainment Chicago will contribute.

RED AND BLUE NETWORKS

Stations of the Red and Blue Networks are located in the following cities: WJAZ, New York; WJBR and WJZA, Boston; WJAR, Providence; WTAG, Worcester; WTIC, Hartford; WBZ, Springfield; WGR, Buffalo; WLIT, Philadelphia; WRC, Washington; WCHS, Portland, Me.; WCAE and KDKA, Pittsburgh; WTAM, Cleveland; WWJ and WJR, Detroit; WSAI, Cincinnati; KSD, St. Louis; WOC, Davenport; WSM, Nashville; WMC, Memphis; WMAQ, KYW, and WBBB, Chicago.

ADVANTAGES IN THE DOMINION.

The chaining together of the New Zealand stations by land lines would prove of particular advantage in the event of a national crisis. Announcements broadcast, for example, from 2YA, Wellington, could be simultaneously broadcast by the other three stations so that even the crystal set owners in each city could hear them.

AUSTRALIAN SUCCESS.

During the opening ceremony of the Federal Australian capital, Canberra, several Australian stations, including 5LO, Melbourne, were linked by land lines to Canberra, and listeners operating crystal sets in Melbourne heard every word uttered at the ceremony.

On previous occasions Australian stations have been connected by land lines with successful results.

RADIO ON THE FARM

New Zealand farmers, read this! More radio sets were sold to farmers in Western Canada last year than to any other class. Radio has developed into an important factor in land settlement. It has banished the traditional isolation of the farm. Radio keeps the new settler in constant communication with the outside world, gives him information on the latest phases of agriculture, keeps him in touch with market prices and furnishes his family with music and entertainment.

LEARN ESPERANTO

Lesson 3 of our Esperanto course, which, as most readers are aware, is being conducted in conjunction with 2YA, is presented below.

During the instructional transmission from the station, students should have a copy of the printed lesson at hand. This point is again stressed in order that the broadcast lesson may be more readily followed and understood.

Inquiries relative to Esperanto may be made to "The Esperanto Instructor," N.Z. Broadcasting Co., Ltd., Wellington, or care of "Radio Record." A stamped addressed envelope must accompany each inquiry, otherwise a reply cannot be guaranteed.

LESSON III.

(To be broadcast from 2YA on August 18, from 7.39 to 7.51 p.m.)

The Adjective.

All ADJECTIVES (words which qualify or describe nouns) end in A. They agree with their noun in number and case. La tertā amato desegnis novan cirkviton. The clever amateur designed a new circuit. Grandaj stacioj sendas longajn ondojn. Large stations transmit long waves.

Degrees of Comparison of Adjectives.

The comparative of EQUALITY is expressed by TIEL (as, so): KIEL (as); mi estas TIEL forta, KIEL vi. I am as strong as you. The comparative of SUPERIORITY by PLI (more): OL (than): mi estas PLI forta OL vi. I am stronger than you. The comparative of INFERIORITY, by MALPLI (less): OL (than): mi estas MALPLI forta OL vi. I am weaker (less strong) than you. The SUPERLATIVE of SUPERIORITY by PLEJ (most): EL (out of, of): mi estas LA PLEJ forta EL c'uj. I am the strongest (most strong) of all. The SUPERLATIVE of INFERIORITY, by MALPLEJ (least): EL (out of, of): mi estas LA MALPLEJ forta EL c'uj. I am the weakest (least strong) of all. The SUPERLATIVE ABSOLUTE by TRE (very): mi estas TRE forta. I am very strong.

Vocabulary.

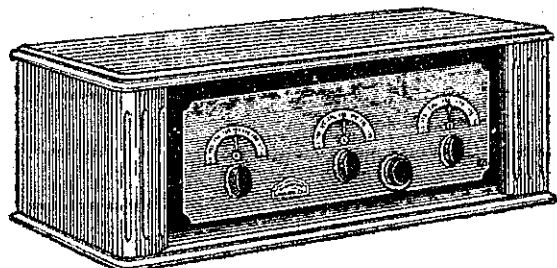
bela—beautiful.	homo—man, hu-
blanka—white	man being
blua—blue.	hundo—dog
bona—good	infano—child
fidela—faithful	Johano—John
forta—strong	lakto—milk
fres'a—fresh	mano—hand
juna—young	pura—pure, clean
matura—ripe	pano—bread
nova—new	papero—paper
nutra—nutritious	tablo—table
neg'o—snow	vino—wine
ric'a—rich	onklo—uncle
sana—well, healthy	pli—more
c'ielo—sky, heaven	ol—than
festo—holiday	sed—but
fraŭlino—maiden	tre—very
lady, miss	ne—no, not
	sur—on, upon

Translate and read aloud:

La patro estas sana. Infano ne estas matura homo. La c'ielo estas blua. Leono estas forta. La patro estas bona. Le mano de Johano estas pura. Papero estas blanka. La papero estas tre blanka, sed la neg'o estas pli blanka. Lakto estas pli nutra ol vino. La onklo estas pli ric'a ol la frato. La hundo estas fidea. La libro estas nova.

"Lady Singleton is asking for you on the television, sir." "Dear me, I shall have to call her back. I'm not dressed."—Frank Godwin in "New York Evening Post."

The first "radio suicide" is reported from Vienna, where a middle-aged domestic fell in love with a musician whose broadcasts she heard over her radio. She bought his photograph and treasured it; but her impassioned love letters remained unanswered by even a verification of reception, and finally the heartsick spinstster turned on the gas.

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From the Woman's Point of View.

By VERITY.

COLOUR HARMONY

Can you think of any woman of your acquaintance who is really indifferent to the atmosphere created by her surroundings? Who does not wish to capture that illusive thing called "charm" for her drawing-room or lounge? To know, too, how to choose fabrics for the bedroom that are soothing, calming, and restoring. The home is not merely a medley of haphazard colouring. It is far more—it stands as a restful retreat from the outer world, picturesque, but peacefully intimate. To choose and blend colours correctly necessitates a knowledge of colour balance and design that will give the right atmosphere.

The production of colour harmony, said Miss Puechegud recently from 4YA, depends on the expression of a correct feeling for colour; and in order to express colour harmony we must know what the meaning of colour is.

What Are Colours?

Colours are the result of rays of white light falling upon various substances, each of which has the property of absorbing some of these rays and reflecting others. Thus red paint absorbs all other rays except red ones, which it reflects. Violet absorbs all

certain colour arrangements which are harsh and discordant, immediately change or alter to agreeable combinations by the introduction of another tone or colour. It is true that some are born colourists, knowing instinctively the right combination to use. These happy beings have what is known as true colour sense—sometimes with, but mostly without, actual knowledge of the laws operating. These people are, indeed, fortunate, for they are true artists.

Tone Values.

"Tone," she continued—"a word continually on the lips of modern artists and critics—implies the relation of all colours to each other, as determined by the amount of light which each reflects. It is the value of the colour in the scheme of the whole. Tone values are to the painter or decorator what harmonies are to the musician. Splendour of colouring is not produced merely by the use of brilliant local colours. There is all the difference in the world between a number of bright, unblended tints promiscuously spotted together in a kind of patchwork, and a consistent colour scheme.

Nature's Colour Schemes.

"In nature, objects do not appear as simple masses of hard and uniform colours, but are broken into subtle gradations of endless variety, every tint bor-



MISS MARGUERITE PUECHEGUD.

whose extremely interesting lectures are broadcast from 4YA during the afternoon sessions, is the recipient of many letters of appreciation from listeners. On Tuesday she talks on "Interior Decoration" in its numerous branches, and she has a thorough knowledge of her subject, having studied architecture, and accumulated a wonderful knowledge of wallpapers, paints, stains, enamels, etc. She is also well versed in furniture of all periods.

Miss Puechegud has now commenced a series of cookery talks, which are heard on alternate Friday afternoons.

figure and animals, the treatment adopted was the illumination in colour of flat surfaces, and consequently they relied on well-balanced contrasts of colour for artistic effects. Considering the limitations of their colour range and methods of execution, it is remarkable how well they managed to obtain and preserve the fine sense and expression of colour harmony which generally characterises their work.

Origin of Primary Colours.

Miss Puechegud proceeded to say that "The colours used by the Egyptians were the pigments and tints of yellow, red, blue, green, brown, black, and white. The yellows, reds, and browns were obtained from the ochre earths, the bright blues were mineral colours composed of copper, sand and a sub-carbonate of soda. Some colours used were of vegetable origin, such as indigo. The greens were mixtures of blue and yellow, blacks were obtained from carbonaceous substances, and whites were made from lime and gypsum. Egyptian colour combinations have a distinct character of their own, that is quite different from the colour arrangement of any time and country. As an illustration of the knowledge of the laws of colour put into practice, the Egyptians, like other nations of the East, remembering their bright and dazzling sunlight, have used only strong and positive colours, in order to emphasise the forms and contours of their architecture, to give the necessary variety to surface, to keep the construction clear and to distinguish the various members of architecture which would be, if it were not for colour, almost indistinguishable in the brilliancy of the Eastern sunshine. The positive colouring of the dress material used by the natives of the East is not by any means harsh or strong when seen under the intense sunlight. Every race has its own particular idea of colouring, but whatever the arrangement it will always be found that it is the expression of a correct feeling for colour.

The Eye the Best Judge.

"Although successful decorative harmony and contrast depend on the correct feeling and expression, it must be admitted," concluded Miss Puechegud, "that the eye is the best judge of what constitutes harmony and contrast. Sometimes one is at a loss to know what particular tint or shade one should select to complete the harmony of some arrangement. When in a situation like this, turn your attention to some of the countless schemes of natural harmonies. The time spent in the study of this fascinating subject will more than repay one, for there are few more lasting and exquisite pleasures than the creation of beauty in our homes and intimate surroundings."

MY HAPPY INVALID

(By "Verity.")

In an upstairs room, lying on his back month in, month out, is a sick man I know. Until the other day, he used to lie for hours in tragic boredom watching a belated, stupefied fly stagger aimlessly across the ceiling, or staring at the pattern on the wallpaper, wondering fretfully why that bird with an open beak didn't have the sense to shut it. If only that blinking bird, repeated at least sixty times on the same old bough, would have the sense to shut its blessed beak, or close its beady eye!

Visitors are few and far between now—he had been lying there so long—reading makes his eyes ache, and it's

so tiring to hold a book directly over one's face. So until the other day he had nothing to do between doses of medicine and the doctor's visits, except listen to the sounds in the house—a door banging (oh, curse that banging door!), the woman sweeping the stairs (what a devil of a time she takes over that flight of threadbare stair carpet!), and the occasional ringing of the door bell. Not much fun lying there with a nagging pain from a jumping nerve. Down below in the street is a vague hum of active life—lucky people are walking about, taxi-cabs and buses are taking people to theatres, pictures, and pleasant places. Not much interest or life in a sick man's room alone with his thoughts, which are daily growing more dreary—until one day a miracle happened. It was this miracle of wireless which he had scorned so much before. Fate had dealt him her terrible blow. It was his wife who had it installed, despite his fretful protests. . . . Now for hours at a time he forgets that jumping pain. He ignores that stupid fly, and that silly bird watching him with its beady eye all day. He doesn't groan every time the church clock strikes another quarter, because it seems like an hour since the last chime. He has something wonderful to look for-

That's a cheery fellow who says the last "Good night," as though he meant it for each and all of them.

So there, now, is my happy invalid. I see him sometimes. He is a changed man. And all due to wireless. . . . All our big hospitals are seeking to extend a wireless service to their patients. What a boon that will be!

OBLATION

'Tis little I can give you, yet I can give you these . . .
A little naked dwelling to dress it as you please,
And a low moon, a gold moon, swinging in the trees.

And may be in the quiet, when the stars out-throng,
Your beating heart will tell you how you were not wrong
To count gold nor silver sweeter than my song.

So, fare you well or stay you, and I will . . . go or stay,
'Tis little I can give you, save love for every day.
And little golden heads for when your head is grey.

—A. Newberry Choyce.

"WHISPERINGS FROM HOLLYWOOD"

LECTURETTE, 2YA, THURSDAY, AUGUST 11).

Mr. Lester Browne, Head Office Representative of Fox Film Corporation, who has recently returned from a visit to Los Angeles, will give a lecturette entitled "Whisperings from Hollywood," from 2YA at 9 p.m. on Thursday next, August 11. This lecturette gives a full description of the homes, habits and hobbies of the famous stars of the motion-



picture city. Every person who has heard the names of such famous people as Delores Del Rio, Mary Pickford, Tom Mix, Douglas Fairbanks, Madge Bellamy, Harold Lloyd, the Talmadges, Janet Gaynor, Olive Borden, George O'Brien, Charlie Chaplin, Victor McLaglen, Edmund Lowe, etc., cannot fail to be interested in this intimate glimpse of their social lives, and of all those people who are connected with the making of motion-pictures. Mr. Browne knows most of the film stars intimately, and his experiences will give listeners-in of 2YA unusual and interesting broadcast entertainment of news from the city made famous by the motion-picture.

ward to! 2YA calling, all the odds and ends of the news of the day, and an evening's entertainment. Some of those lectures and talks are good in a sick man's room. They take his thoughts away—away. He ponders over the problems discussed. And all that music makes the time pass like winking. Some of those entertainers are such cheery fellows, too—as though there were no such things as ill-health in the world, and yet some of them sometimes must have the toothache and feel a bit chippy. Not a bad lesson in its way to a man who grouches overmuch.

Anyhow, life has come into a sick man's room. The world of adventure and art, and music, and business, and bustle comes surging into his ears, and he takes part again, and his tortured soul is comforted. There are slips on the line, rough weather crossing tonight. Better in bed, perhaps! What a dreadful fire that was. China seems to be in a rotten state. Pity 'Varsity didn't win that match.

What, time already for that last dose of medicine? Through the microphone voices speak to the sick men and women of this world in home and hospital, helping them to put their sufferings aside for a few hours, and lifting them out of their weary bodies.

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A GREAT WIRELESS PERFORMANCE.

A great performance in which many New Zealand listeners were interested at the time was an address given by the Queen of Holland from Station PCJJ to the Dutch East Indies. This was received in Australia and relayed, and altogether was a unique demonstration of the growing capacity of wireless for world transmission. The illustration shows the Queen, together with her daughter Princess Juliana, before the microphone.

except violet rays, and so on. But in practice the effect is infinitely more complicated, because no substance can ever be completely isolated, and each gives, not only its own peculiar red or green or violet rays, but also reflections from all adjoining substances. Further, each colour has its contrasting or complementary colour, green being the complementary of red, orange of blue, and yellow of violet. Thus, after looking intently for a few moments at a patch of red on a white ground, the eye sees more or less distinctly that the red patch is surrounded by an aureole of its complementary, and on turning immediately to a plain white ground a patch of green is distinctly visible. Again, where there are two colours side by side, each surrounded by its complementary, these complementary colours will be fixing here they meet or overlap, again producing a new combination.

Primary Laws of Colour.

There are two main primary laws to be borne in mind—that complementary colours, when placed side by side, heighten one another, while colours which are not complementary detract from one another. Thus blue placed by the side of its complementary, orange, appears more intensely blue, because it receives the addition of the blue which is the complimentary of orange. Contrast of colour is due to the modifications in the appearance of colours that are caused by the differences in hue, brightness, and purity of adjacent or contiguous colours. So on see how necessary it is to have an understanding of the natural laws that govern the production of colour before attempting to successfully harmonise or contrast colours.

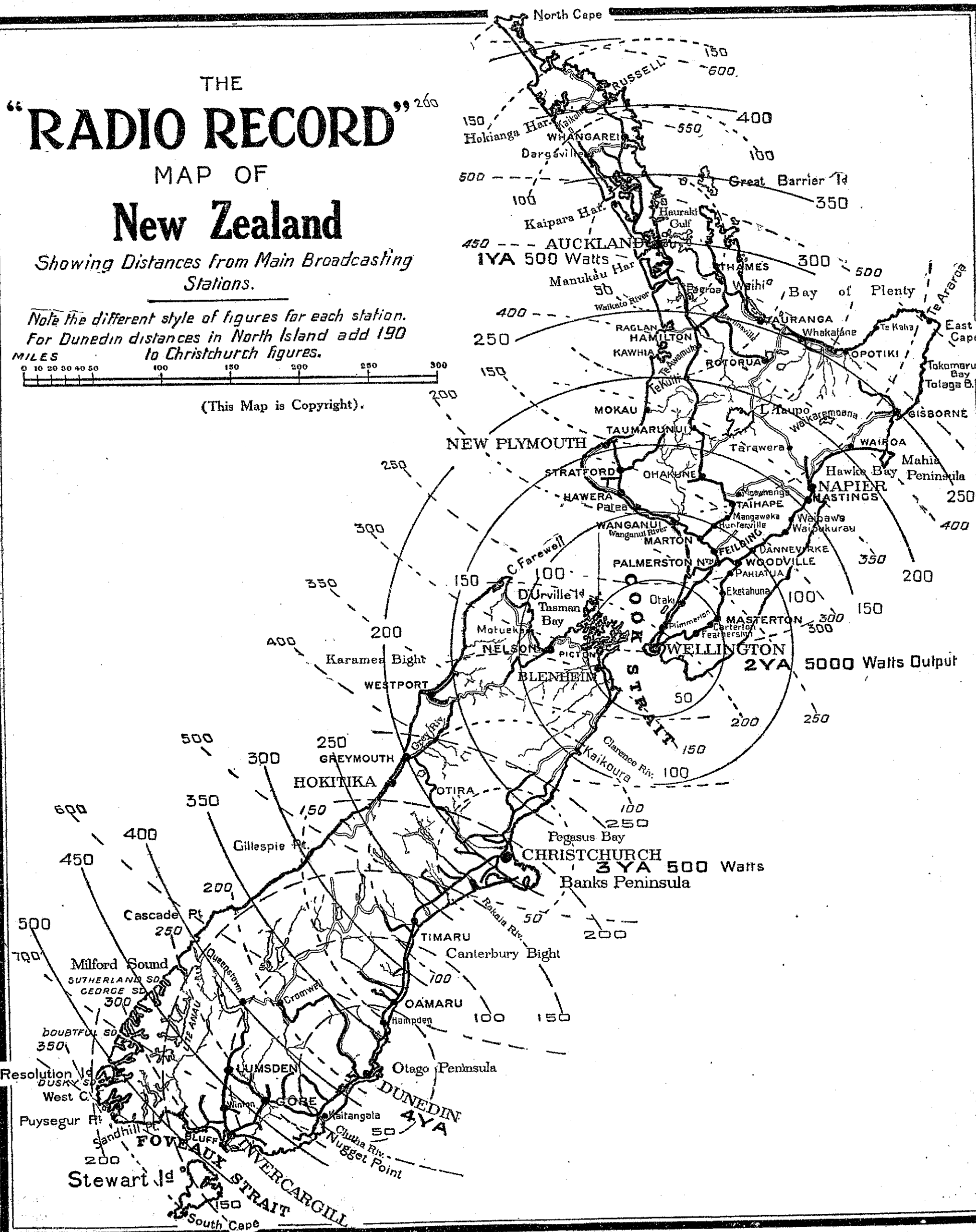
Are Colourists Born or Made?

"It is common enough to hear that colour cannot be taught," said Miss Puechegud. "This is, however, an erroneous idea, for colour can be taught only requires, as I have already pointed out, a knowledge of the laws of colour. How often do we not see

rowing something from its neighbour, every surface displaying reflections and counter-reflections, every colour exerting its influence by relation or contrast. We have only to look at the iridescent colours seen in the plumage of peacocks' feathers, humming, and other birds, also the splendid greens, blues, browns, and ruby colours of beetles, moths, and butterflies and other insects, also shells, to realise the wonderful law that operates in governing colour harmony and contrast. Some of the wonderful and exquisite combinations of colours seen in these furnishes one with schemes of colour harmony superior to any of the flora or other domains of nature. The more brilliant combinations might be used with great advantage in stained glass, enamels, and pottery. While some more sober and dusky harmonies seen on certain moths and butterflies' wings could very well be used, as motives for carpets and other textiles, wall coverings and other interior decorative colour schemes.

Early Use of Decorative Art.

"Right down through the age from the most primitive times humans have been susceptible to the influence of colour—from the savage who, knowing only the bright primary colours of red, yellow, and blue, down to the present period of culture and appreciation of the finer harmonies. The use of colour in decorative art dates at least from the dawn of the earliest historic periods. It would be safe to say that the first attempts in colour arrangements were those affects produced by the weaving of different kinds of grasses and strips of bark together to form mats for clothing and other purposes. We know that some of the very earliest examples of colour arrangements in ancient Egyptian decoration were copied from the designs and patterns of woven mats. Coloured bricks and small discs of coloured clays have been used in the formation of these patterns and specimens of this work have been found in some of the oldest tombs and pyramids in the valley of the Nile. Even in their highest artistic efforts, as in the design and colouring of the human



Full Programmes for Next

—Copyright—

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

1YA FEATURES

TWO INTERESTING TALKS.

Mr. Stanley Bull is to speak at 1YA on Tuesday at 7.30. His talk will be on "A Burmese Public Library." The series of lectures on "Physical Culture" by Mr. Norman Kerr will be continued at 1YA on Wednesday evening at 7.30.

SCOTTISH NIGHT AT 1YA.

Mr. Duncan Black, the popular bass, has, by special request, arranged a special Scottish evening for 1YA on Tuesday, August 16. Among the contributing artists will be the Orpheus Quartet, consisting of Misses Beryl Smith and E. Bentley, Messrs. Duncan Black and J. Simpson, all well-known performers in Auckland. The combination is a new one and has not previously been heard by radio. The Majestic's new orchestra will also be "on the air."

A GOOD CONCERT.

Mr. Barry Coney will be heard again at 1YA on Wednesday, August 17. This popular baritone will sing two brackets, "Break, Break," by Bathope Martin, and "Pat," an appealing number by C. L. Seiler. Mr. Coney's other bracket consists of "The Holy Child," by Bathope Martin, and "The Joy of Love," by Martini. Messrs. Davies and Salthouse will present the popular cornet duet "Besses of the Barn," and the triple tongueing number "Ida and Dot." Mr. Frank Willoughby will contribute humorous songs and sketches at the piano. Miss R. Chellberg, contralto, will sing two brackets: (a) "Lilacs," by Cadman, (b) "Down Here," by Brahe; "The Lord is My Delight," by Allitsen, and "Beloved, Sleep," (Slater). Mr. Norman Watson, violinist, is a soloist with the Aeolian Orchestra.

PONSONBY BOYS' BAND.

The main portion of Thursday evening's concert at 1YA, will be given by the Ponsonby Boys' Band. The band will be assisted by Mrs. J. Parry, soprano. She will sing, among other items, Sullivan's well known "Orpheus with His Lute." Mr. J. Hutton and Mr. J. Dickson will sing some of the best songs of their repertoire.

THE MAGIC BOX.

At 6.30 on Friday evening at 1YA Tom Thumb will further mystify the children with exciting things from his magic box. Mr. George Campbell will continue his talks on motoring at 1YA on Friday evening.

A GOOD CONCERT.

Friday night's concert at 1YA has been arranged by Mr. Arthur Colledge, a bass singer who acted as soloist.

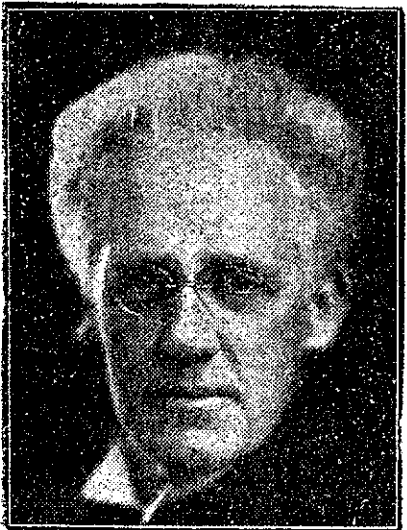


Photo Hurst.
MR. CYRIL TOWSEY.

Mr. Towsey is Auckland's leading pianist, and recently delighted listeners to 1YA. He has acted as accompanist to Dame Melba, Marchesi, and John McCormack. He has toured with Mark Hamburg, Marchesi and Carreno, and is official accompanist to the Auckland Choral Society, Royal Male Choir, and Bohemian Orchestra.

For the local Choral Society in last year's "Messiah." Miss Phyllis Gribben, contralto, is a soloist at municipal band concerts and is one of the best known contraltos in the city. Miss Gladys Gammon, an elocutionist well known on the local platform, is performing for the first time before the microphone. Miss Gammon is a gold medalist with the Wellington Competitions Society. The St. Andrew's quartet have arranged a varied selection of items. One of Miss Gribben's best numbers should be Del Riego's "Sink, Red Sun."

SATURDAY NIGHT.

At 1YA on Saturday evening Mr. Fred Baker will sing a new number in his repertoire, "Uncle Rome," by Homer. The Scott Sisters will present elocutionary and soprano items, including Liza Lehmann's "Bird Songs."

THE CATHEDRAL ON SUNDAY.

The service at the Cathedral will be broadcast by 1YA on Sunday. Canon Percival James is the preacher and Mr. Edgar Randall is the organist and choirmaster.

Station 1YA Auckland

(WAVE-LENGTH 333 METRES.)

MONDAY, AUGUST 15.

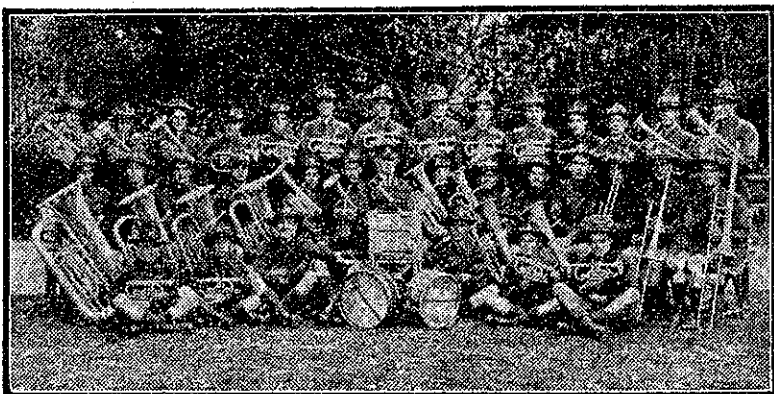
SILENT.

TUESDAY, AUGUST 16.

6.30 p.m.: Children's session—Aunt Betty.
7.15: News and information session.
7.30 to 7.45: Talk on "A Burmese Public Library," by Mr. Stanley Bull.
8.0: Chimes.
8.1: Special Scotch evening.
Relay of overture from Majestic Theatre. Mr. J. Whitford-Waugh, conductor.
8.20: Bass—Mr. Duncan Black, "Scots Wha Hae."
8.25: Soprano—Miss E. Bentley, "Angus McDonald."
8.31: Quartet—Orpheus Quartet, "Ye Banks and Braes."
8.37: Tenor—Mr. J. Simpson, "Cameron Men."
8.43: Contralto—Miss B. Smith, "Hame."
8.49: Duet—Miss Bentley and Mr. Black, "Turn Ye to Me."
8.54: Quartet—Orpheus Quartet, selected.
9.0: Weather report.
9.1: Relay from Majestic Theatre.
9.20: Bass—Mr. D. Black, "Melville Castle."
9.25: Duet—Miss Smith and Mr. Simpson, selected.
9.31: Soprano—Miss E. Bentley, "Comin' Thro' the Rye."
9.37: Tenor—Mr. J. Simpson, "Mary of Argyle."
9.43: Contralto—Miss B. Smith, "My Ain Folk."
9.49: Quartet—Orpheus Quartet, "There Was a Lad."
9.55: Duet—Messrs. Black and Simpson, selected.

WEDNESDAY, AUGUST 17.

7.15 p.m.: News and information session.
7.30 to 7.45: Talk on "Physical Culture," by Mr. Norman Kerr.
8.0: Chimes.
8.1: Relay of overture from Prince Edward Theatre. Mr. Geo. Poore, conductor.
8.20: Contralto—Miss Chellberg, selected.



PONSONBY BOYS' BRASS BAND (Auckland).

8.28: Violin—Mr. N. Watson, "Serenade" (Pierne).
8.33: Baritone—Mr. Barry Coney.
8.38: Cornet—Messrs. Davies and Salthouse, (a) "Besses o' the Barn," (b) "Garden of My Heart."
8.47: Boy soprano—Master D. Lunney, (a) "Tatters" (Lane), (b) selected.
8.55: Vocal—Mr. F. Willoughby, songs at the piano.
9.0: Weather report.
9.1: Relay from Prince Edward Theatre.
9.20: Contralto—Miss Chellberg.
9.25: Violin—Mr. N. Watson, (a) "Paradise" (Kreutzer), (b) selected.
9.33: Baritone—Mr. H. B. Coney, selected.
9.41: Cornet—Messrs. Davies and Salthouse, (a) "Ida and Dot," (b) selected.
9.50: Boy soprano—Master D. Lunney, "La Donna e Mobile" (Verdi).
9.55: Humour—Mr. Willoughby—Songs at the piano.

THURSDAY, AUGUST 18.

7.15 to 7.45 p.m.: News and information session.
8.0: Chimes.
8.1: Relay of overture from Rialto Theatre. Mr. Henry C. Engel, conductor.
8.20: March—Ponsonby Boys' Band, (a) "Heroes of Gallipoli" (Bulch), (b) "Paramount" (Beyer).
8.30: Bass-baritone—Mr. J. Hutton, "The Vulcan's Song."
8.35: Serenade—Ponsonby Boys' Band, "Farewell, My Love" (Mackie).
8.41: Soprano—Miss J. Parry, (a) "Echo" (Somerset), (b) "Orpheus With His Lute" (Sullivan).

8.49: Selection—Ponsonby Boys' Band, "Lucia di Lammermoor" (Donizetti).
8.55: Baritone—Mr. J. Dickson, "Lochnagar" (Gibson).
9.0: Weather report.
Lecture by Mr. H. C. Borrodale, announcer, 4QG.
9.1: Relay from Rialto Theatre.
9.20: Bass-baritone—Mr. J. Hutton, (a) "I Will Not Grieve" (Gounod), (b) "The Lute Player" (Mitzel).
9.29: Fantasia—Ponsonby Boys' Band, "Alexandra" (Dacre).
9.36: Soprano—Mrs. J. Parry, "To a Miniature" (Brahe).
9.41: Baritone—Mr. J. Dickson, (a) "Crown of the Year" (Martin), (b) "Garment Antique and Rusty" (Puccini).
9.50: Intermezzo—Ponsonby Boys' Band, (a) "Dancing by the Moon" (Rimsky), (b) "Under the Old Flag" (Saffroni).
Mr. Fred G. Lawn, conductor.

FRIDAY, AUGUST 19.

6.30 p.m.: Children's session—Tom Thumb.
7.15: News and information session.
7.30 to 7.45: Talk on "Motoring," by Mr. Geo. Campbell.
8.0: Chimes.
8.1: Relay of concert from Messrs. John Court's, Ltd.
8.30: Quartet—St. Andrew's Quartet, "So Glad of Heart" (Oliver).
8.35: Bass—Mr. A. Colledge, "Drake Goes West" (Sanderson).
8.40: Monologue—Miss G. Gammon, "His First Long Trousers."
8.46: Piano—Mr. G. Colledge, overture, "Bohemian Girl" (Balfe).
8.51: Tenor—Mr. R. Peters, "I Hid My Love" (d'Hardelet).
8.55: Contralto—Miss P. Gribben, "Like to the Damask Rose" (Elgar).
9.0: Weather report.
9.1: Violin—Miss M. Stoddart, selected.
9.5: Quartet—St. Andrew's Quartet, "Pussy's in the Well" (Rutenber).
9.11: Piano—Mr. G. Colledge, "Arabesque" (Schumann).
9.16: Duet—Miss A. Taylor and Mr. R. Peter, "Maying."
9.21: Monologue—Miss G. Gammon, selected.
9.26: Tenor—Mr. R. Peters, "Farewell in the Desert" (Adams).
9.31: Soprano—Miss A. Taylor, "Solveig's Song" (Greig).
9.36: Violin—Miss Stoddart, selected.
9.41: Quartet—St. Andrew's Quartet, "In This Hour of Softened Splendour" (Pinsuti).

SATURDAY, AUGUST 20.

Pakaranga Hunt Club meeting, Ellerslie.
7.15 to 7.45 p.m.: News and sports results.
8.0: Chimes.
Relay of overture from Strand Theatre, Eve Bentley conducting.
8.20: Soprano—Miss R. Scott, "Bird Songs" (Lehmann).
8.25: Baritone—Mr. F. Baker, "Uncle Rome" (Homer).
8.30: Violin—Mr. A. Gracie, (a) "Herd Girl's Dream," (b) "Minuet in G."
9.47: Piano—Mr. G. Colledge, selected.
9.50: Contralto—Miss P. Gribben, "Sink, Red Sun" (Del Riego).
9.54: Quartet—St. Andrew's Quartet, "Good Night, Beloved" (Pinsuti).



WALTER SMITH'S CLICK-CLACK BAND (Auckland).

8.38: Elocution—Miss N. Scott, (a) "The Highwayman," (b) selected.
8.46: Soprano—Miss R. Scott, "Little China Doll."
8.50: Baritone—Mr. F. Baker, (a) "King Charles," (b) selected.
8.55: Elocution—Miss N. Scott, humour.
8.58: Violin—Mr. A. Gracie, "Old Refrain."
9.2: Weather report and sports results.
9.5: Relay of dance music from Click-Clack Cabaret, by Mr. Walter Smith's Orchestra.
11.0: Close down.

SUNDAY, AUGUST 21.

6.55 p.m.: Relay of church service from St. Mary's Cathedral. Preacher, Canon P. James. Organist, Mr. E. Randall.
8.30 to 9.30: Selected studio items.

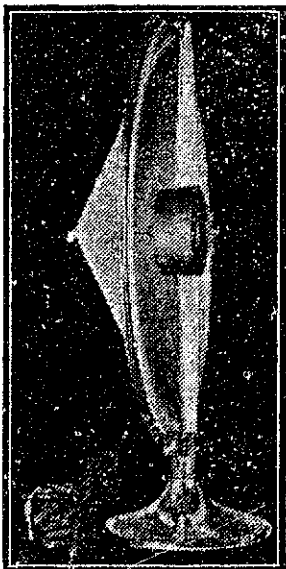
Station 2YA Wellington

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SUNDAY, AUGUST 14.

6.55 p.m.: Relay of The Terrace Congregational Church. Preacher, Rev. Ernest R. Weeks. Subject, "The Potter's Field and Broken Earthenware." Text, Matthew 27-7. Organist, Mr. H. Brusey. Musical Director, Mr. L. Barnes.
8.15: Relay of Municipal Tramways Band from His Majesty's Theatre. Mr. T. Goodall, conductor.

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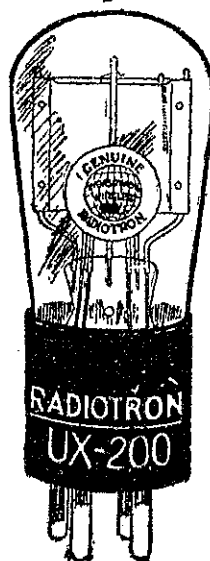
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MONDAY, AUGUST 15.

3 to 5 p.m.: Afternoon session.

7.15 to 7.30 p.m.: News session and market reports.

8-10: Chimes of the Wellington G.P.O. clock.

Instrumental—Studio Orchestra, "Reconciliation" (Fletcher).

Drawing-room concert by Miss Gwen Shepherd and party. (No times arranged. Party will do own announcing.)

Piano duet—Miss G. Shepherd and Mrs. Claude Moss, "Allegro" from "Pastoral Symphony" (Beethoven).

Baritone—Mr. Claude Moss, "In a Monastery Garden" (Ketelby).

Recitation—Mr. Will McKeown, "The Chauffeur's Dream."

Soprano—Miss Jeanette Briggs, "The Hills of Donegal" (Sanderson).

Cello—Mr. Wynne Watkins, "Gavotte" (Popper).

Monologue—Miss G. Shepherd, "What is a Gentleman?" (Andrews).

Baritone—Mr. Sydney Allwright, "Two Grenadiers" (Schumann).

Contralto—Miss Hilda Chudley, "Forever and a Day" (Mack).

Chorus—The company, "Funiculi Funicula" (Denza).

Instrumental—Studio Orchestra, "Soiree" (Zamecuik).

Elocutionary—Mr. Clement May, studies from Dickens.

Instrumental—Studio Orchestra, "Sarabande" (Rameau).

Piano duet—Miss Gwen Shepherd and Mrs. Claude Moss, "Bolero" (St. George).

Recitation—Mr. W. McKeown, "Blood Oranges."

Baritone—Mr. Sydney Allwright, "Muleteer of Malaga" (Trotiere).

Contralto—Miss Hilda Chudley, "Let Miss Lindy Pass" (Rogers), "A Little Wheel a-turning in my Heart" (Goldie).

Cello—Mr. Wynne Watkins, "Priere" (Squire).

Monologue—Miss Gwen Shepherd, "Greetings" (Parker).

Baritone—Mr. Claude Moss, "Ka Matu" ("The Bride"), (Te Rangihikeroa).

Soprano—Miss Jeanette Briggs, "Pur Dicesi" (Lotti).

Chorus—The company, "Good Night" (Ross).

Instrumental—Studio Orchestra, "Valse" (Borowski).

TUESDAY, AUGUST 16.

3 to 5 p.m.: Afternoon session.

7.15 to 7.30 p.m.: News session and market reports.

8.0: Chimes of the Wellington G.P.O. clock.

Relay of orchestral concert for school children from the Town Hall.

Instrumental orchestra—Savage Club Orchestra, overture, "William Tell" (Rossini), "Praeludium" (Jarnefeldt), "Grasshoppers' Dance" (Bucalossi), "Andante" from Haydn's "Symphony" (Haydn), "Poupee Valsante" march, "Old Comrades" (Te'ke).

9.1: Lecturette—Douglas Taylor, "Music and Work."

9.16: Contralto—Miss Audrey Bevan, "Where Corals Lie" (Elgar).

9.20: Tenor—Mr. Egerton Pegg, "Love's Pleading" (Buzza Peccia).

9.24: Piano—Miss Gwen Shepherd, "Hexentanz" (Macdowell).

9.29: Baritone—Mr. Val Jones, "Friend" (Novello David).

9.33: Soprano—Mrs. A. Harris, "Unmindful of the Roses" (Coleridge Taylor).

9.38: Piano—Miss Gwen Shepherd, "Rustle of Spring" (Sinding).

9.43: Contralto—Miss Audrey Bevan, "Drumadon" (Sanderson).

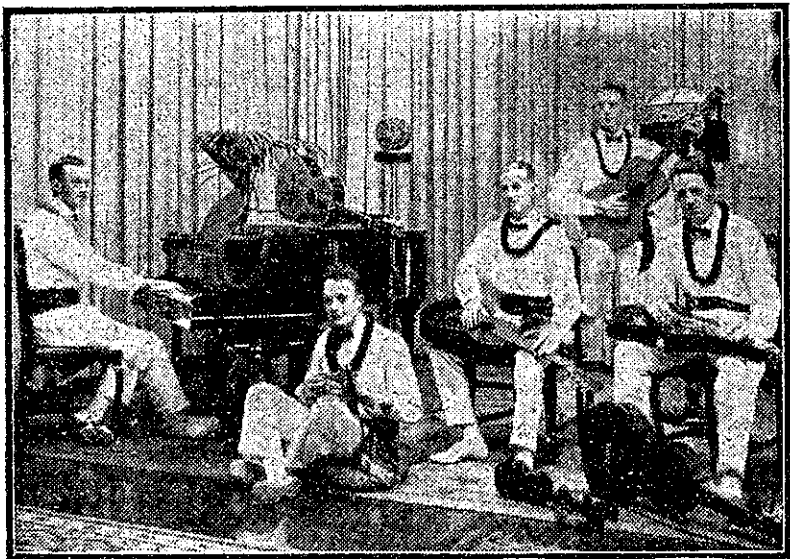
9.47: Tenor—Mr. Egerton Pegg, "Good Night, Beloved" (Balfe).

9.53: Instrumental—Studio Orchestra, "Characteristic Dance, No. 1" (Coleridge Taylor).

9.58: Soprano—Mrs. A. Harris, "The Enchanted Forest" (Phillips).

10.3: Baritone—Mr. Val Jones, "Pagan" (Lohr).

10.8: Instrumental—Studio Orchestra, "Sous la Feuille" (Thome), "La Belle Pierette" (Foulds).



Barry Ingall's Hawaiians, whose popular number is frequently heard on the air from 3YA.

WEDNESDAY, AUGUST 17.

Southland v. Wellington, Rugby relay.

THURSDAY, AUGUST 18.

3 to 5 p.m.: Afternoon session.

7.15 p.m.: News session and market reports.

7.30: Lecturette—Mr. W. King, D.E.B.A., "Esperanto."

8.0: Chimes of the Wellington G.P.O. clock.

8.9: Band—Central Mission, march, "Pomp and Pageant" (Wright).

8.14: Soprano—Miss Beatrice Brittain, "Love is a Slave" (Squire).

8.18: Quartet—Bandsmen McPherson, Smith, W. and H. Baker, "Scotia" (Round).

8.25: Tenor—Mr. J. G. Osborne, "Harlequin" (Sanderson).

8.30: Band—Central Mission, "Lolita" (Lithgow).

8.35: Contralto—Miss R. Arnold, "In Haven" (Elgar).

8.39: Band—Central Mission, selection, "Slave" (Bishop).

8.50: Baritone—Mr. J. M. Meek, "Doreen" (Allen).

8.54: Elocution—Miss E. Brice, "The Sisters" (anon.).

9.0: Weather report.

9.11: Band—Central Mission, waltz, "Always" (Berlin).

9.16: Soprano—Miss B. Brittain, "The Crescent Moon" (Sanderson).

9.20: Band—Central Mission, selection, "Carisbrook" (Calvert).

9.30: Tenor—Mr. G. Osborne, "Emblem" (Thompson).

9.34: Elocution—Miss E. Brice, "The Dentist" (Leacock).

9.40: Band—Central Mission, hymn, "Rock of Ages."

9.45: Contralto—Miss R. Arnold, "Jeunesse" (Barry).

9.49: Baritone—Mr. J. Meek, "To a Miniature" (Brahe).

9.53: Band—Central Mission, march, "Now, Colonial" (Hall).

10.0: National Anthem.

FRIDAY, AUGUST 19.

3 to 5 p.m.: Afternoon session.

7.15 p.m.: News session and market reports.

7.30: Lecturette—Mr. T. Fletcher, "Rugby."

8.0: Chimes of the Wellington G.P.O. clock.

8.1: Instrumental—Studio Orchestra, "Snowflakes" (Thiele).

8.7: Baritone—Mr. E. Quirk, "Cloze Props" (Charles).

8.11: Phono Fiddle—Mr. C. Rashbrooke, "In a Monastery Garden" (Ketelby).

8.15: Soprano—Miss E. Kimbell, "Ships of Arcady" (Head).

8.19: Instrumental—Studio Orchestra, "Chant d'Amour" (Drdla).

8.25: Contralto—Miss E. Buckmaster, "Yonder" (Olive).

8.29: Tenor—Mr. C. Williams, "Thou Art Risen, My Beloved" (Coleridge Taylor).

8.33: Cornet—Mr. E. Ormrod, "Pilgrim of Love" (Hortman).

8.37: Instrumental—Studio Orchestra, "Valse Intermezzo" (Roemer).

8.43: Baritone—Mr. E. Quirk, "My Old Shako" (Trotell).

8.47: Phono Fiddle—Mr. C. Rashbrooke, "Watchman, What of the Night?" (Sargeant).

8.51: Instrumental—Studio Orchestra, "Redzi" (Caludi).

8.58: Weather report.

9.0: Lecturette—"Imperial Affairs."

9.10: Instrumental—Kit-Kat Dance Band, "My Cutie's Due" (Schuerik).

"Baby Face," vocal chorus (Chill and Cohn), "Sunday."

9.22: Contralto—Miss E. Buckmaster, "Country Folk" (Brahe).

9.26: Tenor—Mrs. C. Williams, "Pale Moon" (Logan).

9.30: Instrumental—Kit-Kat Dance Band, "On the Riviera" (Forbstein).

"What's the Use of Crying?"

9.38: Contralto—Mr. E. Ormrod, "I Never Knew."

9.43: Instrumental—Kit-Kat Dance Band, "Red Riding Hood," vocal choruses by Bard, "Hi, Diddle Diddle," "Kentucky Lullaby."

10.0: National Anthem.

SATURDAY, AUGUST 20.

3 p.m.: Football relay.

7.15 p.m.: News session. Market reports and sporting results.

7.30: Lecturette—Mr. Chas. Wheeler, "Parliament at Work."

8.0: Chimes of the Wellington G.P.O. clock.

8.1: Instrumental—Studio Orchestra, "Edelweiss Gavotte" (Fourbie).

8.7: Vocal—Miss Phyllis Andrews, "Too Many Parties, Too Many Pals" (Henderson).

8.12: Steel Guitar Duo—Berthold and Bent, "The Rosary" (Nevin).

8.17: Entertainers—Ronnie and Monty, "Bye, Bye, Blackbird" (Henderson).

8.22: Comedian—Mr. Douglas Stark, "Glesca" (Fyffe).

8.30: Bagpipes—Mr. A. D. Small, "Medley of Scotch Airs."

8.35: Humorous recitation—Mr. Fitzroy Robson, "Uncle Josh Buys an Automobile."

8.40: Instrumental—Studio Orchestra, "By the Tamarisk" (Coates).

8.46: Vocal—Miss Phyllis Andrews, "When You and I Were Seventeen" (Kohn), "I Wonder Where My Baby Is To-night?" (Donaldson).

8.50: Steel Guitar Duo—Berthold and Bent, "Kawaihau Waltz" (Keoki Auri).

8.55: Entertainers—Ronnie and Monty, "Then I'll Be Happy" (Friend).

9.0: Comedian—Mr. Douglas Stark, "The Postie" (a Scotch character study).

9.8: Bagpipes—Mr. A. D. Small, "Loch Rosque March," "Maggie Cameron, Strathspey," "Duntroon Reel" (traditional).

9.13: Humorous recitation—Mr. Fitzroy Robson, "The Rev. Foster Addressing His Flock."

9.18: Instrumental—Studio Orchestra, "The Children's Ball" (Souza).

9.25: Relay of Chas. Dalton's Columbian Solo Six Dance Orchestra from the Columbian Cabaret, Kilbirmie.

Station 3YA, Christchurch

(WAVE-LENGTH 306 METRES.)

SUNDAY, AUGUST 14.

6.30 p.m.: Relay of evening service from St. Andrew's Methodist Church.

Preacher, Rev. Norman L. D. Webster, B.A. Choirmaster, Mr. J. C. McLean. Organist, Mr. R. E. Lake. Anthems: "O God, Thou Art Worthy to be Praised" (Sullivan), "The Sun Shall be no More" (Woodward). Solo: Miss Agnes McLean, "A Song of Thanksgiving" (Allison).

8.0: Musical items from 3YA studio.

Piano solo—Miss Alice Gibb, "March de Rakoczy" (Berliot-Liszt).

Baritone solo—Mr. Theo. Turner, "The Ships of Arcady" (Head).

Mezzo-contralto—Mrs. A. E. G. Lytle, "Echoes" (three songs, a, b, and c), (Allan).

Piano solos—Miss Alice Gibb, (a) "Cradle Song" (Schubert), (b) "Cascade du Chaudron" (Bendel).

Mezzo-contralto solo—Mrs. A. E. G. Lytle, "Have You News of My Boy, Jack?" (E. German).

Baritone solos—Mr. Theo. Turner, (a) "'Tis the Day" (Leoncavallo), (b) "Thanks be to God" (Dickson).

MONDAY, AUGUST 15.

6.30: Children's session, by Uncle Sam.

7.15: News and reports.

8.0: Chimes. Studio concert by Band of 1st Canterbury Regiment (Infantry), under direction of Lieutenant C. H. Hoskin, assisted by vocal soloists.

8.1: March—Band, "Listen to the Band" (W. G. Chapman).

8.6: Mezzo-soprano solo—Miss Doris Irvine, "Sing! Joyous Bird" (Phillips).

8.9: Boy soprano soloist—Master Frank Robinson, "A Song of Holiday" (Slater).

8.12: Fantasia—Band, "Country Life" (Le Duc).

8.19: Mezzo-soprano solo—Miss Freida Davison, "Come to the Garden, Love" (Slater).

8.23: Tenor solo—Mr. Leonard Neil, "Two Eyes of Grey" (McGeoch).

8.26: Overture—Band, "Fifth Revels" (Rowlings).

8.31: Devonshire dialect—Mr. W. C. H. Hallams, "How the Wireless Works" (M.S.).

8.36: Mezzo-soprano solo—Miss Doris Irvine, "Elf and Fairy" (Densmore).

8.39: Triple tongue polka—Band, "Bostonian" (Rimmer).

8.43: Boy soprano soloist—Master Frank Robinson, "Don't Hurry" (Sander-son).

8.53: Talk—Sports announcer, "Cricket, in Relation to New Zealand Cricket Team in England."

9.5: Fantasia—Band, "Nursery Ditties" (Raymond).

9.13: Mezzo-soprano solo—Miss Freida Davison, "The Dawn Has a Song" (Barrier).

9.16: Chorus—Band, "Comrades in Arms" (Adam).

9.21: Tenor solo—Mr. Leonard Neil, "Beneath Thy Window" ("O Sole Mio"), (Di Capua).

9.25: Devonshire dialect—Mr. W. C. H. Hallams, "The Beauty Show" (M.S.).

9.29: Selection—Band, "Pirates of Penzance" (Sullivan).

(Continued next page.)

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2YA WELLINGTON

SUNDAY'S SERVICES.

The service at the Terrace Congregational Church will be broadcast by 2YA on Sunday, August 14. The preacher will be the Rev. Ernest R. Weeks, and his subject will be: "The Potter's Field and Broken Earthenware." Afterwards a concert provided by the Municipal Tramways Band will be relayed.

A DRAWING ROOM CONCERT.

A drawingroom concert presented by Miss Gwen Shepherd, L.A.B., and party will provide most of the musical fare for Monday evening. Miss Gwen Shepherd, herself an accomplished artist, has got together a talented combination, both vocal and instrumental, while she has not overlooked the humorous element. Her associates will be Mrs. Claude Moss, Mr. Claude Moss (baritone), Mr. Will McKeown (elocutionist), Miss Jeanette Briggs (soprano), Mr. Wynne Watkins (cellist), Mr. Sydney Allwright (baritone), and Miss Hilda Chudley (contralto).

Miss Jeanette Briggs, soprano, who is to sing on Monday evening, is the talented daughter of a talented mother—Madame Emily Briggs.

Mr. Clement May, the well-known elocutionist, will be "on the air" again from 2YA on the 15th. Another selection of delightful characterisations from the works of great authors will be presented.



MR. EGERTON PEGG.

Mr. Egerton Pegg, a fine tenor soloist, is to sing at 2YA on Tuesday, August 16.

MUSIC AND WORK.

The next lecturette which is to be given on Tuesday at 8 o'clock by Mr. Douglas Taylor, Supervisor of Music for the Education Department, is entitled "Music and Work."

TUESDAY'S CONCERT.

Mrs. A. Harris, soprano, who is singing at 2YA on Tuesday evening, is a cultured and experienced vocalist. She has sung for the Royal Choral Union, and was a soloist in "Faust."

MR. EGERTON PEGG.

To appear at 2YA on Tuesday, August 16, is Mr. Egerton Pegg, tenor soloist. Mr. Pegg has sung in London, and from the Auckland and Wellington Press he has received high encomiums. Mr. Val Jones possesses a rich baritone voice. He is in demand for concert work, and was very popular with 2YK fans.

The contralto will be Miss Audrey Bevin. Following a very successful song recital in Nelson recently, Miss Bevin is shortly to entertain concert audiences in Dunedin and Wellington.

(Continued next page.)

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3YA CHRISTCHURCH (CONTINUED)

- 9.37: Mezzo-soprano solo—Miss Doris Irvine, "A May Morning" (Denza).
9.40: Fox trot—Band, "La Belle Francaise" (Hume).
9.44: Boy soprano soloist—Master Frank Robinson, "June" (Quilter).
Selection—Band, "The Geisha" (Jones).
Tenor solo—Mr. Leonard Neil, "Somewhere a Voice is Calling" (Tate).
March—Band, "The Old Regiment" (first time performed in New Zealand) (Thomas).

TUESDAY, AUGUST 16.

SILENT.

WEDNESDAY, AUGUST 17.

- 6.0: Children's session, by Uncle Jack.
7.15: Addington stock market reports and other market reports.
7.30: News and reports.
8.0: Chimes. Relay of orchestral selections from Crystal Palace Picture Theatre Orchestra, under the direction of Mr. A. J. Bunz.
8.15: Bass solos—Mr. F. R. Hawker, (a) "The Admiral's Yarn" (Rubens), (b) "Off to Philadelphia" (Haynes).
8.21: Mezzo-soprano solos—Mrs. Bingham Puddey, (a) "In a Monastery Garden" (Ketylby), (b) "It Ought to Be So" (Brewer).
8.27: Humorous recitation, Miss Kathleen O'Brien, "In the Rain" (anon.).
8.30: Talk—Mr. Donald Grant, M.A., "Austria" (the remnant of an Empire).
8.45: Violin solos—Mr. Bernard Barker, (a) "Minuet in E" (unaccompanied), (b) "Hymne Autrichien" (unaccompanied), (Haydn), (c) "Fugue in A" (unaccompanied), (Tartini).
8.53: Tenor solos—Mr. Douglas Suckling, (a) "Tis the Day" (Mattinata), (Leoncavallo), (b) "You in a Gondola" (Clarke).
9.5: Relay from Crystal Palace Theatre.
9.15: Piano solo—Miss Phemie Suckling, "Impromptu" (Merkel).
9.20: Mezzo-soprano solo—Mrs. Bingham Puddey, "Retournelle" (Chaminade).
9.24: Violin solos—Mr. Bernard Barker, (a) "Andantino" (Martini-Kreisler), (b) "Rondino" (Beethoven-Kreisler).
9.30: Recitation—Miss Kathleen O'Brien, "Walnuts and Wine" (anon.).
9.34: Piano solo—Miss Phemie Suckling, "Tarantella" (Heller).
9.40: Tenor solo—Mr. Douglas Suckling, (a) "Land of Delight" (Sanderson), (b) "O Garden of Roses" (Trotter).
9.46: Bass solo—Mr. F. R. Hawker, "The Gladiator" (Adams).
9.50: Relay Crystal Palace Theatre.
10.0: Close down.

THURSDAY, AUGUST 18.

- 7.15 p.m.: News and reports.
7.30: Talk by Miss M. J. Shaw, "A Square Meal" under auspices of Home Economics Association.
8.0: Chimes. Relay of orchestral selections from Everybody's Picture Theatre Orchestra, under direction of Mr. W. J. Bellingham, F.S.M.
8.15: Tenor solos—Mr. Russell Sumner, (a) "Red Devon by the Sea" (Clarke), (b) "I Know of Two Bright Eyes" (Cadman).
8.21: Soprano solos—Mrs. L. A. Waters, "O! Thou Waving Field of Golden Grain" (Rachmaninoff).
8.25: Flute solos—Mr. W. Hay, (a) "Canzonet" (Percival), (b) "Mazurka" (Percival).
8.31: Contralto solos—Miss Mary Taylor, (a) "Thou Art so Like a Flower" (Liszt), (b) "Oh! Lovely Night" (Ronald).
8.37: Piano duet—Miss Alice Searrell, L.A.B., and Mrs. A. L. Jones, "Prometheus" (Beethoven).
8.43: Baritone solos—Mr. Arthur Macdonald, (a) "Prelude" (Ronald), (b) "The Star" (Rogers). (Mrs. Macdonald accompanying).
8.49: Violin solos—Mr. John Boschetti, (a) "Canzonetta" (d'Ambrosio), (b) "Ave Maria" (Schubert-Wilhelm).
8.55: Relay from Everybody's Theatre.
9.10: Tenor solo—Mr. Russell Sumner, "When My Ships Come Sailing Home" (Dorel).
9.14: Soprano solo—Mrs. L. A. Waters, "A Woman's Last Word" (Bantock).
9.17: Flute solo—Mr. W. Hay, "The Angel's Serenade" (Leoncavallo).
9.21: Contralto solos—Miss Mary Taylor, (a) "Thou Hast Bewitched Me, My Beloved" (Coleridge Taylor), (b) "Thou Art Risen, My Beloved" (Coleridge Taylor).
9.27: Piano duet—Miss Alice Searrell, L.A.B., and Mrs. A. L. Jones, "First Movement of Unfinished Symphony" (Schubert).
9.35: Violin solo—Mr. John Boschetti, "Bolero" (Bohm).
9.40: Baritone solo—Mr. Arthur Macdonald, "Song of the Toreador" from opera "Carmen" (Bizet).
9.44: Contralto solo—Miss Mary Taylor, "Friend o' Mine" (Sanderson).
9.48: Relay from Everybody's Theatre.

FRIDAY, AUGUST 19.

- 7.15 p.m.: News and reports.
7.45: Close down.
8.0: Chimes. Relay of orchestral selections from Liberty Picture Theatre Orchestra, under direction of Mr. Ernest Jamieson.
8.15: Baritone solos—Mr. Sydney Armstrong, (a) "Because" (d'Hardelot), (b) "City of Laughter and Tears" (Nicholls).
8.21: Mezzo-soprano soloist—Miss Margaret Ormerod, (a) "Adela" (Sperin), (b) "Mighty Lak a Rose" (Nevin).
8.27: Soprano solos—Miss Renetta Rings, (a) "The Wren" (Lehmann), (b) "In a Garden" (Hawley).
8.33: Organ solos, Mr. Raynor White, F.L.C.M., (a) "Chorale in F Major" (b) "Concert Fantasia in F" (Lemare), (c) "Reverie in D Major" (Dr. Silver).
8.53: Contralto solo—Miss Dorothy Spiller, "A Spirit Flower" (Tipton).
9.5: Tenor solos—Mr. W. J. Trewern, (a) "Come, Love, be Mine" (Leoncavallo), (b) "Mignon" (d'Hardelot).
9.11: Piano solos—Miss Bessie Pollard, A.T.C.M., L.T.C.M., (a) "Arabesque" (Debussy), (b) "Gopak" (Moussorgsky).
9.21: Baritone solos—Mr. Sydney Armstrong, (a) "Cloze Props" (Charles), (b) "For You Alone" (Geehl).
9.27: Mezzo-soprano solo—Miss Margaret Ormerod, "Hine e Hine" (Princess Te Ranghi Pai).
9.39: Soprano solo—Miss Renetta Rings, "Butterfly" (Cavanagh).
9.43: Organ solos—Mr. Raynor White, F.L.C.M., (a) "Bouree in G" (Handel), (b) "Two Russian Folk Songs" (Kreisler), (c) "Jubilate" (Dr. Silver).
9.52: Contralto solo—Miss Dorothy Spiller, "The Hills of Heaven" (Lohr).
9.55: Tenor solo—Mr. W. J. Trewern, "Come Into the Garden, Maud" (Balfé).
9.58: Piano solo—Miss Bessie Pollard, A.T.C.M., L.T.C.M., "Etude en forme de Valse" (Saint-Saens).
Relay from Liberty Picture Theatre.

SATURDAY, AUGUST 20.

- 2.45 p.m.: Relay description Rugby football match from Lancaster Park, Canterbury v. Southland.
6.0: Children's session, by Uncle Jack.
7.15: News and reports.
7.30: Football results.
8.0: Chimes. Relay of orchestral selections from Crystal Palace Picture Theatre Orchestra, under direction of Mr. A. J. Bunz.
8.15: Mouth-organ solos—Mr. G. E. Chennells, (a) "Killarney" (M.S.), (b) "Alice, Where Art Thou" (M.S.).
8.20: Humorous solos (at piano)—Mr. Edward Sargeant, (a) "Sandy McCusky" (M.S.), (b) "When I Was a Boy at School" (M. Spurr).
8.25: String quartet—Haggood's String Quartet, (a) "Just a Bird's-eye View" (Donaldson), (b) "The Question" (Elkin), (c) "That Night in Araby" (Snyder).
8.34: Vocal trio—3Y's Acres, (a) "Tie Me to Your Apron Strings Again" (Shay), (b) "Husha Bye" (Spencer).
8.38: Cornet solo—Mr. H. L. Oakes, "My Task" (Ashford).
8.41: Tenor solos—Mr. Leslie Stewart, (a) "Hats Off to the Stoker" (Arun-dale), (b) "Ten Thousand Years from Now" (Ball).
8.47: Mouth-organ solo—Mr. G. E. Chennells, "Over the Waves" (waltz), (M.S.).
8.50: Humorous solo (at piano)—Mr. Edward Sargeant, "Under the Circumstances" (Spurr).
8.53: String quartet—Haggood's String Quartet, (a) "Baby Face" (Donaldson), (b) "Parfait Amour" (Hume), (c) "Honey Bunch" (Snyder).
9.0: Vocal trio and sketch—3Y's Acres, (a) "With You" (M.S.), (b) "On a London Bus" (M.S.).
9.5: Cornet solo—Mr. H. L. Oakes, "Love's Own Sweet Song" (Molloy).
9.8: Tenor solo—Mr. Leslie Stewart, "The Poor Old Bosun" (Longstaffe).
Relay from Crystal Palace Theatre.
Relay of dance music from Kashmiri Cabaret, under direction of Mr. Les. Grummitt.

2YA FEATURES CONTINUED

CENTRAL MISSION BAND.

The Central Mission Band is to supply much of the music at 2YA on Thursday, August 18. Interspersing the band selections will be items by local artists. Among them are Mr. J. G. Osborne, a tenor with London experience, Miss E. Brice, an elocutionist very successful in Wellington competitions, Miss R. Arnold, a fine contralto, and Mr. J. M. Meek, baritone.

Miss Beatrice Brittain, L.A.B., soprano, is a sweet singer with a lot of solo work to her credit. She will contribute two songs to Thursday's programme at 2YA.

THE KIT-KAT DANCE BAND.

Tune-in for the Kit-Kat Dance Band. The Kit-Kats supply the music for a newly-formed dance club, and, incidentally, present the very latest thing in jazz—the singing in harmony of the vocal choruses of their numbers. This idea, it may be said, comes from the leading American jazz bands, and is found to "catch on" with lovers of this style of music.

Miss E. Kimbell, who is to make her first appearance before the microphone, is the possessor of a very nice soprano voice.

Miss E. Buckmaster is no stranger to the "mike," as listeners-in to old 2YE well know. Her delightfully pure and flexible voice is now to reach the larger audience of 2YA. This talented singer has established herself as a favourite with Wellington concert patrons.

Mr. C. Williams, a tenor of marked purity, specialises in oratorio. A singer of good songs who is sure to be well worth hearing.

Mr. E. Quirk, baritone, who is down for two popular songs, is an experienced vocalist. He is recently from England, where, among other engagements, he included an appearance at the New Queen's Hall, London. He has sung successfully at several band concerts in Wellington.

The phono-fiddle, with which Mr. C. Rashbrooke is to entertain listeners-in, may be described as somewhat of a novelty. The instrument used by Mr. Rashbrooke was made for him by the man who provided Cherwin, the famous white-eyed Kafir, with a similar instrument.

PARLIAMENT AT WORK.

"Parliament at Work," the second of the series of talks by Mr. Charles Wheeler, of the Press Gallery, is to be given on Saturday evening at 7.30.

SATURDAY'S MUSIC.

Berthold and Bent, the well-known steel guitar duo, are favourites "on the air." They are billed for a couple of melodious items.

Ronnie and Monty are a brace of entertainers who have won success on the full circuit of Hayward's Pictures, Ltd., as well as in concert work. They are due to provide two very pleasing items.

The music of the pipes, played by Mr. A. D. Small, will appeal to all sons and daughters of Bonnie Scotland who "listen in" to 2YA on Saturday evening. To them, no doubt, the bagpipes will be the gem of a glittering programme.

Successful in competition work and on the amateur stage—he has played for various operatic and dramatic societies—Mr. Fitzroy Robson is scheduled for a couple of humorous recitations. His efforts will doubtless contribute in no small measure to the pleasure of the evening.

The latter portion of Saturday evening's broadcast will be a relay of Charles Dalton's "Columbian Solo Six" Dance Orchestra, from the Columbian Cabaret, Kilbirnie. The "Solo Six" were always welcomed on 2YK. By the way, you may wonder why the "Solo Six"? The answer is that these six talented musicians are in combination so named because each one of them is capable of first-class solo work. People as far away as Gisborne have danced to "Solo Six" music from 2YK.

A YOUNG BROADCASTER.

Baby Phyllis Andrews, the talented little eight-year-old daughter of Mr. Frank Andrews, the clever New Zealand entertainer at the piano, is to be heard from 2YA on Saturday, August 20. This little girl has sung to huge audiences at the Grand Opera House, the big Town Hall, and His Majesty's Theatre and is the youngest member of J. C. Williamson's Regent Theatre Ballet. She is not only a wonderful dancer, but possesses a delightful little voice, which should be heard to great advantage over the air.

3YA ATTRACTIONS

SUNDAY NIGHT CONCERT.

Following the broadcasting of the service at St. Andrew's Presbyterian Church, a concert will be given in the studio of 3YA on Sunday, August 14.

NEW BAND ITEMS.

A feature of Monday's concert at 3YA will be the playing of four new pieces by the band of the First Canterbury Regiment. The pieces are: "Listen to the Band," "Nursery Ditties," "La Belle Francaise," and "The Old Regiment." The public will hear these for the first time.

Station 4YA, Dunedin

(WAVE-LENGTH 453 METRES.)

SUNDAY, AUGUST 14.

- 6.30 p.m.: Relay of service from the Methodist Central Mission. Preacher, Rev. H. E. Bellhouse. Organist, Mr. Chas. A. Martin.
8.0: Studio items and address by Miss Hunter-Watts (Mrs. Allan Wilkie) on "Rogues and Vagabonds."
8.15: Relay from King Edward Theatre. Concert by the Band of the 1st Battalion, Otago Regiment. Conductor, Mr. Lew Asten.

MONDAY, AUGUST 15.

SILENT.

TUESDAY, AUGUST 16.

- 3 to 4.30 p.m.: Afternoon concert.
Town Hall Chimes.
His Master's Voice recital.
Address by Miss M. Puechegud on "Interior Decoration—The Rejuvenation of Old Rooms."
Studio music.
Book talk, by Mr. H. Greenwood, librarian, Dunedin Athenaeum.
His Master's Voice recital.
7 to 7.30: Children's session—Aunt Diana's sister.
7.30 to 7.45: News service. Address by Pastor W. D. More, "A New Chum's Adventures in the Back of Beyond."
8 to 10: Relay from the Training College Auditorium of concert by the Dunedin Teachers' Training College students, and dance orchestra, arranged by Miss Molly Vickers.
Overture—Selected, the orchestra.
Part-song—"The Rosy Morning," the ladies.
Pianoforte duet—"Spanish Dance," Miss L. and W. Robertson.
Part-song, "Night," the ladies.
Vocal solo—"Ouvre tes Yeux Bleus," Miss Elsie Watt.
Part-song—"Ocean Garden," the ladies.
Trio—"Ring Out, Wild Bells," Miss Wright, McFarlane, and Williams.
Pianoforte solo—"Prelude" (Rachmaninoff), Miss P. Feathers.
Vocal solo—selected, Mr. E. Hamilton.
Recital—"The King's Breakfast" (Milne), Miss M. Taylor.
Part-song—"The Chimes," the ladies.
Vocal solo—"Love's Rhapsody" (d'Hardelot), Miss Eglinton.
Recital—Selected, Mr. W. Pickard.
Trio—"Sunshine and Butterflies," Misses Wright, McFarlane, and Williams.
Pianoforte solo—"Jazz Medley," Mr. A. Golding.
Vocal solo—"In the Night," Miss Eglinton.
Part-song—"Cradle Song" (Brahms), the ladies.
Recital—"Laugh and be Merry," Miss Elsie Nelson.
Trio—"Orpheus With His Lute," Misses Wright, McFarlane, and Williams.
Quartets—(a) "To the Death," (a) "Drink to Me Only," Misses M. Taylor, E. Williams, Messrs. L. Hollow and E. Hamilton.
Vocal solo—"The Market," Miss E. Williams.
Pianoforte solo—"The Naiads" (Farjeon), Miss J. Hendry.
Trio—"Song of the Gate," Misses Wright, McFarlane, and Williams.
Recital—Selected, Miss Elsie Nelson.
Part-song—"The Rock," the ladies.
Recital—Selected, Mr. W. Pickard.
Part-song—"The Chase," the Glee Club.
Vocal solo—selected, Miss E. Williams.
Part-songs—(a) "Sweet and Low" (Barnby), (b) "Stars of the Summer Night," the Glee Club.

WEDNESDAY, AUGUST 17

SILENT.

THURSDAY, AUGUST 18.

- 7 p.m.: Town Hall chimes.
Request gramophone concert.
7.45: Address by "Gargoyle" on "The Origin and Occurrences of Petroleum."
8 to 10: Town Hall chimes.
Studio concert by the Church of Christ Concert Party, and orchestral selections under Mr. Chas. Parnell, relayed from the Empire Theatre.

FRIDAY, AUGUST 19.

- 3 to 4.30 p.m.: Afternoon session.
His Master's Voice recital.
Afternoon tea music from the Savoy.
Studio items.
"Cookery Talk," by Miss M. Puechegud.
Music from the Savoy.
His Master's Voice recital.
7 to 7.30: Children's session—Aunt Diana's sister.
7.30 to 7.45: Market reports.
8 to 10: Town Hall chimes.
Studio concert.
8.45: Address under auspices W.E.A.
9 to 10: Dance music relayed from the Savoy by Ern. Beacham and his Orchestra.

SATURDAY, AUGUST 20.

Football relay—Taranaki v. Otago.

BOY SOPRANO.

A wonderful boy soprano, Master Frank Robinson, just arrived from the Old Country, is to sing at 3YA on Monday, August 15. He has been a Cathedral chorister for several years, and his advent to the microphone in New Zealand will be a keenly awaited event. He will sing, "A Song of Holiday," "Don't Hurry," and "June." Some other singers new to 3YA will make their debut in radio. These will include Miss Freida Davison, Miss Doris Irvine, and Mr. Leonard Will, a new dramatic tenor.

WEDNESDAY'S CONCERT.

Mrs. Bingham Puddey, from the English Midlands, where she enjoyed a reputation as a talented soloist, is to sing at 3YA on Wednesday evening.

On the same programme will appear Mr. F. R. Hawker (light bass), Mr. D. Suckling, Miss Suckling, and Mr. Bernard Barker (violin).

There will also appear on Wednesday evening at 3YA a very clever little reciter in the person of Miss Kathleen O'Brien. She is highly gifted, and has been well trained under Mr. Culford Bell.

A GLIMPSE OF HISTORY.

"The Remnant of an Empire" is the title of Mr. Donald Grant's lecture at 3YA on Wednesday evening. Mr. Grant spent five years in Central Europe after the war, and is well qualified to speak of the disintegration of the ramshackle old empire of Austria.

NICE CONCERT ON THURSDAY.

Much good talent has been engaged for Thursday evening's concert at 3YA. Mr. Russell Sumner, who sang

on the recent Scottish Night, will again please listeners. Miss Mary Taylor, late of Huddersfield, England, already very popular with 3YA's unseen audience, and Mr. A. Macdonald, a great favourite, will broadcast. Mr. Macdonald's items will be Landon Ronald's Prelude and Star, and the Song of the Toreador.

A new singer to radio will be Mr. L. A. Waters, lately heard to such advantage at the competitions. Other new performers will be Miss Alice Searrell, L.A.B., and Mrs. A. L. Jones, who will play pianoforte duets, and Mr. John Boschetti, who will contribute violin solos. Mr. W. Hay as a flautist is also good.

A SQUARE MEAL.

The series of addresses which Miss Shaw is giving, under the auspices of the Home Economics Association, will be continued on Wednesday, the subject being "A Square Meal."

A STUDIO CONCERT.

A studio concert, to which some good artists will contribute, will be broadcast by 3YA on Friday. Miss Dorothy Spiller, always a delight to hear, will sing. Mr. W. J. Trewern, tenor, who sang on the opening night of 3YA, will be welcomed by listeners. Miss Renetta Rings (high soprano) and Miss Margaret Ormerod (mezzo soprano) will sing.

Mr. Sydney Armstrong, who has a nice baritone voice, will give his first performance on the radio.

Miss Bessie Pollard, A.T.C.L., L.T.C.L., a highly talented pianist, as those who have heard her on 3YA know, will again please listeners. During the evening a number of pieces will be played by Mr. Raynor White, the well-known organist.

ITEMS FOR SATURDAY.

For Saturday evening's concert at 4YA a bright and varied programme has been arranged. Mr. G. Chennells will bring his mouth organ, and the Haboods their stringed instruments. Mr. Ed. Sargeant will make his bow before the microphone in humorous songs at the piano. He will play his own accompaniments. Mr. James Laurensen, who took part in the Scottish Night Concert, will recite "Not Understood," and "Kitty O'Toole." The "Three Wiseacres" will appear in concerted vocal items, and Mr. H. L. Oakes, the well-known bandsman, will contribute cornet solos.

4YA, DUNEDIN

MRS. ALLAN WILKIE WILL TALK.

On Sunday, August 14, 4YA will broadcast the service from the Methodist Central Mission, when the preacher will be the Rev. H. E. Bellhouse. At the conclusion of the church service on Sunday evening, August 14, 4YA will broadcast an address by Miss Hunter-Watts, in private life Mrs. Allan Wilkie, whose subject will be "Rogues and Vagabonds." This will be a most interesting talk dealing with the stage and Shakespeare.

DECORATION OF ROOMS.

On Tuesday afternoon at 4YA Miss M. Puechegud will again address listeners on "Interior Decoration." Her subject will be "The Rejuvenation of Old Rooms." Many folk possessing rooms which are not decorated and furnished on up-to-date lines are often at a loss to know just how to go about renovating them without the purchase of new furniture. Miss Puechegud will tell them, giving many interesting and useful suggestions along economical lines. Questions will be welcomed and answered over the air.

CONCERT BY T.T.C.

Tuesday night's programme from 4YA will be of a high order, being supplied by the Otago Teachers' Training College, under the direction of Miss Molly Vickers. This institution possesses a large and well-trained choir which will render glees, madrigals and part songs. Vocal quartets, duets and solos will be heard, and orchestral and solo items will go towards making an enjoyable programme.

INTERESTING ADDRESSES.

Listeners are advised that during August Pastor W. D. More's addresses from 4YA will be delivered at 7.45 p.m. instead of during the concert session between 8 p.m. and 10 p.m. On Tuesday night at 7.45 Pastor More will relate "A New Chum's Adventures in the Back of Beyond." This will be an amusing story of insects and reptiles in Central Australia, and the impressions they made in more ways than one on a new chum meeting them for the first time. It is hardly necessary to add that this talk will be told in Mr. More's usual breezy style.

TALK TO MOTORISTS.

That motorists far and wide are showing their appreciation of "Gargoyle's" lecturettes from 4YA every Thursday evening is demonstrated by numerous letters of thanks he receives. "Gargoyle" is probably one of the best authorities in Otago on everything dealing with the motor industry, and is always delighted to assist in solving motorists' problems. His talk on Thursday will deal with "The Origin and Occurrences of Petroleum."

CHURCH CONCERT PARTY.

The programme on Thursday evening is to be provided by the Church of Christ Concert Party, and some very fine items will be heard. Orchestral selections will also be relayed at intervals from the Empire Theatre.

TEMPTING MENUS.

On Friday afternoon Miss M. Puechegud will conduct another of her series of talks on cookery from 4YA. Miss Puechegud can always be relied upon to give details of appetising and economically prepared dishes. Studio items and afternoon tea music from the Savoy will complete this concert. The Workers' Educational Association will again "occupy the air" at 4YA for fifteen minutes on Friday evening, when another interesting address will be given during a studio programme. Lovers of dance music will be catered for with an hour of Ern. Beacham's Orchestra from the Savoy.

A HUMAN AERIAL

TUNING IN 2YA IN VICTORIA.

A correspondent writes from Victoria: The musical items were perfect. I tuned in on a loud speaker with a neutrodyne set, and as the volume was so great I switched from the outside aerial on to the tape round the room. The reception was still so good that I disconnected all aerials and tried to bring you in off my own body by simply placing my hand on the aerial post of the set. Doubtless you will be interested to learn that the volume from the loud speaker completely filled my dining room (20ft. by 18ft.), and there was no aerial other than my body. I have often brought in 3LO in this manner (and also off the little terrier's foot), but I would not have believed that a station as far away as yours could possibly be heard distinctly under such conditions. You came through as strongly as 3LO, which is only some 180 miles away, and we did not suffer from the fading experienced from 3LO.

NEXT WEEK'S SPORTS

COMING BROADCASTS

CRICKET, RUGBY, RACING.

The following attractions have been arranged for next week:—

Monday: "Our Cricketers in England"—Talk at 3YA.

Wednesday: Southland v. Wellington—2YA.

Friday: Rugby, talk by Mr. T. Fletcher—2YA.

Saturday: Canterbury v. Southland—3YA.

Saturday: Taranaki v. Otago—4YA.

Saturday: Pakaranga Hunt Club meeting at Ellerslie—1YA.

Saturday: Rugby—2YA.

(See programmes for fuller details.)

TELEVISION WAVE-LENGTHS

Official recognition of television's place in the broadcast band was given by the United States Radio Commission with the announcement that the band between 1500 and 2000 kilocycles (150 to 200 metres), now practically abandoned by the amateurs, would be utilised for broadcasting and further experimentation with "radio sight" instead of hearing. This band, with more than half as many channels as the whole broadcast range, indicates the importance assigned by the commission to the new developments. Another dictum of some interest was an official interview stating that the commission will recognise the right of local authorities to regulate stations, prescribe hours, prohibit excessive broadcasting power in congested districts, etc.

AN ANCIENT MARINER

UNIQUE ATTRACTION AT 3YA.

In the year 1871—56 years ago—two young British seamen (one of them born in New Zealand), created a record which has not since been beaten. They crossed the Atlantic Ocean in a 19ft. boat of 1½ tons measurement. It was a remarkable achievement. As great in its time as an aeroplane flight across the Atlantic to-day—and not so common. One of the men who made that trip in a cockleshell of a boat is now living in retirement near Christchurch. He is a radio enthusiast, and he has been persuaded to broadcast his reminiscences of the trip.

The filament of the 201A type valve must not be heated with less than 5 volts, as this causes it to become brittle. In other words, to get absolute satisfaction from a valve, with correct plate and grid voltages, the filament must be heated with the voltage stated by the manufacturer, no higher or lower.

SOME OF THE TALENTED PERFORMERS OF 4YA



MISS WINNIE McPEAK.

contralto, a pupil of Mr. Ernest Drake, is well-known from station 4YA. Her fine voice has been responsible for winning first place in three consecutive competitions in her class, in Christchurch and Dunedin.



MISS GWEN COOPER.

is the possessor of a pleasing, strong, clear mezzo-soprano voice, which is splendidly adapted to the microphone. This versatile young singer, who is equally at her ease in high-class ballad songs, or the lighter numbers, is a regular and easily listened-for artist at 4YA, Dunedin.



MISS MARJORIE WATTO.

pianiste (52 Brown Street, Dunedin), a performer who is always eagerly listened for, is most accomplished with the pianoforte, having enjoyed much success in local competitions, one year winning the chief piano contest, and another year amateur and professional classes. She is a holder of A.T.C.L. and L.T.C.L. degrees. Miss Watto is a regular 4YA artist.

When a galena crystal becomes insensitive it can generally be resensitised by soaking in photographic "hypo" for an hour or two. The hypo is one of the few substances which exert a solvent action on galena. This solvent action is only slight, but nevertheless it is sufficient to dissolve away the surface of the crystal, and so to expose a new and satisfactorily sensitive area.

BLOW FOR BLOW

DEMPSEY v. SHARKEY

FIGHT DESCRIBED BY RADIO.

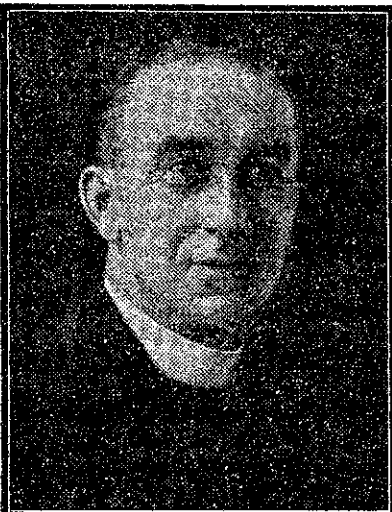
New Zealanders who were interested in the great battle between Dempsey and Sharkey will envy the millions of Americans who heard the ringside description of the fight described by radio broadcasting.

The San Francisco "News" and 25 other Scripps-Howard newspapers arranged with the National Broadcasting Company to broadcast the boxing match at New York between Jack Dempsey, former world's champion, and Jack Sharkey, a strong contender, on July 21, to decide who should attempt to wrest the championship from Gene Tunney.

Thirty-seven stations were linked up by land-lines in the chain. It was the most extensive boxing hook-up in the history of radio.

Two nationally-known NBC announcers described the contest for the millions of listeners. One was Graham McNamee, famous for his microphone pictures of the country's premier athletic events, who gave the blow-by-blow description, while his mate, Phillips Carlin, manager of W.E.A.P., New York, gave listeners a resume of each round, in addition to furnishing interesting sidelights of the fighters, the crowd and other notes.

Like a scientific romance is the plan actually to be carried out by French scientists in testing the action of radio waves in the upper air. Light balloons, carrying automatic transmitters, are to be sent up to a height of ten miles or more, where human beings cannot venture, and reception therefrom carefully recorded and studied.



REV. G. E. MORETON

is well-known throughout Otago and Southland for his social work, and also as a brilliant clarinet soloist. For many years past he has been associated with musical activities in Dunedin, being a vice-president of the Kaikorai Band, and also a foundation member of the Anglican Musical Club. Mr. Moreton's instrument is frequently heard over the air from 4YA.



MR. ALFRED WALMSLEY

is acknowledged as one of the finest tenors heard in Dunedin, and is a popular 4YA artist. Mr. Walmsley's excellent singing is always a signal for many telephoned requests of the older songs he so admirably renders. He frequently appears in the leading public concerts in the Southern City.

Broadcast listeners in New Zealand who suffer from power line interference will relish the following new item from America:—Peter J. Walter, of Milwaukee, was awarded a verdict for heavy damages against the lighting and traction company, for erecting near his home a high-tension line which prevented reception on his radio set. The case has been fought through the State Courts, and is now expected to go to the Federal Supreme Court for final affirmation. The case is legally unique.



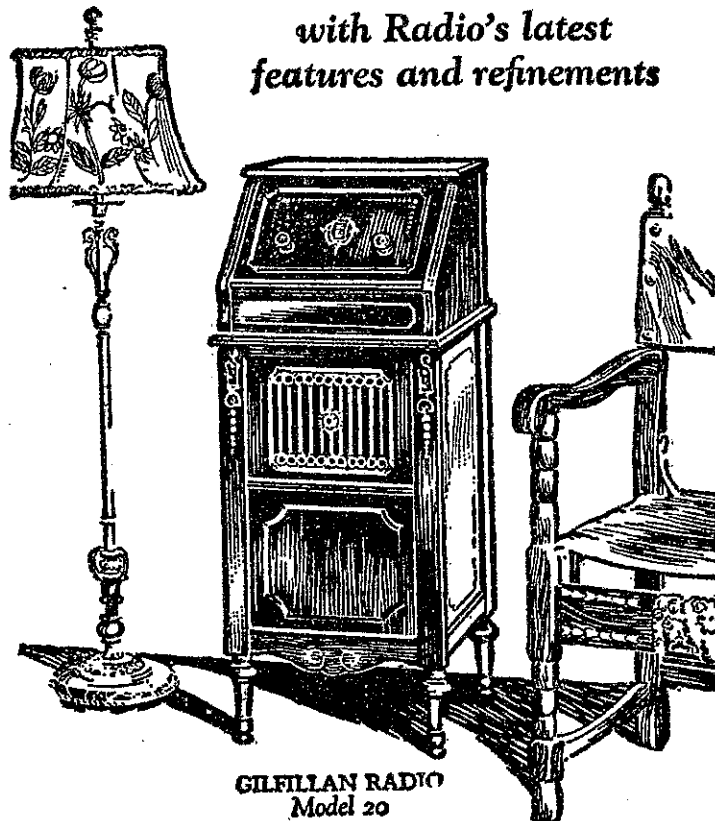
MR. E. G. BOND,

bass, is the possessor of a beautiful deep, rich voice, and his splendid modulated tones place him in the ranks of ideal broadcasting artists. Mr. Bond, who is a favourite 4YA artist, is one of the soloists in the St. Paul's Cathedral Choir, and has had considerable experience in all the branches of church music.

Station OGG, at Godhaven, the capital of North Greenland, was often heard in the United States last winter. This station, which entertains the Greenlanders during their long night, rebroadcasts from high-power stations in the United States and Canada; and is also conducting research work on the aurora. It transmits on 875 metres at 2 p.m. EST, U.S.A.

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Amongst the Listeners

This is the Listener's Corner. It is available for reports of receptions from individuals; the correspondence of Leagues of Listeners and reports of their proceedings; constructive criticism or suggestions for the betterment of radio in general and the consistent improvement of the service that broadcasting can render in our community life. We wish this page to be the meeting-place of listeners and officials for the better understanding of points of view and the problems of others. It is a "Service" page, and we invite you to make use of it. Address all communications: Editor, "Radio Record," P.O. Box 1032, Wellington.

HAWKE'S BAY NOTES

It is with very marked pleasure that we are able to record a very noticeable improvement in the programmes which are being sent out from 1YA, 2YA, and 3YA up this way. We never worry much about 4YA, for that station appears to have "gone to the pack" completely. At odd intervals 4YA dishes up transmission which is really worth while, but so seldom is it that it is generally missed.

Whilst one must express pleasure at the improvement in programmes from 2YA, it is still a fact that the station still fades just as badly as ever, and until this fault is remedied, 2YA is not going to be as popular with local listeners as either 1YA or 3YA. 1YA fades badly at times, but it is not in the same street as 2YA, and 3YA is looked upon as the best station up here.

At the last meeting of the Hastings Radio Society (or as it is now styled Hawke's Bay Radio Society), there was a general grouse about interference of all kinds. More signals came in for trouble, and a resolution was passed urging the Postmaster-General to do something to eliminate this. The trouble is that the Morse stations are not keeping a set 600 metre limit, and that is where the Government can take action. Howling valves were also freely discussed, and a sub-committee was set up to bring down a recommendation as to the best way to deal with this. A resolution on similar lines to that passed by the Auckland Listeners' League will probably be the result, but an addition will likely be made that it be the duty of the radio inspectors to make periodical inspections of all receivers.

Interference from motors and power-line leaks was a hot topic, and this was also referred to the sub-committee to investigate.

Matters are moving along very quietly in connection with the proposed local station, but will be brought to a head very shortly. The annual meeting of the society was held on Monday night (8th), and the issue of debentures for the raising of the cash was a main topic of discussion. The issue of these will be under way very shortly, and if the response is as good as expected, in a month or six weeks there should be something doing.

ROVING BY WIRELESS

TRAVELLERS' TALK FROM 2YA.

We cannot all go a-roving, but the next best thing is to hear about it first hand from those who can.

On Tuesday last listeners-in were privileged to hear a short talk from one of the two intrepid motor cyclists, just arrived in Wellington, who are travelling round the world on their machines. The speaker told us that so far they had had a delightful trip, with comparatively few disagreeable adventures. The worst that had befallen them was in Turkey, where they were forced to spend a night in prison. Turkey, in its present state of upheaval, is a hot-bed of spies, and Mr. Cathrick and his friend were arrested as such, immediately they reached Sofia. It was in vain they produced their papers and expostulated with the authorities. They were marched off to prison to be examined at 5 minutes to 7 in the evening, where to their dismay, the governor blankly refused to listen to them, simply ordering that they were to be put in prison. It afterwards transpired that the governor had a dinner engagement at 7 p.m., which accounted for his summary treatment of the prisoners. They spent a most dismal night in a verminous Turkish prison, but in the morning, the governor, having apparently spent a pleasant evening, returned in a good temper and they were given their freedom and allowed to proceed on their way.

In Milan, where they spent a pleasant day, the lecturer was rather amused at a little experience he had. It was an extremely hot day, and he went to see the cathedral, being, as he told us, keenly interested in architecture, and knowing that Milan cathedral was one of the finest in the world. While examining the exterior he was accosted by a quaint little man, who looked about a hundred years old, and who asked him if he would like to see the finest view from the finest cathedral in the world. He, knowing Italy, replied "How much?" and on producing the requisite number of lire, the old fellow led him to a little iron door in the wall and proceeded to mount innumerable steps. After a while our traveller began to tire, but the guide urged him on with promises of "the finest view in the world." "The finest view I could see," replied the traveller, "would be to see a large bottle of beer in front of me, it being, as he once more pointed out, a very hot afternoon!"

To his intense surprise, the old chap answered "Well, you shall." Greatly encouraged, the lecturer toiled upwards and finally came out on to the flat roof of the cathedral, where, to his amazement, was set out a small but comfortable bar, which contained all a man needed and entirely filled the bill as being "the finest view in the world!" The lecturer was all too brief, merely touching on his trip through India, and just detailing one place they visited, where in the past the natives used to

Our Mail Bag

"I should like to compliment you on your 2YA souvenir number. I am glad that it is your intention to publish some of the popular lectures given."—C.C., Arrowtown.

"The Radio Record" is what the listeners want. Accept best wishes for future success."—R.C.H., New Plymouth.

"The greatest value of your paper to me and many more of us out in the woods is to have a list of the programmes well ahead of time. It has filled a much-felt want, and will be heartily appreciated."—H.W.W., Marlborough.

"Your paper will fill a long-felt want, and I am sure it will receive the support it deserves."—T.F.A., Pahiatua.

Worth Double the Price!

"I think your publication a step in the right direction, and I would not be without it at double the price. Your programmes, I consider, are very good, and the song some people make about what they should get for a penny a night is amusing. I think the sporting results alone are worth the license fee. My one disappointment is the power of 2YA. On your opening night I turned my dials on 1YA and then on to 3YA without altering the volume control, and 2YA's programme came in just as strong through these stations. 2YC and 2BL come in as strong at 10 p.m. as 2YA. Can you account for this?"—G.L., Inglewood.

"I would like to take this opportunity of expressing my appreciation of your paper, and consider that it will fill a long-felt want in radio circles."—G.W.F., Dunedin.

"This paper will be much appreciated by most listeners-in. It certainly is reasonably priced."—H.C., Waiotira.

"The initial numbers of 'Radio Record' are excellent, the various articles extremely interesting to a listener-in, and the post-dated weekly programmes supply a long-felt want. The subscription is moderate, and if the present standard is maintained, I for one would not mind paying double the price. The programmes generally are showing a marked improvement, the 'Scots Night' from 3YA being a corker! Wishing the 'Radio Record' all success."—R.D.Mc., Ohingaiti.

"This paper just fills the missing link of fine programmes put out by the different stations. We can now see which evening's entertainment we would best enjoy, and get on to that station."—H.N.S., Illawarra Farm, Morrinsville, Waikato.

Value to Invalids.

"I am an invalid, and am confined to my bed, and greatly appreciate my wireless; and also your splendid paper, full of interesting matter. I wish you all success in your venture."—G.W.C., Pendafton.

"Radio has been a great boon to me. I wanted a scenic book for one of my boys, and upon inquiry found it was unobtainable in Southland. My son thought of writing to Uncle Jack, who procured one for me. I appreciate Uncle Jack's kind action very much. To-night an old widow lady is coming to my place to hear her daughter singing from 2YA, Wellington. I think it would be a good idea if some of the listeners-in could let you know of some of the benefits received through your stations."—F.J.Mc., St. Kilda. [We shall be happy to give a corner for 'Benefits Received'.]

"A most excellent publication, and conceived on excellent lines. The more technical articles the better, and your contributor 'Megolm' has begun well."—P.N.B., Silverdale.

"I wish to express my appreciation of this paper, which I think will do a great deal towards bringing the listeners-in to a better understanding of the position with regard to programmes."—E.H., Redcliffe.

Good Programmes.

"Received your souvenir number and am very pleased with it. I have a 5-valve set and got almost perfect reception on the opening night with no fading whatever. Your programmes to date have been very good. Best wishes for the success of the 'Radio Record'."—F.W., Kaikoura.

"I must thank you for the initial number, it is most interesting, and if anything like the quality of the first number is maintained, then I am sure the journal will be most popular with the radio public."—A.F.G., Oruru.

"I must say how pleased we all are

worship a neighbouring volcano, which they placated once a year by casting in for a sacrifice the most beautiful maiden of the village.

The lecturer remarked on the pleasure it gave him to be in New Zealand, and the comfort it gave them to feel they had completed half their journey. From here they would go to the United States of America, over the Andes, and through South America, thence to Africa and so Home. Truly a wonderful tour—and our best wishes go with them. D.W.

with our wireless. We are getting the very best results. Can hear Wellington distinctly on four valves, not so distinct on three, but on five valves very loud. We have got Australia on a good night with three valves and can hear every word."—B.I.F., New Plymouth.

The Winterless North.

"I have a six-valve set and heard your official opening splendidly. We are about 15 miles south of Kaitia. Would appreciate bagpipe selection from 2YA."—P. Mc., Awaroa.

"We like Wellington's station so much, and were absolutely charmed on the opening night. It is our clearest station up here."—E.A.G., Hokitanga Hospital, Rāwene.

"I must say we consider the paper a credit to the company. With regard to programmes, we are satisfied with the advance made during the past fortnight and realise that the company are doing their utmost to meet their obligations."—R.W., Kawhia.

"I must compliment you on the initial copy of the 'New Zealand Radio Record,' and hope your enterprise will meet with the success it deserves."—R.P., Waimamaku.

Sticking to Wellington.

"Speaking voice excellent, except football announcer. Football otherwise most enjoyable. Orchestra does not come out at all well—jumbles badly. The same applies to band music. Clarinet, flute, violin, cello, and cornet are excellent. Piano not good—jumbles a good deal. I may add that I never go past Wellington now when the station is 'on.' I tune in and sit tight, till you close down."—R.N.A., Blenheim.

May We Have One Hymn?

"I must say one word about the descriptive piece (I think it was a Church parade) played by the Wellington Tramway Band on Sunday evening. It was simply beautiful. Friends who listened in with us thought it was the best item they had ever heard. So please thank them for the pleasure it gave us. I do hope some future time they will play it again! May I say just one thing—could the bandmen at any station play hymns, or one hymn, in any of their programmes? I am sure 10,000 listeners-in would be pleased to hear just one hymn, even if the other 10,000 were displeased. It seems to appeal to many people, even just to remind them of bygone memories. If they object to it, may they play one on Sunday nights?"—B.J.F., New Plymouth.

Give the Company a Chance.

"In the past I have indulged in agitation against the company (not through the medium of the newspapers, as I am not in agreement with that method), especially with regard to programmes. I must say now (and other listeners in this neighbourhood concur with me) we are satisfied with the advance in this direction made by the company during the past fortnight, and realise that the company are at present doing their utmost to meet their obligations. A month ago I should have voted in favour of a change of control; to-day I say, give the company a chance, and am not in favour of any such change. Thanking you."—E. W., Kawhia.

Timing Programmes.

"Having sent in my subscription for twelve months, I feel I have already commenced to take special interest in your publication. The other night an idea struck me. In giving the daily programme of the various stations in New Zealand, would it not be possible to put in front of each item approximately the time that that item will be given? This, to my mind, would enable the listener-in to glance through the programme of the four stations and pick out items most attractive to him. By so marking the items the listener-in could switch from one station to another, and so hear the particular item he wishes to. As it is, a great many of the items are lost while one is tuned in to the wrong station. This, to my mind, could be avoided by picking, as it were, the eyes out of the four programmes, and one compiled by the listener-in of items special to his fancy. Approximate timing would aid the listener-in greatly."—D.E.B., Dunedin.

[This has been arranged for our readers. It is understood, however, that some variation may take place, but as far as possible the stated times will be observed.—Ed.]

A year or more ago, Britons were alarmed by the broadcasting of the sounds of a "revolution"; and those who missed the preliminary announcement felt that the levity was improper. Less serious was the announcement, a few days ago, that Germany and New York had been connected by the trans-Atlantic radiophone; later traced to a hoax played by a London operator on one in Frankfurt-am-Main, which led to a Press dispatch followed by an official investigation on the part of the British postal authorities.

AFTERNOON SESSIONS

START FROM 2YA

MONDAY, AUGUST 15

As from Monday next, the 15th, 2YA will be on the air in the afternoons from 3 p.m. to 5 p.m. The initial programmes will mainly consist of gramophone selections, but lectures, descriptions of cooking by electricity and by gas will be arranged for and also talks on fashions by the experts of some of the leading firms. Final details cannot be given at the time of going to press. The initial programmes will be steadily improved.

NO OUTDOOR AERIAL

LOOP A GOOD SUBSTITUTE.

Residents in flats who cannot use an outdoor aerial can employ a loop or frame aerial with good results on a multivalve set over long distances. The loop or frame aerial will operate well with a neutrodyne or Browning-Drake set.

The loop may be used on either of these sets in the same fashion as an antenna or a regular loop. The following methods are illustrative of the antenna methods. (1)—One end of the loop may be connected to the antenna post and the other terminal left open. The regular ground is left on. (2)—Both terminals of the loop may be connected together and thence to the antenna post. The ground is still left connected. (3)—One terminal of the loop may be connected to the antenna post. The other terminal of the loop may be connected to the stationary plate post of a known variable condenser. The rotary plate post of this condenser is then connected to the ground post. The ground may or may not be connected. The last method when using the loop as an antenna, is to connect both terminals of the loop to the antenna and the ground posts, shunting the terminals with a known variable condenser. Again the connection of the ground is optional. Now as to which connections to employ when using the loop as a regular loop. Either four binding posts or a double circuit jack will be needed. When using the posts, connect the beginning and the end of the secondary winding to two posts. Connect the stationary and the rotary plate posts of the condenser that originally shunted this secondary to another pair of posts opposite to those just installed and connected. When desiring to use the loop, connect the loop terminals to the posts connected to the condenser posts. When desiring to use the antenna and ground, short these posts with strips of bus bar. When using the jack, the inner terminals are connected to the beginning and the end of the secondary winding. The top terminal (should be near the end of the secondary winding) is connected to the grid post. The bottom terminal (near the end of secondary winding) is brought to the A minus post.

In response to several requests we shall publish at an early date full particulars of a four-valve Browning-Drake receiver. This circuit, when properly constructed, should have very wide range of reception when conditions are favourable. The four-valve set has one radio-frequency amplifier, detector, and two transformer-coupled audio amplifiers. If the audio is resistance-coupled, then three amplifiers would be used and the total number of valves would be five. The later types of L.F. transformer, however, leave little to be desired in the way of tone and volume when coupled to suitable power valves.

ected to the stationary plate post of a known variable condenser. The rotary plate post of this condenser is then connected to the ground post. The ground may or may not be connected. The last method when using the loop as an antenna, is to connect both terminals of the loop to the antenna and the ground posts, shunting the terminals with a known variable condenser. Again the connection of the ground is optional. Now as to which connections to employ when using the loop as a regular loop. Either four binding posts or a double circuit jack will be needed. When using the posts, connect the beginning and the end of the secondary winding to two posts. Connect the stationary and the rotary plate posts of the condenser that originally shunted this secondary to another pair of posts opposite to those just installed and connected. When desiring to use the loop, connect the loop terminals to the posts connected to the condenser posts. When desiring to use the antenna and ground, short these posts with strips of bus bar. When using the jack, the inner terminals are connected to the beginning and the end of the secondary winding. The top terminal (should be near the end of the secondary winding) is connected to the grid post. The bottom terminal (near the end of secondary winding) is brought to the A minus post.

Here is a hint to Wellington crystal-set owners:—A correspondent writes to an American journal:—"I am using an aerial somewhere between 300 and 400 feet—almost the length of the block I live in—but this is primarily to get loud-speaker volume on my 'pure and simple' crystal set. Most of the time I listen to the locals on this crystal set, which brings them in about as loud as an ordinary two-tube combination with one stage of audio amplification." For crystal sets, the longer the aerial the louder the reception.

RADIO IN ICELAND

BROADCASTING IN FULL SWING

Mr. Keith H. Thow, who was sent out by the British Standard Telephones and Cables, Ltd. to Wellington, in connection with the installation of 2YA, Wellington, recently erected a broadcast station in Iceland.

Iceland is now one of the most ardent radio fans among nations. This island, which touches the Arctic Circle, on the north, but is made habitable by the warming influence of the Gulf Stream on the coast, is probably the farthest north in radio enthusiasm.

THE TRANSMITTER.

A 500-watt transmitting equipment of standard Western Electric design, was installed at Reykjavik, Iceland's capital, by Standard Electric Atkieselskap of Oslo, an associated company of the International Standard Electric Company. It was impossible to erect a new building and new aerial masts during the winter, and the broadcast station was therefore installed in spare apartments in the principal commercial radio telegraph station at Reykjavik.

NOVEL AERIAL.

This necessitated a rather novel arrangement of the new aerial, so that it would not conflict with the 600 and 1800-metre aerials for the radio telegraph transmitters. A sloping cage was swung from one of the masts to the station building.

ENTERTAINMENT WELCOME.

Iceland had only two movie theatres and a few choral societies and bands. The promise of the new broadcast entertainment aroused all the more interest for that reason.

"With all the disadvantages," says Mr. Thow, "of severe climatic conditions, isolation of towns, difficulties of travel and lack of entertainments, it seems likely that broadcasting will become of greater utility as a public service in Iceland than in any other European country."

RADIO DIFFICULTIES.

Iceland, however, has her own radio problems. The mountains and glaciers of the interior and the frequent activity of the aurora borealis interfere with reception. In the summer there is almost uninterrupted daylight from June through August, and consequent poor results in broadcasting and receiving.

When the new station was ready for testing, no public announcement was made. But so rapidly does news spread in Iceland that everyone had heard of the tests within a few hours, and more than 100 crystal receiving sets were sold in Reykjavik the next day.

In the absence of professional artists, except for occasional visitors, the programmes are supplied by amateur talent. Reykjavik has two or three excellent male voices and mixed choral societies and a number of talented soloists. On the instrumental side there are amateur brass bands and orchestras, and it is also proposed to broadcast dance music by the small orchestra playing at the chief hotel and cafe.

LECTURES WELCOMED.

The level of education is extremely high, and as a result lectures on subjects of real interest by professors of the colleges, by members of Parliament, and others are assured of eager reception. Services at the cathedral are also broadcast, and since the cathedral is invariably packed to a point of discomfort, at least an hour before the service commences, the opportunity of those unable to gain admission to hear by radio in their own homes is anticipated eagerly.

RELAY FROM CHURCH.

The annual service for those at sea was held in a church at Hafnarfjord, about eight miles from Reykjavik. Arrangements were made to broadcast this service for the benefit of the trawlers at sea, and connection was made by telephone from the church to the broadcasting station. A large number of trawlers, up to a distance of 300 miles, heard the service.

The Iceland Broadcasting Company was financed by six prominent trawler owners and business men of Reykjavik and by public subscription. Revenue is derived from an annual license fee and a royalty on radio receiving sets and certain parts.

A PIONEER OF BROADCASTING

It would be difficult to determine who was the first person to broadcast music by wireless, but probably the late Prince of Monaco wins. His broadcasting was not accomplished by telephony, but by telegraphy—without the use of the Morse code. One morning in 1911 an operator put on the head phones in an island on the Mediterranean and not long afterwards was astounded to hear a squeaky, quavery, but quite recognisable performance of the British and French national anthems. Then came words in Morse acquainting all stations that the wireless piano on board the Prince of Monaco's famous yacht had been responsible for the surprise. It is supposed that by some ingenious arrangement on board the spark frequency was raised and lowered at the will of the operator, and thus it was possible to produce a tune.

Vagaries of the Microphone

This article, written from a recent number of the "Radio News," contains so many interesting sidelights upon studio problems, and the factors which cause variations in the results passing over the "microphone" (or "mike" as it is familiarly personified) that we reproduce it in its entirety for readers. The facts recorded will show that the conditions of the atmosphere, humidity, etc., are rarely constant, and therefore must be considered in the adjustment of the instruments for the best results.

Give your favourite broadcast station a chance, even though the programme does not sound just as you think it should at the beginning of the evening's entertainment—the first five minutes are the hardest.

In five minutes it is possible to move the "mike," shift the orchestra, get a very good idea of the kind of air that fills the studio, or do any one of a half hundred—or more, if necessary—things that will very nearly assure you of a pleasing programme during the remainder of the evening. And, remember, poor transmission is no secret to those on duty in the station, and that they probably discovered it before you did and are already working to overcome the trouble.

Most of us know that the microphone is now located as per blueprint—the result of hundreds of tests and experience in scores of studios—but conditions change from day to day and there are always the unexpected "freak" occurrences. It is these which cause the anxiety in the studio and transmitter room when the lights flash and "power" is cut into the antenna system that is radiating to perhaps a million listeners.

Radio always has been full of freaks. They were there galore back in the old days of the first auditions. To-day high power and more efficient equipment have eliminated many of them, only to make room for still new ones in unexpected places.

So critical now are the station operators and the invisible, but no longer silent, audience that no two orchestras or soloists may be broadcast in just the same way. Quite often the same orchestra cannot be broadcast more than one time on the same general layout of musicians and microphone location. This, no doubt, sounds like gross exaggeration, but it is a fact, nevertheless, in more than one studio.

Problems of the Studio.

In addition, there are the less bothersome details of adding or subtracting rugs on the floor to "tone" down "highlights" or to "pull" up the "low places"; the shifting of silencing draperies that cover the walls of the studio, and changing the location of the mike.

The latter may be moved from the centre of the studio to one corner, then to another. It may face the orchestra or have its side or back turned to the musicians. When placed in a corner it may be hidden behind the drapes of the sidewall. One voice is "brilliant," another "dark," and so they require different treatment in the pick-up; but just how different is dependent upon many factors.

There are the air conditions in the studio, of which more will be said later, and the artist may be unnatural from nervousness and pitch the voice higher than is expected. These and many other things must be discovered after the programme starts. The 1000-watt does not sign off for fifteen minutes while making the discovery, and therefore, the first five minutes are the hardest.

Sometimes the studio may be a little bit cold for an afternoon broadcast in the middle of the winter; and when it begins to warm up there is more trouble. The orchestra must change its "shade." This happened recently in a studio. The first thirty minutes were fine and then the buzzer from the transmitter room on the roof began to sound like an SOS.

"What's happened down there?" demanded the outraged operator. "Up here it sounds like all the tin cans in town have been let loose. For the love of Pete, see what you can do about it, will you?"

The announcer knew that there had been no change in the way the orchestra was performing. Every man had broadcast many times before and knew how to keep the volume level that was requested. Groping in the dark for a moment, the announcer had them tone down their next selection, and then the operator reported the transmission perfectly clear and satisfactory. After that there was no more trouble from that source.

Later we tried to analyse the trouble, but the only goat we could tag was the air in the studio.

Real "Atmospheric" Problems.

So many of these freaks are developing lately that some are beginning to dream about temperatures and humidity. One studio is new and supposed to be the most modern devised; there is an excellent forced-draft heating and ventilation system, but there are some unsolved problems that might be explained if a miniature weather bureau was set up there. The writer thinks so and is gaining a few converts. Maybe they'll get the weather bureau before they get through.

Does the temperature of a studio, where the artists are in no danger of suffocation or frost-bite, have anything

to do with the carrying power of the air between the artist and the mike?

Does the amount of humidity have any direct effect on the acoustic properties of the same air?

Do these two elements affect the walls, ceiling and floor of the studio and make them more or less vibrant? Even when the floor is oak, the walls concreted with an overcovering of "monk's cloth," and the ceiling is of felt composition?

Take this illustration. There is an orchestra which plays from a certain station every two weeks. It is composed of the same musicians, playing their usual instruments; but, every time they have returned to the studio, it has been necessary to alter their arrangement and change the mike pick-up.

Diagrams showing the location of every instrument are made in the station log for every orchestra broadcast and it is but a moment's work to refer to them. However, they have proved of little service at a later date in helping to arrange a band for a return engagement.

Is there any other explanation than that the walls of the studio and the air are not in quite the same condition? And if this is true, isn't it also true that the atmosphere is affecting even the musical instruments which are not made of metal?

Rearranging the Setting.

Recently one of the regular orchestras moved into the big studio and the members took their accustomed places. The first number had hardly started

4QG's ANNOUNCER

TO LECTURE AT 1YA.

Mr. Harry Borradaile, announcer at station 4QG, Brisbane, who has been appointed adjudicator of elocution and oratory for the forthcoming Auckland Competition Society's festival, to be held this month, will give a lecture at 1YA on Friday, August 19. His theme will be: "The Competition Movement as an Educational Factor." This lecture will take place at 9 p.m. approximately.

when the buzzer from the roof started an uproar. The banjo was running away with the ether.

However, it was being played by the same man who had been broadcasting every month for a year, and he knew his stuff. When the banjo was moved five feet further away from the mike its notes took their proper relative position.

Another freak comes to mind. There is a blind entertainer, appearing regularly on a programme as a singer, who is his own accompanist. One week it isn't necessary to close the piano and the mike may be placed on its corner. The next time the mike must go to a far corner and the piano be closed. Sometimes it has even been necessary to restore the rubber cover to all except the keyboard. This man, being blind, has developed to a high degree the acuteness of his ears, of course, so it is not reasonable to believe that there is so much variation in his performance.

Be patient, give them five minutes. Maybe after the last piano solo the heavy rubber covering has not been restored to the piano and that instrument's strings are vibrating in unison with the violin or banjo. Possibly the sounding board of the piano is picking up some note to send it reverberating into the mike. The mike can't well be moved, for you'd think your house was tumbling down, so great would be the thump when the stand was set down. And so that number goes to its conclusion in agony. Then there is a little longer wait than usual after the announcement, and the next selection comes through as it should. The mike has been moved, the piano covered up, the side curtains rearranged, and so on.

By the time these troubles are overcome, as likely as not, there is an altogether different type of number on the programme, and so the studio director and announcer may be standing on their heads again. At times an evening will become a nightmare, but none of it gets to the invisible audience; the listeners hear none of the long hours of rehearsals that precede a programme, or of the trouble that comes from last-minute programme cancellations.

There are all sorts of things like these constantly bobbing up, but the station personnel takes them as all in their day's work—which is providing you with a high brand of entertainment in your own home, every night of the week, and for which they do not always get even your thanks.

Remember, five minutes and a kind word once in a while are little in return for what we get. Let's give them both.

Some New Zealanders have shielded their receiving sets in order to shut out interference, but have been sadly disappointed with the results. Shielding, unless designed in the laboratory by competent engineers, is very likely to reduce the efficiency of the receiver.

COOLIDGE LISTENS

PRESIDENT'S WIFE TUNES IN.

Intended to help United States President Coolidge to while away the long evenings at the summer White House in the Black hills of South Dakota is a fine six-valve radio set taken along from the capital especially for that purpose. In fact, an enterprising broadcaster has offered to install a powerful temporary broadcasting station for the President's use in emergency communication and to be handy in case Mr. Coolidge decides to make a speech or two.

In the meantime, President and Mrs. Coolidge will be enjoying radio programmes from nearby stations, with Mrs. Coolidge herself operating the set. The President is a much better listener than he is credited with being; nevertheless, in Washington, he doesn't have much time for this. During the restful evenings in the Black hills, the situation is expected to be entirely different.

While there Mrs. Coolidge, who is reported to be quite a radio fan, will very likely for the first time regularly be able to hear some of the big coast stations, including KPO at San Francisco and KFI at Los Angeles. Likewise she will probably be able to get KOA at Denver with certainty. WCCO at Minneapolis will be the largest station close by, but others which ought to be heard without difficulty are most of the Chicago stations, WWJ, Detroit, KMOX, St. Louis, and most of the big stations within that area. In fact, located about half way across the continent, the Black hills ought to afford an ideal listening post, and weather conditions on the cool nights should be considerably better than in Washington.

BROADCASTS IN TURKEY

The people of Osmanieh, Turkey, have just had their first taste of radio broadcasting, according to a report to the United States Department of Commerce. A station has just been constructed in Osmanieh, and the people were amazed that a concert could be picked up out of the air with receiving apparatus.

Sets are being rented to subscribers, and although the public is greatly interested in the project they are still incredulous as to its permanency.

A station also is being constructed at Angoria, according to the report. The Osmanieh station will work on 1200 metres, and the Angoria station on 1800 metres.

"Dad," said the little boy, "where is Atoms?" "You mean what are atoms," said his father; "there is no place called Atoms." "No, I mean Atoms—the place where kings get blown to."

\$60,000 RECEIVING STATION

The Fukuoka wireless station in Irumagun, Saitama Prefecture, said to be the largest receiving station in the Far East, has been opened and now is handling all incoming messages from Europe and America. The Haranomachi station in Fukushima Prefecture is functioning for transmission only. The new station also will replace the Tomioka station in China Prefecture. The plant was started last August and cost \$60,000 to build. It is equipped with apparatus made in Japan. It also has a transmitting plant, but this will not be used except in emergencies.

The prospectus of the Indian Broadcasting Company, now erecting two 12,000 transmitters, in Bengal and the Bombay district, points out the possibilities when a chain of powerful stations shall make possible crystal reception throughout the densely-settled areas. A listener's license in India costs 10 rupees (15s.). The two new Indian stations are expected to be testing this month. New Zealanders should listen for them round about 1 or 2 a.m.

CHURCH SERVICES ARE APPRECIATED.

Many letters indicative of how greatly the broadcasting of church services on Sunday evenings is appreciated reach the Broadcasting Company. Many letters, also, reach the preachers from those who listen in from afar. Typical of these communications is one, perhaps best described as an anticipatory epistle, which reached the Rev. Clarence Eaton on the eve of the recent Sunday on which the service was broadcast from Taranaki Street Methodist Church:—"I notice," says the writer, "you are 'on the air' on Sunday evening next. We shall be in the great congregation. Dad and Mater, now high eighty years each, are coming over to join with you. Great is your opportunity 'midst the millions. We attend many church services in New Zealand and Australia—a flick in the wave-length and we jump thousands of miles. I notice Bishop Averill is 'on the air' the same night. The Spirit of Truth is nigh unto responsive people."

LOUD, BUT DISTORTED

AIM FOR TONE.

Don't bring in the music too loudly or you will overload your valves. There are physical limits to the capacity of radio valves just as there are to our appetites or the speed our car will develop without also developing trouble. Very few machines of any kind are efficient when overloaded. If we eat beyond our normal requirements we suffer all manner of disagreeable conditions—indigestion, fatigue, sleeplessness, et al; if we drive our motor beyond its normal capacity we lose traction, are bounced about, and are as likely as not to burn out a bearing or two. If, in our radio receiver, we are using small valves and we turn out enough volume to fill a dance hall we cannot expect music, because we are sure to get noise instead. Overloading our valves—and such operation is surely doing just that—results in a heavy drain on our batteries and produces distortion which almost any ear will detect.

Do Not Overload Valves.

Where small valves are employed we may well be satisfied if our load supplies volume enough for a medium sized room. Where semi-power valves are properly used we may expect enough volume from our speaker to fill a large room without sacrificing tone quality, but where music loud enough for dancing in a fair-sized hall is required ordinary valves will not do. We must use a power amplifier, equipped with power valves.

Harm to Radio.

The idea that an ordinary receiver may be used in a club or hotel dining-room without such a power amplifier is doing much more to hurt radio than to make it popular. In almost every case of this nature the receiver is cranked up to the last notch in order to have it heard above the rattle of dishes and buzz of conversation. The result is bedlam. Radio receivers, when properly designed and properly operated, are capable of tremendous volume accompanied by beautiful tone colour. They may be called upon to serve where every other means for providing entertainment fail, and they will produce music in a most satisfactory manner if we employ them with some regard for their limitations and do not look for Cadillac performances from a sliver.

While the rights of broadcast stations to the air are still to be determined, the city of Portland, Ore., U.S.A., has outlawed man-made interference (violet-ray, X-ray and similar electrical appliances) by an ordinance prohibiting the operation between 7 and 11 p.m. of any electric device causing interference to reception, and taxing each such article a 4s. license fee to pay for the inspection. Other cities are contemplating similar action.

OUR 7/6 OFFER ENDS AUG. 13!

Send 7/6

for first year's subscription to "THE RADIO RECORD"—the progressive, national Radio Weekly—full programme; for week ahead.

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As a special introductory offer, however, to induce the largest possible number of subscriptions in the shortest period of time, a concessionary rate of 7/6 per annum for immediate acceptance is submitted.

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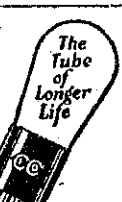
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EC

A Tube for Every Radio Need



Mainly about Construction

BY "MEGOHM"

AN EFFICIENT CRYSTAL SET

CAN BE MADE BY ANYBODY

There is a simple crystal set for the beginner in construction. It is not intended to be a permanent set, but can be quickly constructed and put into use while the owner takes his leisure to construct a more pretentious set. All that is required in addition to the items given are a pair of headphones and an aerial.

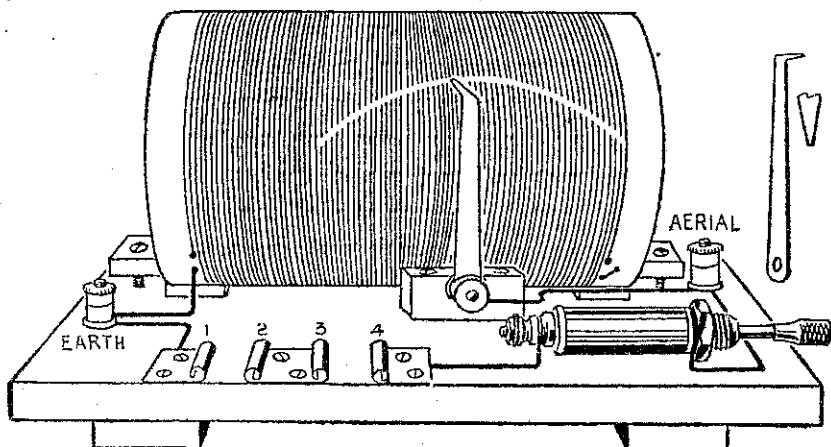
Articles Required.—Cardboard former about 5in. long and 3in. diameter, 3 brass terminals, 1lb. 20's enamelled wire, permanent crystal detector, piece of board about 9 x 5 inches, 1 dozen 1/4in. brass screws, sheet brass, etc.

As no condenser is to be used in tuning this set, it is necessary to provide a means of tapping the coil at the exact turn that tunes in the required station. Any means that will accomplish this will answer well, but the simplest and most convenient is a metal arm moving in an arc across the wires, the insulating material having been scraped away to give good metallic contact between the metal arm and the wire. The end of this arm that makes contact

ing is now proceeded with as described elsewhere on this page, and this method will be found good whether the former is bought or made at home. The ends of the coil can be supported on small blocks of wood, and the coil clamped down by a lath running through the bottom, a hole being drilled in each end of the lath through which screws may be passed to fasten the whole to the baseboard. The finish of the coil is fastened through two holes in the former, but cut off close as it does not connect to anything.

The Tuning Arm.

The brass for the tuning arm should be hard brass of 18's gauge, 2 1/2in. long, at least, but the length can best be determined after the coil is fixed in position. When straight up it should contact the wires well above the centre of the coil. The wide part of the arm is about 1/2in. across, drilled to fit over the terminal on the portion that usually holds a wire. Half an inch at the other end is turned over at right angles, the width at the bend being about 1/2in. The end is tapered nearly to a point, a small flat being filed at the extremity. The block should be thin enough to allow of the terminal projecting at the back through the hole drilled for it, so that a nut can be screwed on to keep it secure. The enamel coating is scraped off the end of a piece of wire, the end curled into a loop and secured between the base of the terminal and the block, or, better still, between the nut and the block.



with the wire on the coil must have upon it a small flat which will rest upon one wire without touching the wire on either side of it. As a crystal set is generally used only on the local station, once the arm is set it will only require moving in the event of the station getting several metres off its usual wave-length. It is convenient, therefore, to fix the pivot of the arm in a suitable position below the few turns upon which contact is to be made. If two stations can be heard, then the pivot may be fixed half-way between the two positions. The new Wellington station, 2YA, comes in best at about 80 turns on a three-inch former, with an 80 feet aerial, whilst about 100 turns should be provided to include 4YA if that happens to be the local station, and for 2YA 90 turns should be put on to leave a margin, and this same winding will suit for 1YA and 3YA, as they will tune in on fewer turns than 2YA as their wave-length is lower.

The Coil.

Twenty's enamelled wire is to be used for the coil, and wound close together goes about 23 turns to the inch, 90 turns occupying about four inches, so that a former five inches long will give a good margin at the ends. The diameter is to be three inches. Two holes are made near one end with a fine bradawl, the wire is passed in through one hole and out through the other, leaving about five inches of end. Wind-

This wire is scraped clean where it is looped round the aerial terminal, and without cutting, continues to one end of the crystal, whatever type may be used as detector. The enamel must be carefully and thoroughly scraped off the wire for a distance of half an inch or more, wherever it is to connect to another part of the circuit. Even a small portion of enamel remaining will sometimes stop signals from coming through.

The Crystal.

The crystal shown in the drawing is a good type of semi-permanent crystal that will go for days without resetting, and will give good volume. Some may prefer the carborundum type, which is put up in similar cartridge form, but has the additional advantage of never requiring setting, and always gives good and consistent volume and tone. It pays to buy a good crystal to ensure continued good reception, and it can always be used in a more pretentious-looking set that may be constructed later on. Of course, a cat's whisker and loose crystal can be used, but is not recommended for local reception.

'Phone Connectors.

The 'phone connectors shown are made from 30's hard brass sheet, curled round a nail or drill shank 1/4in. in diameter. The brass for the two outside pieces measures 1 1/2in. by 1/2in., and for the centre piece 1 1/2in. by 1/2in. Holes 1/4in. diameter are drilled or punched as

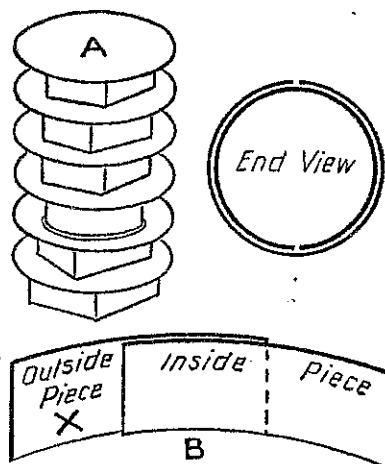
shown, and the connectors fixed to the board with 1/4in. No. 4 brass screws. The loose end of wire from the left-hand of the coil is now cleaned at the proper position, clamped under the earth terminal, and continues to clamp under the brass 'phone connection (1). These 'phone connectors will allow of two pairs of 'phones being used. If one pair is in use, plug the tags into 1 and 4; if two pairs, plug the first pair into 1 and 2, and the second into 3 and 4.

Final Remarks.

The baseboard may be finished with shellac, dissolved in methylated spirits, rubbed on with a rag, but this must be done before attaching any of the parts. The crystal is shown supported by the connecting wires, but a brass angle piece drilled 1/4in. on one face and drilled for two screws on the other, can be screwed to the board, the wire from aerial clamped underneath. The broad end of crystal mount will then slip through the 1/4in. hole and is secured by the nut provided, and stands in the same position as shown, but is more securely held. Provided that a reasonably good aerial is erected, this set will give all that can be desired in the way of crystal reception. Where the aerial used is short, extra turns should be put on the coil to compensate. The track of the tuning arm should be bare copper 1/4in. wide, the enamel being scraped off the wires with a sharp knife.

FORMERS FOR COILS

It is not always possible to purchase the particular size or diameter of coil former required, so here is given a simple and handy method of making a neat, true, and serviceable former of any exact dimensions. A sixteenth of an inch is usually sufficient thickness for the wall of an ordinary former. Two layers of the white card called by printers "8-sheet" will make up this thickness. If thinner card is used sufficient layers must be put on to make up one-sixteenth. The method will be best described by taking some particular size as an example, so we will suppose it is desired to make a former of three inches outside diameter and four inches long. From an old cardboard box cut six circles 2 1/2in. diameter and pile them up with small blocks of wood or anything handy to separate them about 1/2 inch as shown at



A in accompanying drawing. This is only to act as a core around which to make the former. Now cut a strip of the good card four inches wide and place round core, marking where it meets, and cut just short of meeting round. Now keeping this round the core, place another strip round the outside, marking the full distance round, and cutting off just short. Now glue about half of each together as shown at B, and when the glue is sufficiently set, glue all over portion marked X, place round core, work into position with both hands, wind two or three yards of twine round outside and leave to set. Seccotine used sparingly is a handy adhesive. A coat of thin shellac varnish will keep the damp out.

DON'T TWIDDLE

HANDS OFF THE DIALS.

Many listeners attempt to retune their set when one programme number gives way to another. They notice a decline in volume and assume that the set needs adjustment. If the dials are not turned, the volume control is adjusted, or perhaps both are tinkered with, on the assumption that this is necessary.

Nearly always there is no occasion for touching the set. The volume change is due entirely to conditions at the broadcasting station. Perhaps a soprano has just given way to a brass band. The operator in the control room of the station takes care of the volume by adjusting resistances connected with the speech amplifier—an audio channel used for regulating the amplification of everything broadcast. A different adjustment is needed for a band than for a soprano, and it may take a few moments before the transmitter is properly settled for the new conditions.

Therefore, when a station seems to be suffering from an odd form of fading at the time of programme change keep in mind the probable cause and let your receiver alone. No attempt should be made at readjustment until a few minutes have elapsed.

RADIO BATTERIES

DRY AND WET CELLS

INTERESTING FACTS.

Between the storage battery and the dry battery are four outstanding differences in operating characteristics:

First, the storage cell is rechargeable. Following the change of lead peroxide and sponge lead to lead sulphate in the normal discharge of the cell, this lead sulphate may be converted again to the original condition of peroxide on the positives and sponge lead on the negatives by connection to a suitable source of charging current, the cell then being again ready for another period of service discharge.

In other words, the discharging process is reversible, and the succeeding operations of discharge as a source of electric power supply and charge to bring back the conditions under which the storage cell may again furnish electric current may be repeated indefinitely until the cell wears out in service.

Various Differences.

The primary or dry cell, however, may act but once, continuously or intermittently, as a source of electrical current. When discharged it is useless.

Second, the difference in voltage of the storage cell between the state of full charge and that of nearly complete discharge is relatively slight. The voltage is well maintained under given conditions of discharge rate for the larger portion of the discharge period, dropping down less rapidly at the start and holding well up until nearly at the end. With the dry cell the voltage drops in more or less of a straight line from beginning to end of discharge and over a considerable range.

Internal Resistance.

Third, the virtual internal resistance, that is, the resistance factor which produces variation in voltage with change in current rate, is extremely low in the storage cell. Both storage and dry cells increase in internal resistance as discharge progresses. Not only is this increase in resistance less marked in the storage cell but the initial value of resistance is so low that this effect is practically nil. The dry cell, however, gives a voltage somewhere near its initial voltage for only a small portion of its rated capacity in terms of rate and time and exhibits more and more as discharge progresses variation of this voltage with current change.

Fourth, the storage cell has to a marked extent the property of recovery. In intermittent operation, as usual in radio service, it gives at the beginning of any short discharge period a voltage higher than that given at the end of the previous discharge, and until the intermittent discharges have integrated nearly to the rated capacity, the storage cell gives under these conditions of intermittent use the voltage of a nearly charged condition.

Why Life is Shortened.

Reverting for a moment to the first outstanding characteristic of the storage cell, the type of plate used in both A and B radio batteries will give in laboratory practice from 400 to 600 cycles of charge and discharge before disintegration. This would indicate a service life in radio of many years. Actually, this service life is greatly shortened, due to abuse, overcharging and overdischarging, idle periods in a discharged condition, lack of attention to the necessity of refilling to replenish evaporation and other causes. In farm lighting plants, where the same type of plate is used and the battery is given a more or less complete charge, usually weekly or twice a week, a service life of ten years is not unusual, and six to eight years something like the average. A good radio A battery should give dependable service over a period of at least four to six years.

In our second consideration, the open circuit voltage of the storage cell of the pasted plate type may be taken as 2.15 volts at full charge and initial operating voltage at low rates as 2.1. Radio batteries are usually of sufficient capacity for several weeks' intermittent operation. The final discharge voltage may be as low as 1.80.

Greatest Discharge.

By far the greater portion of the discharge at radio rates, whether con-

tinuous or intermittent, is between 2.05 and 1.95 volts. The final voltage is approached only as the cell nears complete discharge. This variation from 2.05 to 1.95 represents only 5 per cent. lowering in voltage over most of the discharge period. In comparison, the initial voltage of the dry cell, 1.5, drops down from the start, going to about 1.13 at the practical end of its useful service life, a variation of 25 per cent.

Now, again, if partially charged at more frequent intervals than would be represented by the full discharge period, or installed with a so-called trickle charger, the available voltage of the storage cell may be considered as constant at or near the 2.1 voltage or full charge, whereas the continual loss in voltage of the dry cell is unavoidable.

Making Wet Batteries.

Storage batteries for radio service are almost universally in the lead-acid type of the so-called Faure plates. These are made with grids or lattice frameworks of lead antimony alloy, on which by special machine processes are pasted mixes of lead oxides, constituting the active material.

After pasting, the plates are converted respectively into positives and negatives in the forming process, that is, by continued charging. They are then in A battery manufacture, assembled into groups by lead burning the plate lugs to so-called post straps, then assembled with the separators, usually of wood, Port Oxford cedar, in compartment type rubber or glass containers.

Cells are joined together by lead links, integrally lead burned to the posts of the positive and negative groups, and to gas and acid tight lead bushings moulded in the rubber covers. When finished, the batteries are shipped either with the acid, charged and ready for use, or more often in what is called the add-acid type. In this form the batteries are without acid, but completely charged and ready for service upon the addition of the necessary acid electrolyte.

Sizes of Batteries.

Radio A batteries range in size from 18 ampere hours capacity at four volts for some types of super-heterodyne receiving sets, and 35 ampere hours at six volts for so-called trickle charge batteries, up to the larger A sizes of 75, 93 1/2, 105 and higher ampere hour capacities. B batteries are usually in two plate types, in glass jars, of capacities 2500 to 4500 milliampere hours and in assemblies of 12, 24 and 40 cells, giving nominally 24, 48 and 80 volts, and covering the voltage range of standard 2 1/2, 4 1/2 and multiples of these figures in dry batteries. Both the A and B types find application in broadcasting stations as well as for home receiving sets and amateur transmission.

PLUS OR MINUS?

TO ASCERTAIN WHICH IS WHICH.

Difficulty in ascertaining which is a positive or negative wire connected to a battery is frequently experienced by radio fans. This applies particularly to loudspeaker cords. Connecting the loudspeaker with the wrong polarity causes weakening of the magnet within it.

The simplest method of testing the polarity of wires leading from storage batteries of small voltage is by grasping any pipe or ground wire with one hand and touching the wire you desire to test to your tongue. The positive wire will give you a slight sensation or a sort of sour taste; the negative will have no effect. Do not attempt this, however, with alternating current, or, in fact, any current of high voltage. With any voltage up to 110, you can determine the polarity by touching with a fingertip. If an alternating current, touch very quickly. If it is a positive wire you will get a slight shock; if negative, there will be no effect. Direct current (used in radio receivers) will cause a slight tingling feeling, whereas alternating current will produce a shock. There is no danger in making these tests on ordinary battery power in connection with radio. If, however, you prefer a different means, place a little common salt in a glass of water and insert the ends of both wires in the solution. There will be a bubbling around the negative wire, while the positive will apparently produce no effect on the water.

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The Children's Corner

By "ARIEL"

Dear Boys and Girls,—Here is another picture for you to paint this week, and then next week we will see our No. 1 animal of the Wireless Zoo—the "Howler." Won't that be exciting? I have an idea he is going to be a beauty, too!

Have you all got your "Smilers" ready? Remember they have to be in by August 17.

For our third animal I think we will have a "Krytik." He is a "yarly-snarly" creature who sits around with his ears well back, showing all his teeth. No matter what you give him, he always wants something else. Even in his brightest moments he is rather "sniffy," and he has never once been known to show the least bit of gratitude to people who do their level best to please him. See what you can make of him and send in your drawings and verses with your letter writing competition by Aug. 24.

The picture for painting is of Kink and his Squizard meeting a Sandman over the hill. Kink says—

"My Squizard can turn himself head-over-tails,
And dance on the tips of his toes;
But all I can do is to waggle my ears
And balance a ball on my nose."

He's got the right kind of ears to waggle, hasn't he?

I am so glad to know that you are all interested in our corner. As one little girl remarks—"it helps to pass away a rainy evening." Another boy says he is "tickled to death" with the idea of drawing a Wireless Zoo! I am looking for great things from him!

Oh! I almost forgot to tell you to be sure and use water colours for your paintings (if you have them). You can make a far nicer picture with them than with coloured chalks.—Love till next time, Ariel.

HIDDEN FRUITS

In each of the following sentences is a hidden fruit—just ordinary, well-known ones. See if you can find them before you get your next week's paper. The letters occur in their correct order.

1. We each err, yet are always pardoned when repentant.
 2. "Draw me a map, please," said the schoolmaster to his geography class.
 3. "Isn't this sweet pea charming?" said the gardener, proudly exhibiting his flowers.
 4. What is the difference between a turban, a narcissus, and a pillar-box?
 5. Is this really the same London that I remember twenty years ago?
 6. A mustered plaster will often stop lumbago if put on in time.
 7. At his birthday party poor Ted ate far too much cake!
 8. The burglar was very cunning, but could not escape arrest.
 9. A little whimpering cur ran through the half-opened door.
- The answers will be given next week.

MUDDLED NAMES

Here are some muddled names of people of whom you have all heard. Who are they?

1. BROOCHIND.
2. OREGLEDGLOY.
3. DANIBS.
4. TEENRAPP.
5. LBNNOS.
6. GYTHINK.

A CHILD'S DREAM

I had a little dog, and my dog was very small;
He licked me in the face, and he answered to my call;
Of all the treasures that were mine I loved him most of all.
His nose was fresh as morning dew and blacker than the night;
I thought that it could even sniff the shadows and the light;
And his tail he held bravely, like a banner in a fight.
We ran out in the morning, both of us, to play,
Up and down across the fields for all the sunny day;
But he ran so swiftly—he ran right away.
I looked for him, I called for him, entreatingly, Alas!
The dandelions could not speak, though they had seen him pass,
And nowhere was his waving tail among the waving grass.
I called him in a thousand ways, and yet he did not come;
The pathways and the hedges were horrible and dumb.
I prayed to God, who never heard. My desperate soul grew numb.
The sun sank low, I ran; I prayed:
"If God has not the power
To find him, let me die. I cannot bear another hour."
When suddenly I came upon a great yellow flower.
And all among its petals, such was Heaven's grace,
In that golden hour, in that golden place,
All among its petals was his hairy face.
—Frances Cornford.

WHAT AM I?

How pleasant to stroll along
O'er upland, vale, or lawn,
And listen to the joyous song
Of my first at early morn.
My second oft, too oft is used
By hunters in the chase;
And sometimes too is much abused
By rides in a race.
My whole is seen in summer time
Amid the gay parterre,
And blooms quite freely in our clime
If treated but with care.

Answer to last week's: Schoolroom.

"Oh, doctor, the child has swallowed a bottle of ink!"
"And what have you done?"
"We made him eat a sheet of blotting paper."

MAY DAY IS COMING

Although we have no real May Day here, I think this verse is so pretty we might adopt it for our coming spring time.

Silver stitchery,
Elfin witchery,
Sew up the seams of my Lady's Smock!
Quick, and begin it!
Don't waste a minute!
What is the time by the Dandy's clock?
Robin's raggedy,
Torn and jaggedy,
Billy's buttons want tightening up;
Waken, you lazy,
Sleepy-eyed Daisy,
Polish your petals, O Buttercup!
Marshy Marigold,
Every bud unfold!
Hawthorn, spread all your hedges with snow;
Orchids! Celandine!
Meadows, gold and green!
May Day is coming! Didn't you know?
—Catherine A. Morin.

A BEDTIME STORY

WHAT THE OWL HEARD.

Old Mother Owl, who lived in the largest oak tree in the village, woke one evening just as the rest of the world around her was thinking of going to bed.

She stood on the ledge of her home and blinked at the light. The sun had not finished setting, and little birds were still about. A chaffinch swung on a branch above her, though she could not see it properly, because the light was too strong for her eyes; but she heard it twittering and laughing at her.

"Come along," it said, "old blind owl. You can't catch me."

But the owl felt too dignified to make a dart at him, knowing he would only cheerfully hop on to a branch above and laugh at her again, for if she came out too early in the evening the little birds had a way of teasing her. So she just stayed there and talked to her fluffy but nearly grown-up babies, who were in the nest inside the tree.

Presently the sunlight died down; a young moon appeared across the pale sky, and the night put on her silver clothes.

"Come," said old Mother Owl, as she called to her children; and, being of rather a poetical disposition, which perhaps came of being so much among the dark trees when the beauty of moonlight was dimpling the shadows, she sang this little song

The day sleeps now, so you must wake
Inside this woody tree;
And come to where the shadows hide,
For you must hunt with me.

The old dark oak which is our home
Is crowned with silver light;
And overhead the little clouds,
Like feathers soft and white.

Race through the darkness hand in hand,
And dance across the skies;
The moon has such a beaming face,
The stars such shining eyes,

So spread your wings, and leave your nest
Inside this woody tree;
And come to where the shadows creep,
For you must hunt with me.

And the young owls answered "To-who, to-who," and off they started, each on his journey in search of adventure and supper.

When Mother Owl got to the Squire's garden with its sweeping lawns and sleeping flower-beds, she paused to rest on the branch of a cedar tree and looked around her.

It was nearly dark now, and lights twinkled from the old Manor, and as it was a warm evening the windows were open, and music and voices came from the inside. Humans interested Mother Owl, those strange things that went in at night and came out in the day, and she flapped her soft, quiet wings and flew nearer to the lights in the house to get a glimpse of the people inside.

The room she first went to was so bright that she was blinded and could see nothing; so she softly flew to a room above that one, which had the dimmest of glow-worm lights in it. And there she saw what to her seemed a wonderful sight.
There were two baby humans going

CAN YOU PAINT THIS PICTURE AND WIN A PRIZE?



Read Ariel's letter in the next column, and see if you will be the lucky winner. Competition closes August 17.

ARIEL,

P.O. Box 1032, Wellington.

MY SET WON'T WORK!

EVERYBODY ELSE TO BLAME!

It isn't so bad when the listener resides in the city, where service is readily available, but the distant up-country novice listener is up against a serious proposition when he finds his set won't work. It went very well last night, but to-night it refused to perform. He, not infrequently, writes or wires to the nearest radio dealer: "My set won't work." The dealer hasn't much to go upon to diagnose the trouble in his correspondent's set, but the latter, by some obscure process of reasoning, decides that the dealer will know immediately where the trouble lies. Therefore, he says: "My set won't work."

Maybe the set, say, a five-year-old neutrodyne, has only one jack. And, therefore, it is not possible to narrow down the circuit by simple methods to ascertain whether the trouble is in, say, the detector circuit or the audio stages.

Causes of Trouble.

Among various causes of the "won't work" malady are the following:—

- (1) A burnt-out transformer.
- (2) A loose connection in the circuit.
- (3) A valve-prong not contacting properly in the socket.
- (4) A fault developed in the valve itself, which may light, as usual, but not function.
- (5) A faulty jack, the phone plug not contacting properly.
- (6) A piece of fluff or dirt caught inside the jack, preventing proper contact.
- (7) Batteries connected the wrong way.
- (8) Corrosion on battery connections which can be cleaned off with household ammonia.
- (9) Batteries run down.
- (10) A fault in one of the rheostats.

Possibly a broken resistance wire.

These are not all the ills that a radio set may be heir to, but they are among the most common.

CHURCH SERVICE VALUED

Speaking at the Taranaki Street Methodist Church, Wellington, on Sunday evening, the Rev Clarence Eaton made reference to the broadcast service of the previous Sunday, stating that during the week he had received telegrams and letters from listeners

in Wanganni, Hawera, Tauranga, Hastings, Nelson, Rai Valley, Marlborough, Oamaru, and Dunedin. Writing from Bethlehem, near Tauranga, a former member of Wesley Church stated that, though 400 miles away, every word of the sermon was heard, and the voice actually sounded clearer than if the hearers had been in the church. Mr. Eaton said it was particularly pleasing to know that many in isolated and wayback townships were thus linked up with the more privileged dwellers in the cities. When next broadcasting, Mr. Eaton said he would be glad to get a line from friends listening who appreciated the broadcasting of the service of the church.

RADIO ON THE FARM

"AN UNTOLD BENEFIT."

A small farmer in the middle of the North Island writes: "Within the last three months we have installed a wireless set and have derived great pleasure from your progs. There is no doubt that radio is of untold benefit to country people, whose isolated position renders them unable to take advantage of the many forms of pleasure possible to those living in or near a town."

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WELLINGTON, N.Z., FRIDAY, AUGUST 12, 1927.

Per Annum, Post Free, 10/-; Booked 12/6.

Brilliant Record of Gisborne Amateur.

Morse Contact with 53 Countries

Up in Gisborne, on the East Coast of the North Island of New Zealand, there is an amateur transmitting station, 2AC, which has made history in radio, not only in New Zealand, but in the world. Both in transmitting and receiving its owner and operator, Mr. Ivan H. O'Meara, has loomed large in the public eye from time to time. To the broadcast listener in particular, Mr. O'Meara's name is familiar through his reception of news of great happenings in lands afar, which he has generously passed along to the Press. Only the other day he received a full report of the Dempsey-Sharkey fight in New York before the news filtered through by Press cables.

wave-length to 80 metres, and again broke the record by communicating with amateur station ISF, Mr. Johnson, Short Beach, Mass., U.S.A., just north of New York.

SPANS 9000 MILES.

The distance spanned was 9000 miles. This was the commencement of reliable radio communication on short waves. Mr. F. Bell then worked Great Britain, using 80 metres wave-length, and this then became the record for 80 metres.

On 40 metres new records were established, and soon broken, until work was carried down to 20 metres, on which wave-length Mr. O'Meara has done a considerable amount of operating and experiment. His best performance on 20 metres was a nine hours' continuous contact with amateur station 8JN, in Paris. This feat received the plaudits of General Ferrie, the great French scientist and experi-



MR. IVAN H. O'MEARA.

menter. Communication was maintained with the Paris amateur from 6 a.m. till 3 p.m. Paris time, and the signals from Mr. O'Meara were still good at 3 p.m.

A 17,000 MILES RECORD.

Mr. O'Meara's best long-distance record was made on 20 metres, when he worked station 8ALY, in U.S.A., the "long way" round the world, which is approximately 17,000 miles. It must be explained to the uninitiated that radio waves are stifled by sunlight, and when long distances have to be spanned radio waves always prefer to take the route of darkness. Thus it was that Mr. O'Meara's communication, which was accomplished at 8 a.m., New Zealand time, travelled over Australia, Africa, Europe, Great Britain and across the Atlantic Ocean.

The best relay work performed by Mr. O'Meara was his receiving of a message from amateur station 8JN, in Paris, and its communication to

another amateur in Shanghai. An answer was obtained by Mr. O'Meara, who relayed it back to Paris, the total time occupying less than ten minutes.

FIGHT NEWS FROM NEW YORK.

Last April 2, when the New Zealand boxer, Tom Heeney, fought the Spaniard, Uzcudon, at Madison Square Garden, New York, Mr. O'Meara arranged details with the officials of the Radio Club of New York to obtain prompt news of the contest. The result of the fight was published in a Gisborne paper five minutes after it was over. Probably it was published in Gisborne before it appeared in the New York papers. The fight was described blow for blow, and the details were keenly interesting to the boxing folk of New Zealand. This feat was described as unparalleled in the history of journalism.

A similar achievement was recorded in connection with the Dempsey-Sharkey fight last month, when the result was known in Gisborne as soon as it was declared by the referee. The most exciting rounds were described blow for blow, and, thanks to Mr. O'Meara's wonderful little station, the description of each of these rounds was published in the Gisborne evening paper.

GREAT WORK ON 20 METRES.

The most interesting work done by Mr. O'Meara is on 20 metres and even shorter waves. Both Canada and the United States are worked by him from noon onwards, with daylight all the way, on 20 metres. He has received recognition in many countries for his pioneer work on short waves. His foreign correspondence would require the services of a private secretary if it were all to be answered.

RADIO MARVELS

GREAT PREDICTIONS

The next generation may live in homes lighted and heated by power transmitted through radio beams.

Instead of to-day's furnaces and small power plants for each home industry or community the power of to-morrow may be generated in a few gigantic stations, scattered strategically over the globe. From them it will go surging through the ground and the air to be tapped by an aerial or a grounded wire at any point, to drive airplanes, automobiles, and trains, provide heat and light and operate factories.

Many At Work On Idea.

Such is the possibility pictured by Summer N. Blossom, editor of "New York Popular Science Monthly," in discussing the recent success of Dr. Phillips Thomas, Westinghouse research engineer, in lighting an electric lamp by radio power in a demonstration before the New York Electrical Society.

While a group of engineers watched Dr. Thomas raised in his hand an electric light bulb. To it was attached a four-foot copper rod. A short distance away a radio vacuum tube was turned on—and instantly the bulb glowed brilliantly.

"A few months ago," said Mr. Blossom, "no one dreamed that soon you would be able to see by radio—yet now we have television! Will radio power be the next great invention? Many scientists are at work on it to-day—and at any moment it may be realised on a practical scale."

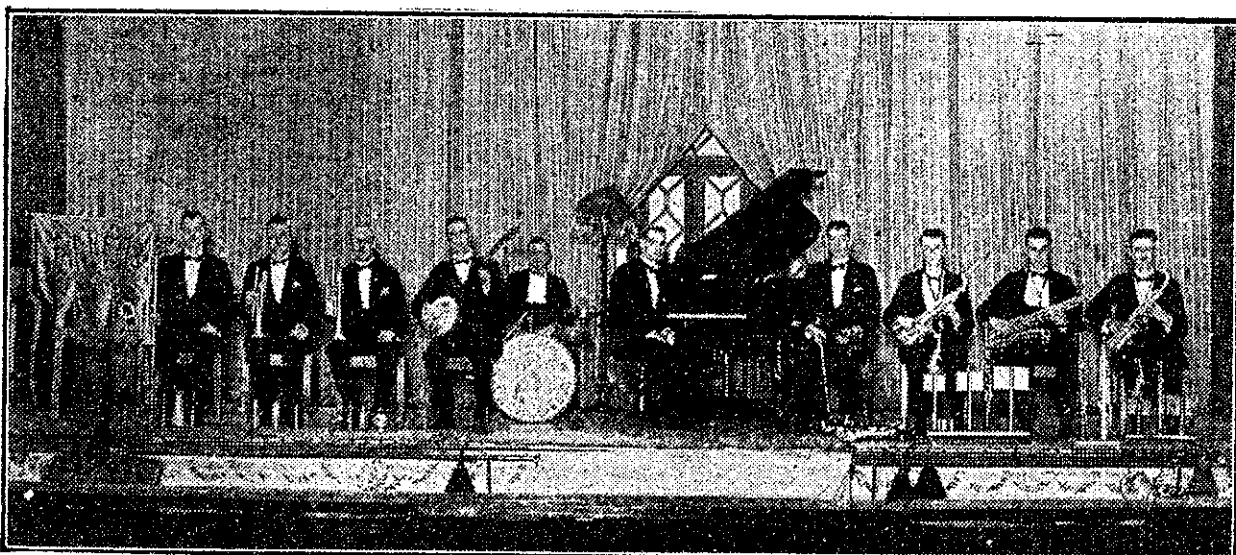
Power By Radio.

"The idea of transmitting power without wires is not new. Heinrich Hertz, discoverer of radio waves, tested its pos-

Organise Your Jazz Party for Aug. 27.

2YA Will Give Music from 9 to 11.

Allen's popular dance orchestra, featured below, will provide the music for a special jazz dance programme from 2YA on the evening of Saturday, August 27. There will be two solid hours of enjoyment from 9 to 11. Send out your invitations and let us know how you enjoy it.



A treat is in store for listeners-in when Allen's Orchestra is on the air. By giving the public what they want, this orchestra has made itself one of the most popular combinations of its kind in Wellington. This popularity is as much due to the individual members as to the band as a whole.

Noisy jazz is unknown to the orchestra, and all their numbers are of the melodious type, but with plenty of pep and rhythm. They play all their dances at the correct tempo, and of this

one of New Zealand's leading ball-room dancing teachers says: "I consider Allen's Orchestra most up-to-date. They can always be relied upon to play the various dances at the correct tempo, and therefore the orchestra should be much appreciated by all good dancers." Many other compliments, too numerous to be mentioned, have been paid to the organisation.

They were heard on the air quite a number of times from 2YK, and their efforts were always appreciated by listeners-in, and it is hoped that this

orchestra will be a regular feature from 2YA, when a larger band of listeners will have the pleasure of "meeting the boys via the air."

The personnel of the orchestra consists of:—Alan Wilson, piano; Eric Worth, violin; Jack McIlwain, first saxophone; Cyril McIlwain, second saxophone; Bert McIlwain, third saxophone; Norm. Piez, first trumpet; Clarry Cummings, second trumpet; Bert Sutcliffe, trombone; Jim Goer, banjo; Mel. Wilkens, drums; Frank Lloyd, bass. Conductor, J. McIlwain.

sibility and found it feasible. Nikola Tesla, celebrated inventor, who devised a system of wired power to transmit alternating electric currents, now in use throughout the world, has experimented in the field for years. Even now he is designing an amazing wireless power plant to be erected at Niagara Falls. Dr. Charles P. Steinmetz, one of the greatest electricians the world has known, was a firm believer in future wireless power, and suggested a method by which it might be achieved. Senator Marconi, father of radio communication, adds his expert opinion that power by radio is near.

Beam Method Advocated.

"Only recently Marconi told the Institute of Civil Engineers in London that the transmission of power by electrical waves awaited only the perfection of devices for projecting the waves in parallel beams in such a manner as to minimise dispersion and diffusion of energy into space. The ordinary broadcasting station projects random waves in all directions. But Marconi has invented a radio reflector that concentrates the waves in one direction, bunching them all together."

Would Make Wires Obsolete.

Short radio waves, 10,000 times shorter than those used in broadcasting, are the means Dr. Thomas will use. His goal is 'beam' radio—but a beam unlike any that has ever been produced. If he can make his radio waves short enough—and powerful enough—he will focus them to a narrow, four-inch ray by means of a curved metal mirror. Then he will project his beam, like a searchlight, to its destination. Such rays would criss-cross a city, and wires would become obsolete. Each home would have its own 'rod receiver,' a short copper wire, resembling the one Dr. Thomas used in his demonstration, with which you could tap the power flowing through the ether just as you now listen-in to music with your radio set."