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THE RADIO RECORD

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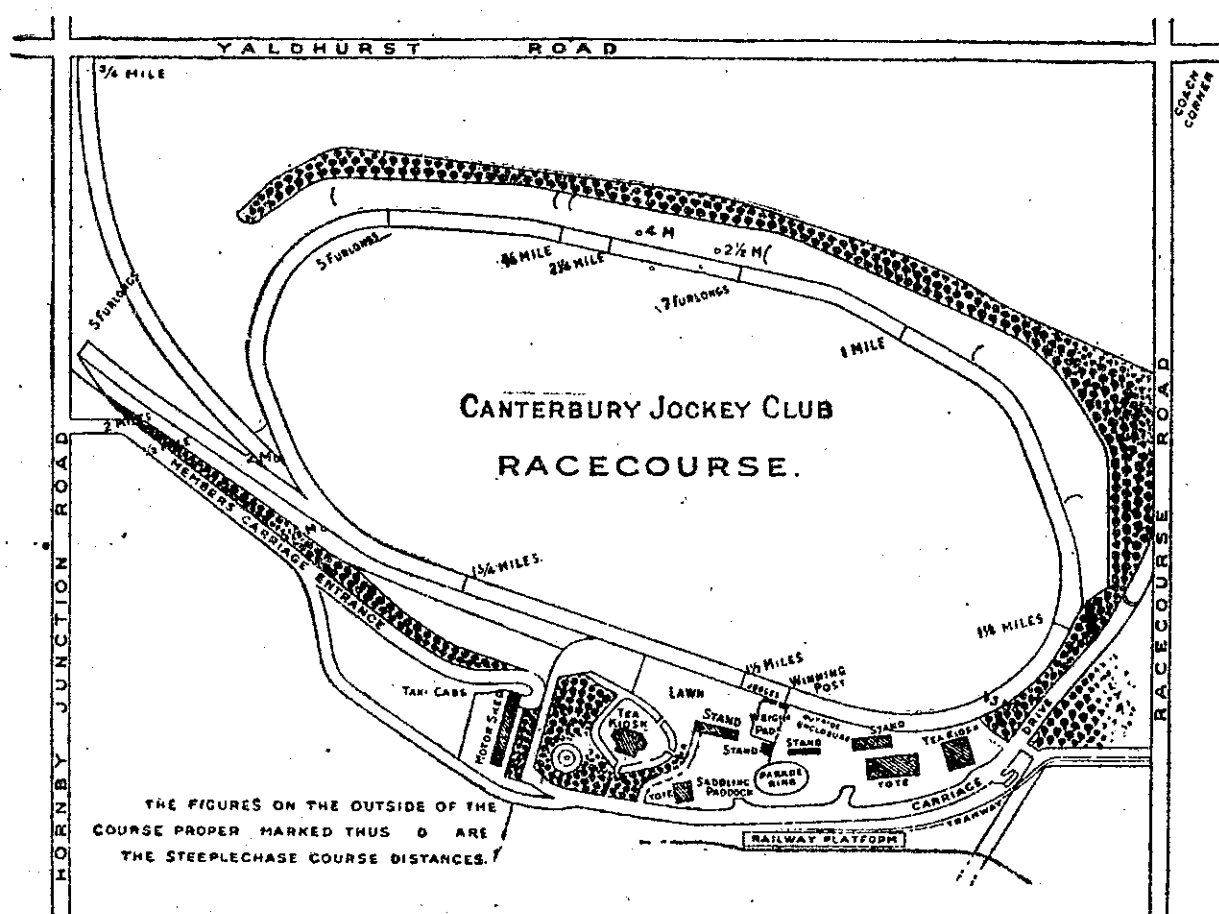


Mr. A. R. Allardyce, the Broadcasting Company's official sports announcer, who will describe all the racing on the seven days of the carnival. In addition, Mr. Allardyce will give a talk each evening on the form of the horses and the prospects of the succeeding day. A further service throughout the week will be a special early morning talk between 8 and 8.30 o'clock to give the latest possible information and notification of the events and attractions of the day.

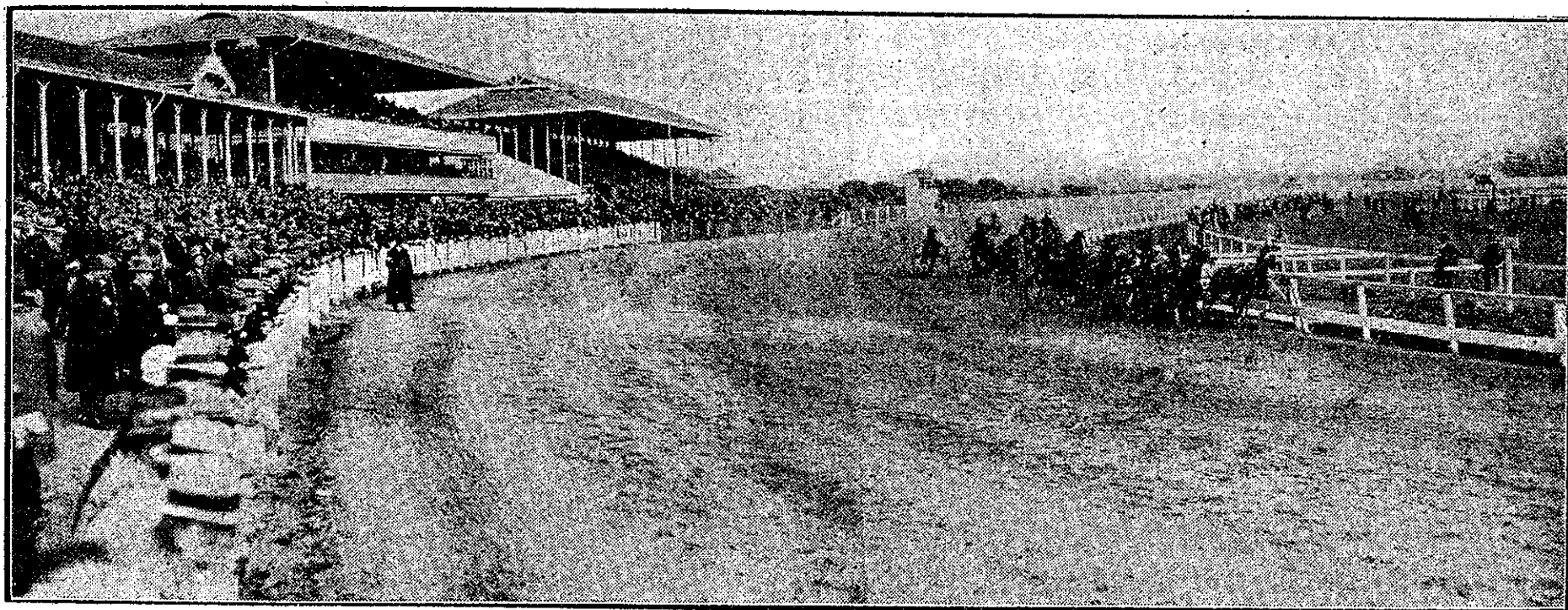
Mr. Allardyce is recognised as a particularly able sports announcer, having a wide and comprehensive knowledge of the contesting horses and a quick eye and mind to convey the course of events to listeners. During the week he will be at the microphone for something over 35 hours. He will be given a little relief between races by a "lady announcer" taking his place at the microphone in order to describe the dresses of the ladies on the lawn. This will be a new departure for New Zealand broadcasting.

Follow the Races by Radio

Special Full Service Arranged by 3YA



PLAN OF THE CANTERBURY JOCKEY CLUB RACECOURSE.
For the benefit of our readers who wish to follow closely the broadcast description of the races, we publish the above plan of Riccarton Racecourse, showing the distance posts and the various jumps. The figures on the outside of the course proper and marked with a small circle are the steeplechase course distances.



A glimpse of the Addington Trotting Course with a race in progress. All the events on this course, too, will be broadcast by the official sports announcer from 3YA. The broadcasting service to be given this week from 3YA will be the most complete ever given any carnival or sporting event in New Zealand.

Christchurch and the Charm of Carnival

A City Fair on a Plain Serene

Everyone who lives in Christchurch says it is a beautiful city—people who have been there and seen for themselves say so, and nearly everyone who has not been there is being told or is reading about how beautiful it all is.

But at this time of the year, the spring, Christchurch accepts all these compliments. Flattered and encouraged, she blooms and blossoms still further. The fine old trees, planted by the far-seeing early settlers along the beautiful walks and in the pretty gardens, and bursting forth in great

Christchurch is gay just now. Everyone is on enjoyment bound, for it is Carnival Week, and Christchurch looms larger than usual on the map of New Zealand. Her name is heard from one end of the Dominion to the other, and much that is nice is said about Christchurch.

foliage of Christchurch is a wonderful sight.

As a city, Christchurch is uniquely situated. It has thrived and solidly progressed despite the fact that its only trade connection with the outside world is by one pair of steel rails through a tunnel to Lyttelton, its port. When the founders of Christ-

people, and Christchurch residents can certainly boast that they are "citizens of no mean city."

A tourist visiting Christchurch is not so much concerned with the factories and industries as in seeing the attractions. Trams, buses, charabancs and taxis will take one to all parts of the city, the suburbs, and the neighbouring countryside.

In the city itself are many places of interest, some of them historical, as, for instance, the old Provincial Council Chambers, picturesque and quaint, but still doing a useful work as the office of the Lands and Deeds Department.

In the Museum one can see relics of fossils of prehistoric times, curios and treasures from every country on earth, and souvenirs of memorable occasions. It is a repository for specimens of nearly every species of bird, beast and fish—a place of endless interest and unknown value.

The Rose Garden.

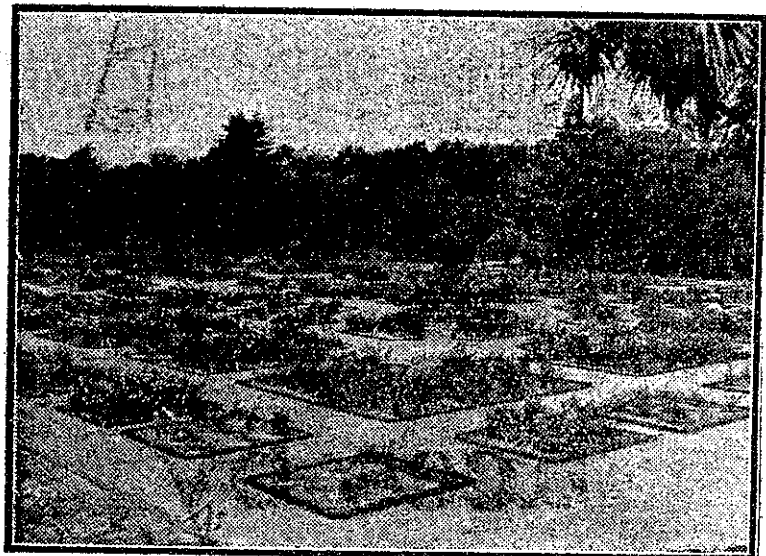
The piece de resistance in Christchurch is, of course, the Botanical Gardens. It is an area of 52 acres, a portion of Hagley Park, and the Avon forms a natural boundary for the greater portion of its perimeter. These gardens might well have been the inspiration of Rudyard Kipling when he wrote "The Glory of the Garden." There is a rose garden here which is considered to be the best of its kind in the Southern Hemisphere. The original design was a copy of the garden in the Duchess of Sutherland's Hertfordshire home, but it has been considerably enlarged. Each year sees the charm of this rose garden increased, and many visitors from England and Scotland declare that it is the best they have ever seen.

Two of the main features of the Gardens are the Cunningham Winter Garden and the Townend Conservatory. Plants from many parts of the

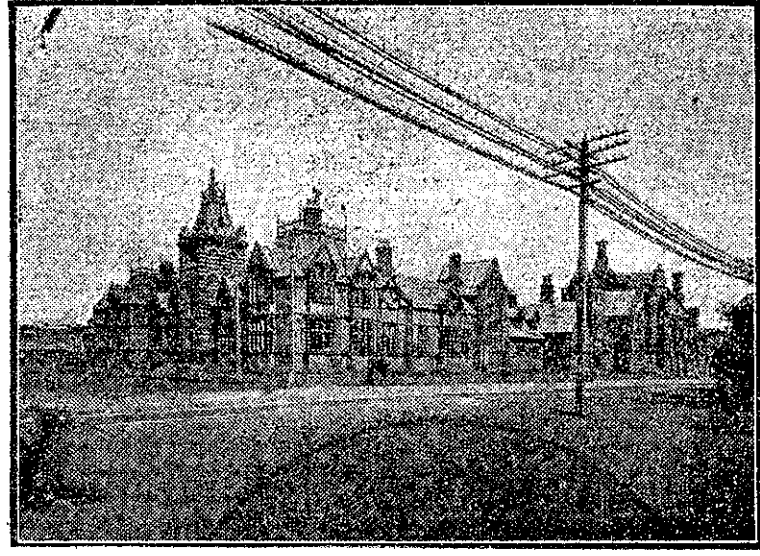
world are being continually added, and the collection of exotic plants is now considered to be the most valuable in the Southern Hemisphere. The blaze of vivid colours is always an irresistible draw to the public.

An "Archery Ground" is a feature of the Gardens, which are in other ways reminiscent of Old England.

Gully, Governor's Bay, Diamond Harbour (by launch from Lyttelton), Kairaki, and other places. All visitors, of course, go up Cashmere Hills and pay their respects to those two picturesque kiosks, "The Sign of the Takahē" and "The Sign of the Kiwi." It is from these hills, at night time, that the most glorious of all views of Christchurch is secured. Then a myriad electric lights, stretching apparently to the horizon, scintillate and twinkle in a dazzling and fascinating manner.



FAMOUS ROSE GARDENS, CHRISTCHURCH.
One of the chief attractions to visitors attending the Christchurch Botanical Gardens.



AN HISTORIC BUILDING IN CHRISTCHURCH.
The old Provincial Council Buildings, whose oak beams and flagged corridors are reminiscent of the Old World, are now used as the office for the Lands and Deeds Department.

er effulgence of leaf, and the Avon, as she lolls along, seem to smile more serenely. Pretty as Christchurch is just now, she is prettier still, when, after six months of adulation, her trees and shrubs in the parks and gardens blush in nature's most fascinating way. The autumn

church laid off the city they had visions and ideals, but not the visions that have materialised. They did not foresee that cheap hydro-electric power would play such a part in the development of a manufacturing city.

It is even now only 77 years since the first five ships of immigrants, or Pilgrims, as they are called, arrived at Lyttelton and came across the Port Hills by the old bridle track to settle in Christchurch, but there are now, according to the last census figures, 118,408 people in Christchurch, and the city is the third largest city in New Zealand, the second being Wellington with 121,324

Christchurch is justified in being proud of its beautiful Botanical Gardens, where colour in profusion charms the eye, and where attention is held at every turn by delightful vistas. They are a show place to visitors, and a place of pleasant dalliance for the public which visits it in thousands each week of the flowering seasons.

There are many drives and places of interest around Christchurch. Sumner is the favourite beach resort, nestling alongside the Port Hills, then New Brighton, but other places are well known, too—Stewart's

MULLARD VALVES

Listeners and prospective radio buyers in the Canterbury area are asked to note that the wholesale distributor for both North and South Canterbury is:

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CARNIVAL WEEK

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until you've heard the



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277 Durham Street,
CHRISTCHURCH.
(Near Bridge of Remembrance.)

COME TO CANTERBURY FOR A HOLIDAY

(Contributed by the Canterbury Progress League.)

Flanked on the west by an exalting and inspiring Alpine Wonderland, and on the east by the sun-kissed Pacific, Canterbury consists in the most part of broad, level plains, reminiscent in their aspect of the quiet homely beauties of the southern counties of England. Christchurch, the capital of the Province, with its broad, clean streets, substantial and pleasing architecture, its wealth of open spaces, its public parks and gardens, and with the placid Avon winding through its very heart, it is a veritable slice of England, transplanted to the Antipodes.

Blessed with an equable climate and with a variety of scenery, equalled by few other parts of the world, Canterbury may justly be acclaimed as one of the great pleasure resorts of the Pacific.

That great mountain range—the Southern Alps—rivals the Alpine attractions of Central Europe, while in the matter of thermal springs with health-giving properties, Hamner, in North Canterbury, stands pre-eminent in the Dominion. In the matter of sport—trout and salmon fishing and deer stalking—Canterbury has had three-quarters of a century's experience in acclimatising the game of the Homeland, and its success is universally admitted. Canterbury possesses the loftiest mountain peaks, the most magnificent and extensive sea beaches, and the most elaborate transport facilities of any other province. It is the most convenient gateway to that scenic wonderland—Westland—a region in which nature displays her charms with a profusion and opulence which are the admiration and amazement of all who have the privilege to behold them. Canterbury is pre-eminently the district which offers the visitor a holiday, comprising the best that New Zealand can offer. There could scarcely be imagined a place in which sport and pastimes would be carried on under conditions more nearly ideal. The high proportion of sunny days in the year constitutes a strong inducement to the people to spend much of their leisure time out of doors. Racing, of course, is the sport predominant. Riccarton and Addington, where the principal New Zealand events are decided, possess racing and trotting grounds, respectively, which are difficult to beat anywhere in the world. Thousand of visitors literally pour into

Christchurch for the Carnival Week in November and for the Grand National week in August. In no other city in the Dominion is there so much gaiety as in Christchurch during these two weeks. It need only be added that Canterbury at all times welcomes its visitors, and does its best to render their stay comfortable and enjoyable.

This is written as an invitation to visit the province, with an assurance of a pleasant sojourn in the most beautiful and diversified region in New Zealand.

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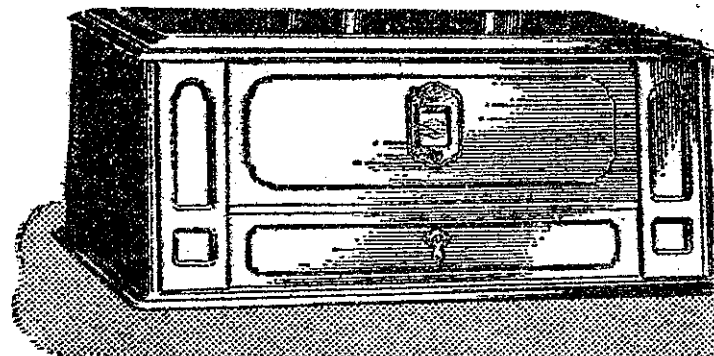
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Special Radio Service for Carnival Week

Breakfast Session, Race Sessions, and Three Special Dance Evenings

CARNIVAL BY BROADCAST

THE FUN BEGINS.

Saturday night (November 5), the day of the New Zealand Cup will strike the keynote for the week's merriment with a long and varied programme of popular vocal and instrumental items. Among the artists are Mr. Ivan Perrin (songs at piano), Mr. A. B. Dowell (popular baritone), Mr. J. J. Flewellyn (Meanderings of Monty), and Mr. Jack Oxley (zither banjo), while there will also be a rebroadcast from Wellington and a relay of dance music.

A LIVELY MONDAY.

This day commences with the 8.30 a.m. sessions. It is New Zealand Derby Day.

A special concert programme has been arranged for the evening. Assisting the band will be two fine baritone singers and a first-class elocutionist. The last named is Mr. Ronald Foster, who has made a reputation for himself at competitions. At Christchurch he has won the championship gold medal two years in succession, and at Wellington he has won the elocutionary scholarship and the highest aggregate two years running. His items on Monday evening will be of a humorous nature.

The immortal "Tin Gee Gee," by Eugene Field, will be one of the songs sung by Mr. Eric Vovce. Mr. Vovce,

The Christchurch Carnival Week opens on Saturday, November 5, and station 3YA has made special preparations for broadcasting all the attractions and for providing entertainment.

Very many people will find a great appeal in the descriptions of the racing events, which will be given every day from 11.30 to the finish of the last race in all the trotting and galloping events. The narrating will be done by the Broadcasting Company's own official, Mr. A. R. Allardyce.

On Saturday and Tuesday the stay-at-homes will hear something more than racing and band selections. They will hear all about the people on the lawn—who they are and what they wear. The dresses will be described by a lady announcer for the special edification of ladies.

A novelty in the way of an early morning session will be in vogue during Carnival Week, when from 8 a.m. to 8.30 o'clock news, and a lot of useful information will be broadcast.

In keeping with the breakfast-time session, a dinner session of music is also being instituted. This will last from 6.30 to 7.30 p.m.

For this week the children's sessions will begin at 5.30 p.m.

Every evening the sporting announcer will give a short talk on the next day's racing.

The evening concert sessions will, for the week, depart from the usual procedure at 3YA, and every programme will be in keeping with the spirit of the carnival, when no one is supposed to be seriously minded. There will be no silent day.

Three long dance night programmes are to be broadcast during the week and some of the brightest and most engaging talent has been secured for every evening of the week. The programmes will be of a very varied nature.

The dance nights will be Tuesday (Jockey Club Ball), Friday (Marston's Band at studio), and Saturday evening.

Miss Belle Renaut, the popular contralto, can be looked to for delightful renderings of the favourite "Off to Matket, Johnny," "Danny Boy," and "Ma Laidy Lou."

During the evening orchestral music will be relayed from Everybody's and band music from Olympia Show.

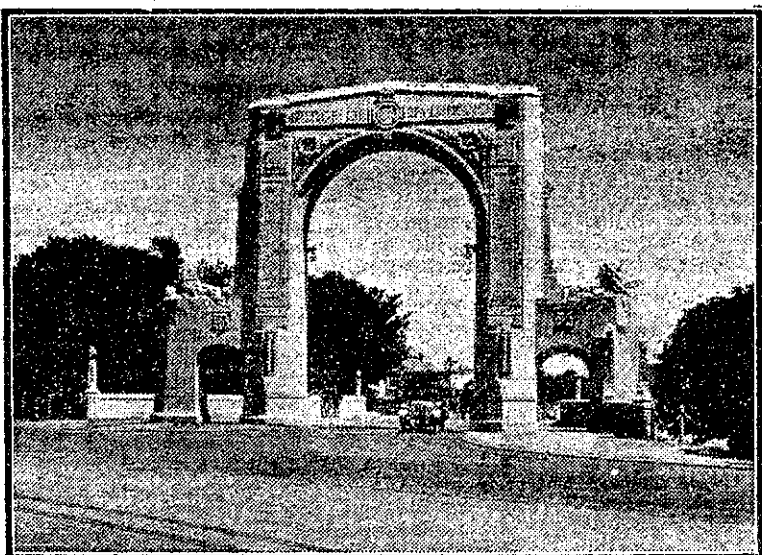
LONG DANCE NIGHT.

Friday will be another dance night at 3YA. For this occasion the well-known Marston's Band will play in the studio, and interspersed between the dances will be an entertaining concert, the items being contributed by Mrs. D. W. Stallard, Mr. E. A. Sargent (songs at the piano), Mr. Sydney Comfort (humorous), and Mr. Leslie Stewart (baritone).

ANOTHER LATE NIGHT.

Saturday night will see a regular "Saturday night" concert at 3YA, varied and bright, with a late dance session. There will be banjo, concertina, and bagpipe items, while Mrs. Helen Murdock will give some songs at the piano, including some of her own compositions, and Mr. James Laurensen will contribute comic recitations.

With all the solemnity that a comedian is capable of, Mr. Sydney Comfort proposes to give a sermon dealing with



BRIDGE OF REMEMBRANCE.

This handsome and impressive memorial was built on the site of the bridge across which every Canterbury soldier passed on his way to the war. Photo, Webb.

who is making his first appearance, has a fine baritone voice and sings popular songs. Another baritone to sing this evening will be Mr. W. C. Mann.

NOT A SILENT TUESDAY.

Tuesday, usually silent day at 3YA, will have a programme of a most diversified nature. By special arrangement the music of the Canterbury Jockey Club Ball will be relayed and broadcast. The music will be played by Les Marston's band, so its quality can be guaranteed.

Interspersed between the dances will be items from the studio—recitations, steel guitar, baritone and mouth-organ solos, piano novelties and a sketch.

Mr. Jack Darragh will be held in some clever turns, including impersonations of well-known New Zealand speakers, such as the late Mr. Seddon. He will also be associated with Mrs. E. F. Temple in a sketch entitled "A Lapse of Memory." This sketch, which will occupy about 15 minutes, will be given during the supper adjournment at the ball. Mrs. Temple will also give items, and as both Mrs. Temple and Mr. Darragh are splendid elocutionists their contributions to the programme should be greatly appreciated.

Mr. Ivan Perrin, the clever pianist, will entertain with some of his musical medleys, improvisations and extemporisations. He calls his turn "Mocking the Classics," which is a title which should have a wide appeal to the people who like "light stuff."

Mr. F. R. Munro, well known at 3YA, is bringing along his steel guitar and will play Hawaiian and other airs. Miss Edna Donaldson, a very promising young soprano, who sang in opera in Christchurch a year ago, when she was eighteen, and who appeared at 3YA a few weeks ago, to the great pleasure of all listeners, is to

sing. Mr. Robert Samson (baritone), who was heard recently at 3YA, is also to sing some favourite songs, and cello solos will be played by Mr. Harold Beck.

VARIETY FOR WEDNESDAY.

Misses Dorothy and Edna Johnson are singing some of their happy songs on Wednesday evening. Miss Dorothy will be at the piano, and Miss Edna will have her ukulele.

Mr. Alex. Dey, whose style of humour is so well suited to the radio, and who is such a favourite, has two very bright contributions. He will give another instalment of the "Meanderings of Monty," this time on "Bananas," and it will be a particularly amusing effort. His second will describe the "stir at coot," immortalised in "The Sentimental Bloke."

Some of the latest jazz and revue songs will be contributed by Mr. Roy August and his ukulele.

The more classical side of the programme will be provided by the Christchurch Broadcasting Trio, Miss Irene Morris (violin), and Mr. D. Suckling, one of 3YA's most popular singers.

Interspersing the programme will be orchestral items relayed from the Olympia Motor Show.

THURSDAY NIGHT.

An excellent programme of bright and popular songs, instrumental items, and humorous recitations will be presented on Thursday evening. Those four splendid singers, Misses Belle Renaut, Frances Hamerton, and Messrs. R. Sumner and T. D. Williams, have chosen suitable songs from their long repertoires and will be once again a delight to all who hear them. The Broadcasting Trio will play some favourite selections.

The announcer will be heard in a new role. He will please and amuse. He

calls his first contribution "My Own Punch," being funninesses from real life, and his second will be "Daniel and the Lions."

In Mr. T. D. Williams 3YA has found a bass singer who goes over well. He brings to Christchurch much experience from singing in the Histeddodditi

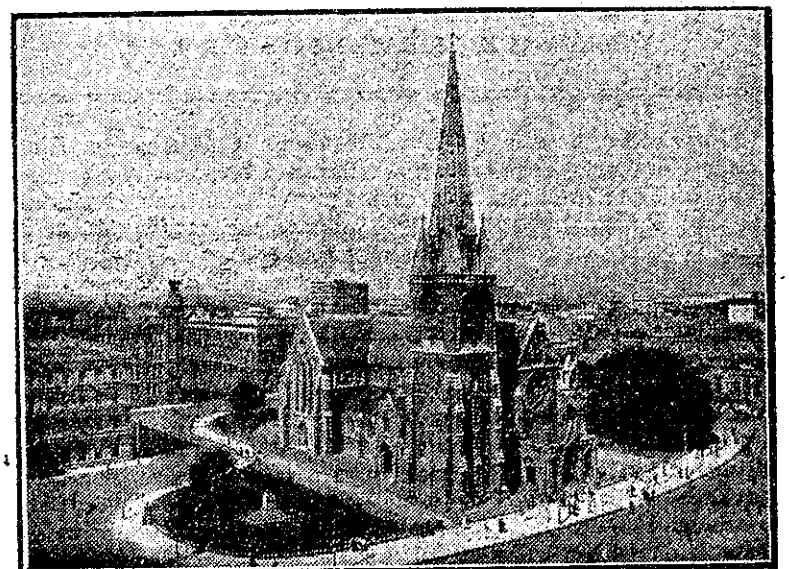
MARSTON'S BAND.

Les Marston's Band, of Dixieland, will play an important part in carnival week entertainments. The music for the three dancing nights—Tuesday (Jockey Club ball), Friday (studio dance programme), and Saturday (Dixieland)—will be supplied by this talented combination.

The band will be heard every week from 3YA, having been engaged to play on Fridays and Saturdays alternately. The personnel of the band is: L. G. Marston (leader), pianist and saxophonist; P. Squire, pianist; P. Large, second saxophonist and piano; J. Nuttall, trumpet; W. Floyd, third saxophonist; R. Box, drums; A. Pointer, banjo; R. Wilson, bass (tuba).

in Wales. On Thursday he will be heard in two dialect songs, "Zammer-zetshire" and "Gee Wup, Horses."

Mr. Russell Sumner, the tenor star in broadcasting in Christchurch, will sing several of his best solos and will be associated in duets with Miss Hamerton and Mr. Williams, as well as singing in a quartet.



ANGLICAN CATHEDRAL.

This handsome building, in Cathedral Square, is a landmark for miles around. —Webb, photo.

Miss Frances Hamerton will be heard in one of the best solos from "The Belle of New York." She will sing "They All Follow Me," and there will be a chorus. This talented singer has several other popular solos against her name this evening, as well as duets and a quartet.

the depravity of man. He will also attempt to convince his audience that he discovered the North Pole. It is, of course, Mr. Comfort's own story. His audience will probably think it is a pity that De Rougemont is not here to join him in making a duet of his third item, "Birds of a Feather."

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THE NEW ZEALAND Radio Record

PUBLISHED WEEKLY.

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

LITERARY MATTER.

All literary matter and contributions must be addressed to the Editor. If the return of M.S. is desired, enclose 1d. stamp.

SUBSCRIPTION RATES.

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

ADVERTISING RATES.

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

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

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

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

P.O. Box 1032,
WELLINGTON.

WELLINGTON, FRIDAY, NOVEMBER 4, 1927.

Simultaneously with Carnival Week in Christchurch, and the specially full descriptive news service that will be given by 3YA in connection with the races, and an accompanying supplement of night features, the Radio Broadcasting Company is undertaking a brief and intense publicity campaign throughout Canterbury to popularise radio and enlarge the number of licensed listeners. This enterprise is very commendable, and we trust will reap its due reward. Listeners will already have noted the fact that the service given them can be increased in merit and quality only as the resources of the company are enlarged by extra revenue. It is primarily also to the interests of listeners themselves to increase their own numbers by securing as many recruits as possible, and ensuring that all are duly licensed. Not only in connection with this campaign, but with the approach of the Christmas season, an opportunity is presented for popularising radio by the giving of radio presents or equipment. We should not be surprised to find at a later stage a definite effort being made, in which we will be glad to co-operate, to make the Christmas of 1927 memorable as a radio Christmas. That will be a matter for development.

In the meantime, it may be timely to briefly review the efforts made by the Broadcasting Company to fully meet the needs of the public, and the response thereto by listeners. In Christchurch recently, as the outcome of a small agitation, the Christchurch Listeners' League convened a public meeting, which was attended by some 50 or 60 persons out of, as the president remarked, a total of 6000 licensed listeners in the district. The meeting, too, was open to the general public, and the fact that only 1 in 100 of the licensed listeners attended may be taken as a definite indication of their general satisfaction with the existing service.

Some few months back the complaints of critics were as to the lack of quality in the programmes. With the steady improvement in its financial position, the company has progressively rectified that, and now the complaint that is being voiced is that there is too much quality and not enough "light" entertainment. It must be taken for granted that to perfectly please a cosmopolitan audience at all times is impossible. Human tastes and degree of culture are so varied that one man's musical meat is another's poison, and there must inevitably be a degree of conflict between the two main sections which, for the sake of convenience, may be described as the highbrow audience and the "others." A judicious mixture in the class of programme is desirable, and is being given, but obviously the company, seeking to fulfil the general demand for entertainment, must set a reasonably high standard in the items selected. The difficulty of pleasing all was well illustrated at the meeting in question, as three distinct classes of complaints were voiced:—(1) not enough quality; (2) too much quality; and (3) the desire for a vaudeville programme every night.

The point of chief interest in connection with the meeting was that it was attended by the general manager of the company, Mr. A. R. Harris, who gave an indication of his policy that is of definite interest. The company would be prepared and glad, he said, to have available for consultative purposes an accredited representative of listeners; but it was fair, he indicated, that the listeners on their part should be sufficiently organised to ensure that the representative chosen did represent a majority of the listeners, and their views. As the president of the league indicated, that was essentially a fair requirement, and it is sincerely to be hoped that, instead of minority movements making claims for meeting this taste and that demand, the listeners will be sufficiently concerned with the general good of radio to be able to combine and co-operate with the company along lines that will be workable and effective. Obviously the company, with its very considerable investment in the business, is concerned to meet the requirements of its clientele and give the best possible public service. The views of listeners that reach us indicate a very high appreciation of the standard set. It is in reality very much easier to do a job well and satisfactorily than unsatisfactorily, and it is only common sense to assume that the company's policy is conceived upon a basis of satisfying the majority. There will always be minorities who want more of this or more of that, and they are quite entitled to express their views—although they will always command more respect when given openly than anonymously—but the danger in the situation is that the interests of the majority might at any time be sacrificed by undue attention being paid to a manufactured and interested propaganda. Anonymous letters are very easily written, and when put into print may attract a notice far beyond their merits. The fact that the number of licensed listeners now totals 35,000, showing more than a 50 per cent. expansion in the past four months, would suggest that the service being given is meeting with a very large measure of public support. Such an increase would not be recorded if it were not for public endorsement and approval of the fare supplied, and recognition that the company is honestly striving to meet all legitimate demands for both instruction and entertainment. The same initiative that has brought about existing results and success may be relied upon to meet all further demands as the means for doing so become available.

2YA HEARD IN ALASKA.

GOOD DEDUCTIVE WORK.

"This reception was with a 7 tube Atwater Kent Model 32, in the unsurveyed frozen wastes of Alaska, the land of the midnight sun, 140 miles from the nearest railroad," writes Mr. J. D. Smith, of Chitina, Alaska, to 2YA. He reports that the programme came in with plenty of volume. Mr. Smith had not the wave-lengths of the N.Z. stations, but after comparing his dial readings with those of the known American stations, he concluded that the wave-lengths of the N.Z. stations were: 1YA, 335 metres; 2YA, 422 metres; 3YA, 309 metres. Not too bad!

"WORTH SITTING UP FOR!"

Mr. Ewart Lyne, organist, who broadcasts from CNRY every Tuesday evening from 11.45 p.m. to 12.45 a.m., Pacific Standard Time, reports that he picks up 2YA. He says: "Your music is well worth sitting up late to listen to."

3YA LISTENERS

POOR RESPONSE TO MEETING

MAJORITY SATISFIED.

After some months of quiescence in Christchurch, during which 3YA programmes have been vastly improving, some critics, by means of anonymous correspondence in the papers, recently endeavoured to promote an agitation and cause dissatisfaction with the broadcasting service. The old familiar "seething with discontent"—the time-worn expression used by all propagandists—was lavishly applied to listeners who were said by the anonymous correspondents to be in that state regarding 3YA programmes. The agitation was unaccountable. It showed what can be done by a few dissatisfied people, but the sequel also showed what such an agitation is worth.

One correspondent was rash enough to ask, "What is the Listeners' League doing?" This brought the instant retort from the league, "Awaiting the support of listeners," and the challenge of the unknown correspondent was answered by the league calling a public meeting, to which not only members of the league, but also listeners, were invited.

The meeting was duly held, about sixty people attending. It was not a very great response from 5000 license owners, who were supposed to be "seething with discontent," and desirous of making radical changes in the programmes at 3YA.

At the meeting the preponderance of what was said was in favour of the Broadcasting Company. Those who did criticise differed amongst themselves as to their grounds for complaint. One said that variety was lacking, another that there was ample variety but not enough quality, and another that there was already too much quality or "high brow" stuff.

One man said there should be a vaudeville programme every night, such as could be got at Fullers, little realising that this well-known company, with all its organisation, cannot put on a change every night, but runs the same vaudeville for weeks at a time.

One suggestion that was made, and which met with the general approval of the meeting, was that the Broadcasting Company should be requested to appoint a programme committee on which the listeners of Canterbury would be represented.

The general manager of the Broadcasting Company, Mr. A. R. Harris, who was present at the meeting, said the Broadcasting Company would welcome the co-operation of listeners in this way, provided that the listeners' representative represented a majority of the listeners in the area served by 3YA.

The chairman, Mr. M. J. Gresson, president of the Canterbury Listeners' League, said this was a very reasonable condition to make. He pointed out that the membership of the league was only between 300 and 400 out of some 6000 licenses in the district, and he raised the question as to how a representative was to be appointed.

Considerable discussion ensued on this aspect but no solution was found, and the meeting came to an end.

Next evening the radio editor of the "Star" had this paragraph in his notes:—

"Aerial" would like to voice disappointment at the small attendance at last night's meeting of listeners, for a city that has at least 3000 licensed listeners, an attendance of about fifty or so at this meeting shows either that the great majority of listeners are satisfied with the fare provided by 3YA, or that they are too lazy to help others in their attempt to secure better and brighter programmes. And that's that!"

RADIO PRICE REDUCTION IMPROBABLE

IMPORTANT BEARING OF PATENT POSITION

ENCOURAGEMENT TO HOME BUILDERS

Here, in New Zealand, one often hears "outsiders" fatuously remark "I think I'll wait till radio sets get cheaper. There is bound to be a fall in prices." In England first-class radio receiving sets are not showing any signs of being sold cheaper. On the contrary, with the added cost of refinements and better quality now in evidence prices are higher than a year or two ago.

Over ninety per cent. of the radio valve sets on sale and sold in New Zealand are of American manufacture, and the position in the United States, together with the increased New Zealand tariff against American sets will prevent any fall in present prices even if there is not a rise in the near future which, however, is probable.

POSITION IN AMERICA.

Mr. Hugo Gernsback, editor of the New York "Radio News," says:—"The Radio Corporation of America, and its allied interests, who always have been in the lead, as far as radio patents are concerned, have during the course of years acquired practically all of the important radio patents in this country; and they are therefore in a position to impose terms on all who have infringed their patents. Of course the cry of 'Monopoly!' will, as usual, go up; but the point remains that, after all, every patent is a monopoly, and that any one to whom is issued a patent must protect his rights—otherwise he stands to lose them. In upholding the rights to its patents, the Radio Corporation, after all, is within its rights, and will now reap the benefits from the patent situation.

PRICES WILL RISE.

"As generally known, practically every one of the large radio manufacturers is now paying a royalty of 7½ per cent. to the Radio Corporation, with a clause of \$100,000 (£20,000) per annum minimum royalty. This, of course, means but one thing, and that is, the price of radio sets must go up. Furthermore, the small set manufacturers will no doubt go back into the parts business; as the Radio Corporation will probably license only those who are financially responsible (and it may be presumed that most of the smaller ones probably are not in a position to guarantee a minimum royalty of \$100,000—£20,000—per year).

"What has been predicted for a number of years has thus come to pass. The radio set business will be in the hands of a few strong corporations, which will control the legitimate set business in the United States on a highly competitive basis. All other reports to the contrary, this certainly is not a general monopoly of the set business; and we believe that, in time to come, it will work out to the advantage of the public.

MANUFACTURERS OF PARTS.

"But what about the parts business? It is believed in many quarters that, because of the conditions just mentioned, the general parts business will come back with a grand rush. Parts manufacturers, of course, sell their merchandise to set manufacturers; and this outlet, frequently, is their largest source of income. But outside of this, they sell their merchandise to radio dealers and to professional set builders. From present indications, there will be a great and immediate demand for parts; because the small set manufacturer, being put out of the way, will leave the road clear for the professional set builder to come into his own.

AMATEUR BUILDERS ENCOURAGED.

"The man who builds a set now and then, in his attic, is not likely to be worried by any patent situation, nor will the radio interests be much concerned about professional set builders. Quite the contrary, the Radio Corporation has always maintained that it encourages the amateur and constructor. More than ever, no doubt, the big interests now feel that they have little to lose on account of the set builders."

HINT TO N.Z. DEALERS.

Owing to the patent position in America there is every likelihood of a rise in the prices of American sets. The New York "Radio News" says:—

"There are always several hundred thousand people in the United States who build their sets either for themselves or for friends; and this number is likely to increase materially in the immediate future, because of the reason just explained. Summing up, therefore, these facts, it is reasonable to predict that the radio parts business during the next few years will show a very large and healthy growth."

New Zealand traders should take the hint and stock an abundance of parts.

35,000 LICENSEES

2YA ABROAD

FIGURES FOR OCTOBER

AUSTRALIAN COMMENT

The Secretary of the Post Office advises that the number of wireless receiving licenses received up to the end of October is as follows:—

Auckland	..	12,645
Canterbury	..	7,184
Otago	..	1,965
Wellington	..	11,753
Total	..	33,547

Radio Dealers:

Auckland	..	473
Canterbury	..	284
Otago	..	166
Wellington	..	724
Total	..	1,647

Transmitting licenses. 128
Grand Total .. 35,322.

W. F. H. Armistead (New South Wales) writes as follows:—

"You may be interested in learning that your broadcasting station is received here at very good loud-speaker strength in this locality—a city on the New England table-land in northern N.S.W."

"On 23/9/27, when I first picked up 2YA, we followed the various items of the programme readily and with pleasure. The strength and volume was such that, with a temporarily constructed indoor aerial of about 20ft. of No. 28 D.C.C. wire, I had really good speaker reception. Finally, I found that the piece of flex (about 1 yard) connecting the set to earthing switch, was quite sufficient for an aerial, giving all the volume one wished for home use.

the date, but during the week I received the result of the Schneider Cup race from 2YA before I heard it elsewhere."



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'PHONE 4778.

SHORT-WAVE NOTES

THE WEEK'S RECEPTION

NOTES BY MR. SELLENS.

Mr. F. W. Sellens, Northland, Wellington, writes:—

During the past week, some very interesting items have been heard on the short waves, and new stations logged. My list now totals 82 stations—all on telephony.

Last Friday evening, RFN, 8AU, and 8AG were heard from 10.25 till 11.30 p.m., and still going when I closed down. I heard at good strength some gramophone selections and foreign talk at intervals, "la Argentine" and "Buenos Ayres" were mentioned, so it was probably RCBS.

On Saturday afternoon, 2XAD, of Schenectady, New York, was heard to advantage from 1.30 p.m. to 3.41 p.m. During the first hour, a playlet was heard by the WGY Players, and then some music by the WGY Orchestra. At 2.30 p.m. the station relayed from New York City the 48th anniversary proceedings of the invention of the incandescent electric lamp by Thomas Alva Edison. This programme consisted of musical items, a speech by Mr. E. Wilbur Wright—a director of the General Electric Co., the owners of WGY, who, after introducing Mr. Edison, asked him various questions, which the great inventor answered briefly. Other prominent men in the electrical world also spoke.

The announcer at the commencement of these proceedings, stated that forty-four stations from coast to coast were relaying the programme. During the evening RFN came in well, also the foreign station heard on Friday evening.

On Sunday afternoon KDKA was weak. 2XAF was very good during the last half an hour, when musical items by the "Original Melody Boys" from the Arcadia, Buffalo, New York, were relayed. RFN, 2AQ, 1AI, and 8AU were also heard.

Tuesday evening found 2FC transmitting on 28.5 metres (through 2ME), as well as their regular wave-length.

During the evening they called WGY Schenectady, asking them to report reception through either 2XAD or 2XAF. They sent greetings and stated that it was hoped that later on these short wave broadcasts would be a weekly feature. He also announced that they would be on the air again on short waves on Thursday and Friday of this week, from 7.30 to 11.30 Eastern Suburban time. RFN were also heard during the evening.

PCJJ were transmitting their regular programme on Wednesday morning, but were not up to their usual strength.

A new foreign station was heard very early on about 32 metres, musical items, speech and music. On Thursday evening, 2FC were on 28.5 metres, again calling WGY. They also announced that, on Tuesday, November 1, at 8.15 p.m. Sydney time they would broadcast the Melbourne Cup on 28.5 wavelengths, 28.5 and 442 metres. This, he said, would be the first time that a race would be broadcast in the British Empire so that all the world could hear.

2MR, on Friday morning, were transmitting a test programme on 28.5 metres for reception in Britain. He announced that a special programme would be given on Sunday at 7.30 to 10.30 G.M.T., also on the 29th inst. from 3.30 a.m. to 4.30 a.m. Eastern Australian time.

The foreign station heard on Wednesday morning was again heard, musical items and foreign talk, also music. This time the call was heard being given in broken English—very hard to understand. The station was ANI, Java, on 31.86 metres.

In the evening, 2FC, on 28.5 metres, was again transmitting a programme for reception in America. He read a cablegram stating that WGY intended rebroadcasting this programme if weather conditions permitted.

An interesting log. J. Rait (Wellington) writes:—My short wave log may be of interest. Australia, 2SS, 4SW, 3FA, 2TH, 7MW, 8LM, 3HP, 5AH, 2BC, 7AO, 2WW, 2VA, 2RB, 4QR, (AGD?), 2ME, 8LO, 6WF, 6AG. Best phone, 2SS.

New Zealand:—1AN, 1AI, 8AU, 3AJ, 8AP, 2AJ, 2AY (3AZ?), 1FE (1AQ?), 2BH, 2BA, 2AQ. Best phone, 2AQ, 1AI, 1AN.

Mixed:—2XAF, 2XAD, 2XAG, 2XC, 4NW, 4VLW, KDKA, 2NM, PCJJ (Dutch 32 last Thursday), RFN, Belgium 33 (call SBR by my call book), 2SW, WMO.

MADAME WINNIE FRASER AT 2YA

Madame Winnie Fraser, who is to sing for 2YA on Friday and Sunday, November 4 and 6, was first introduced to New Zealand audiences in 1910 when, as Miss Winnie Nixon, she toured the Dominion with the Ellwood Trio under the management of Mr. Hugo Gorlitz. Her talents as a vocalist then earned for her the highest praise, and the best musical critics in New Zealand prophesied for her a brilliant future, and the critics have been right.

Trained in Christchurch under Mr. H. M. Lund, in 1919 Madame went to England and Europe for travel and study, and on returning to New Zealand sang for all the musical societies, including the Royal Auckland Male Choir, Royal Wellington Choral Society, Christchurch Musical Society, and Dunedin Choral Orchestra and Male Choir. She returned to Europe in 1923 for study alone, and after six months in London as the pupil of Sir Henry Wood, with whom she studied Oratorio and choral works—such as "Hiawatha," "Golden Legend," and Elgar's works, "King Olaf," "Caracatus," etc., she went to Italy for six months to hear and study Italian Opera and songs under Signor Cortogni.

From Italy she went to Vienna, the most musical city in the world, where Beethoven, Schubert, Brahms, Wolf, Gluck, and Mozart lived. Here there are three Opera Houses open for seven nights a week, and for ten months of the year, not to mention the Comic Opera Houses and the wonderful Concert Rooms where the world's greatest artists appear.

Madame Fraser remained in Vienna for a year, studying German Lieder under Herr Manzoni, and Grand Opera with Von Mullin, both celebrated teachers. She gave a concert in Vienna in November, 1921.

On returning to New Zealand Madame Fraser received many engagements at the New Zealand Exhibition, under M. Slapofski in the "Messiah," "Tannhauser," "Rebel Maid," "Elijah," "Golden Legend," etc., and now can fairly claim to receive more engagements and sing in more works than any other New Zealand soprano.

In August of this year at Auckland Madame appeared in the first New Zealand performance of "Aida" (Verdi's opera) in the role of "Amneris." She has just sung for the Napier Liedertafel, and will shortly sing in "Hiawatha" at Palmerston North. She has also sung at New Plymouth, Wanganui, Timaru, Gore, Dunedin, and other places.



—Clifford photo.

GOOD WEEK'S PROGRAMME FROM 4YA

At the conclusion of the Central Mission Church service on Sunday, the first regular concert by the St. Kilda Band will be played, providing the weather is suitable. The St. Kilda Band is in excellent form, and will render a fine programme. Its Sunday night concerts will be a regular feature from 4YA during the summer months, when fine weather prevails.

On Tuesday afternoon Miss Marguerite Puechegud will again be heard, offering valuable suggestions for furnishing and renovating the home. Mr. H. Greenwood will also conduct his weekly review of books, mostly fiction.

Pastor W. D. More will deliver a very humorous address on Tuesday evening. The title will be "Epitaphs," and listeners who miss this will miss a treat. Here is one of them, from Mark Twain: "Here lies the remains of Alexander McGlu,

He lies in sweet repose;
He wore a pink shirt and number nine shoe,
And had a big wart on his nose."

This provides an illustration of the quaint and incongruous humour that frequently appears in graveyards.

The programme for the evening concert on Tuesday includes some of the best broadcasting talent in Dunedin, and it promises to be most interesting.

The receiver used is the N.Z.R. "All-wave" receiver, three and four valves (three audio), and is OK for this type of work. My complete log numbers 93 stations from last December.

Miss Gwen Cooper, whose pleasing contralto voice is always eagerly looked forward to, will contribute four songs, as will Miss Peggy Neill (mezzo-soprano) in her usual artistic manner. Mr. R. G. Bond (basso), and Mr. Avery Dale (baritone) will also render two brackets of songs each. Instrumental solos will be provided by Mr. A. Levi (flautist), Mr. George Christie (cornetist), and Miss A. D. Allen at the piano.



MISS RAY WRIGHTSON.
Miss Ray Wrightson, of Napier, a promising young contralto, who will be heard from 2YA on Saturday, November 5, is a pupil of Madame Bella Russell, of Napier. She was the winner of the vocal championship competitions, Napier, this year, and has appeared in "The Ancient Mariner" for the Choral Society, and also at the Municipal Band.

Listeners who are fond of dancing may make arrangements for two hours of joy on Thursday night. Invite your dancing friends and tune in to 4YA. The Kapai Dance Band, the oldest in Dunedin, will provide the music for fox-trots, one-steps, waltzes, both old and new, and some old-time sets, Alberts, and quadrilles. The announcements for these numbers will be made the usual M.C. style. So that those who are not dancing may enjoy the programme, the dance numbers will be interspersed with solo items, both vocal and instrumental, of a high quality.

Arrangements have been made with the Dunedin branch of the League of Nations Union for a series of weekly lectures on the League of Nations. This important subject is commanding much attention at present, and these talks will be of great interest and value. The first address will be heard on Thursday evening at 8.45, when the Rev. H. R. Bellhouse will give a survey of the league's work to date. Mr. Bellhouse possesses a fine broad-

casting voice, and is the chairman of the Dunedin branch. He recalls that he was the first to broadcast a lecture some years ago from the old Wellington station 2YK, and on that occasion his subject was the League of Nations.

Friday night's programme will be of high order. The studio portion will comprise vocal items by Mr. H. W. Harvey (baritone) Mr. J. B. McPherson (basso), Miss H. M. Ashton, and Miss Dora Drake (mezzo-soprano). Miss A. Newman will play some delightful piano solos, and elocutionary numbers will be given by Mr. A. Gorrie. The second portion of the programme will be relayed from the Savoy, when Mrs. Beecham and his orchestra will provide the latest dance music.

On Saturday evening listeners will have the opportunity of hearing more of Dunedin's best performers. Miss Winnie McPeak (contralto) will render some selected songs. Miss Mat-

RADIO WORLD'S FAIR

GREAT NEW YORK EVENT.

Several millions dollars' worth of contracts for radio receivers were placed during the trade hours of the Radio World's Fair at New York in September, and more than 7500 dealers in radio apparatus have been in attendance, it was announced at radio show headquarters in Madison Square Garden. The equipment purchased will be sent to all parts of the world.

A representative of the show said American dealers had declared that the public demand this year was for de luxe receivers in elaborate cabinets, while in foreign countries the demand was for the simpler sets.

Fire Commissioner John J. Dorman visited the "Theatre of Wonders" at the show. He was especially interested in the balanced photo-electric cell, which utilises the sun's rays to turn on and off the lighting circuits of city streets, and in devices which automatically sound an alarm when a fire develops.

DIVINE RADIO QUEEN'S THOUGHT.

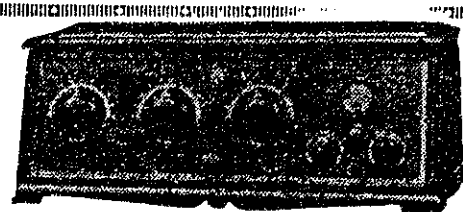
Another visitor to the show was Konrad Leitner, Swiss psychologist, who succeeded in "reading the mind" of the radio queen, Miss Edith Amelia Smith. He readily discovered the hiding place of a small object, it was said, after Miss Smith had secreted it among the 300,000 separate articles on display in the booths of the exposition. Mr. Leitner said he learned English by listening to its being spoken over the radio here and in Europe.

A COUNTERPOISE

An insulated counterpoise will work very well in place of the ground on a receiving set. In locations where the earth is sandy or dry and a good ground connection cannot be obtained, a counterpoise is superior to a regular ground connection. A counterpoise is constructed exactly like an aerial; and is suspended directly beneath the aerial and near to the earth. It is connected to the ground binding post on the receiving set in the regular manner. Both the counterpoise and the lead to it should be well insulated from the ground. As in the aerial and lead-in, it is best to use enamel copper wire, about No. 12, in the counterpoise. A receiving set using an insulated counterpoise instead of a regular ground connection is not so likely to pick up interference from electric light lines, vacuum cleaners, door bells, and telephones.

Edgar, possessor of a fairy-like, yet well modulated, voice, will also be heard. Mr. W. Mills (tenor) and Mr. R. Mitchell (baritone) will each contribute four numbers. Among the instrumental soloists are Misses Alice Wilson and Marjorie Watts, at the piano, playing classical numbers, Mr. Malcolm Robilliard, one of the foremost cellists in New Zealand, and the Rev. G. E. Moreton, with his clarinet.

On Saturday an address will be given by Mr. A. E. Wilson, manager of the Government Tourist Department at Dunedin. He will offer advice to tourists who are contemplating a summer holiday, and will show that Otago has some distinct advantages for the traveller.



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TO-DAY AND TO-MORROW

They Say:

That Dunedin is specially sunning itself in the fierce light of praise and enthusiasm heaped upon Miss Isabel Wilford by the English public and Press; Mrs. Wilford, the mother of the risen star, being a daughter of a notable house belonging to the Scottish city, which has a reputation for being foremost in the field of appreciation of art in all branches. Miss Wilford is the only daughter of Mr. T. M. Wilford, orator and parliamentarian, whose historic gift, it would seem, she has inherited in full measure. Beginning her stage career at Hollywood, she quickly attracted attention, and starred successfully in four screen plays. Subsequently she toured New Zealand and Australia with "The Bat" Company, her attractive personality and performance winning high praise. Later one remembers her beguiling acting in "The Merchant of Venice," with Moskovitch in his great performance of Shylock. Afterwards the plucky and gifted trader of the uphill path to fame and fortune, which is no royal road, but must be essayed with faith and courage, tried her luck in the wider world beyond our little islands, hoping to "arrive" some day on the English stage, which she has now so triumphantly done. Six months after arrival she secured an engagement to understudy Ruth Vincent, subsequently playing her part, a low comedy one, with outstanding success. This was the prelude to her appearance in a minor role in "The Garden of Eden," the while she understudied Tallulah Bankhead. And when the hour struck, the chance came, Miss Wilford was more than equal to it, to judge by her rapturous reception from the English public, which as a general rule is not remarkable for over-enthusiasm. We are glad, but not surprised, calling to mind an unforgettable performance by this actress, then a very youthful maiden indeed. The occasion was an amateur show, given for the cause, during the late war years. Miss Wilford impersonated the symbolic figure of Grief. No word was spoken, the effect relying solely on facial expression, significance of pose, abandonment to emotion. And for a few short minutes tragedy lived before our eyes, stark grief, wordless and beyond hope. Extraordinarily clever in conception and execution for so young a girl; and now that Miss Wilford's great gift has full recognition, and the world is her oyster, her own little country over the seas rejoices.

Smart Smoking Suits.

The smoking or lounge suit has superseded the negligee in the wardrobe of milady for boudoir wear. They are immensely popular in England just now for the inevitable cocktail party. Two extremely attractive examples were on show at the Pageant of Industry in Wellington last week. A particularly smart affair had trousers and waistcoat of rich scarlet satin, with the popular mandarin coat of scarlet and gold brocade. The trousers were of generous proportions, in the top half tapering from the knee to the ankle, embellished with buttons of gold. This and the little stand-up collar gave an air of piquancy to a very charming toilette. The other model had a coat of shot gold and rose, a one-sided rever striking an entirely new note. The loose trousers were of black satin, the jacket and rever being widely bordered with black satin to match.



—S. P. Andrew, photo.
MISS ISOBEL WILFORD,
who has achieved a dramatic success
in London.

PATIENCE.

Lord, give me patience! Hope I have,
But hopes are curses when they cry
For swift fulfilment, lest they die.
Patience, not hope, is truly brave.

Give me a patience that will work
Through the grey years for sweets
delayed;

Nor ever faints, nor grows afraid,
When doubts assail the spirit's gate.

Give me a patience that will work
With little things to little ends;
That wealth of time and care expends
On duties which the heart would shirk.

Give me a patience that will bear
With others, when the pin-pricked heart
Would send through scornful lips a dart
Steeped in the venom of despair.

A patience that untiring proves;
Thwarted, yet all-expecting still;
That climbs above the present's ill,
And waits, and waits, and meanwhile
loves.

Stephanie Ormsby.

Child Welfare.

Here is a subject of vital importance to the nation. Surely there is no man better qualified to stress its importance and to speak authoritatively concerning the incidental problems which he himself has done so much to solve than Sir Truby King. By his self-devotion to a great cause, Sir Truby has beyond all question rendered a signal service to his country, and the honour that has come to him has been well earned. Throughout New Zealand his name is a household word, by reason of the beneficent institutions which, through his untiring efforts, have been brought into being for the preservation of infant life. Sir Truby King will, on the evening of the 12th, conclude the lecture, the first portion of which was broadcast from 2YA on Saturday, November 5.

Getting Busy!

Head Gardener (to Roy): "Now then, Alf, look alive an' get a move on. Jest hoe up all them little weeds, an' put a Latin label on the big ones. 'The missus is comin' 'ome this afternoon!'"

TO-DAY AND TO-MORROW

Indian Ink for Ebony Brushes.

When ebony brushes become brown or discoloured through repeated washings, their blackness can be restored by applying a good waterproof Indian ink to the affected parts with a small brush. One or two coats can be applied in a few minutes, as the ink dries rapidly. Incidentally, Indian ink is an excellent black dye for small wooden articles.—(From an English journal.)

Summer Coats.

Fashion has decreed that the georgette coat shall be a special feature for summer wear. These coats are chiefly in shades of beige, and are carried out with pleatings, both accordion and box-pleating, embellished with beautiful chintilly and fine guipure laces. The interesting feature of these coats is the quiet distinction of real simplicity they impart to any toilette.

English Crystal.

The skill necessary to produce high-class crystal is inherited and only acquired by glassmakers after generations of practice. Nowhere on earth is this so apparent as in Great Britain, famous throughout the world for its crystal of sparkling brilliance. The aim to express beauty in glass not only applies to the more costly examples of craftsmanship, but also to pieces designed to meet the modest purse. Good taste and the dictates of fashion unite in calling for cut crystal, suitable alike for decoration and table use. Moulds so much used on the Continent are rarely to be seen in first-class English glassworks. Fancy yourself in one of these glass houses, among the glass blowers, and the scene of their labours immediately impresses you. Active figures are seen moving against the glow from the working holes of the great furnaces, and coming closer—not too close, for the heat is scorching—you can watch them like so many magicians creating beautiful things out of clear liquid—a puff of breath, a wave of the hand, a turn of the wrist, and presto! a wine glass, a vase, a bowl—what you will in glass.

The "Cutting Shop."

First of all the pattern is roughed out the article by means of a revolving flat iron wheel, against which the cutter steadily holds the glass. As the wheel rapidly turns, a thin stream of sand and water falls on its edge from a container above. The rough cut article is then passed to an operator who controls a stone wheel, which effects a smooth finish to the original cuts. Glass cutters have a training period of seven years, but it takes many more to turn out an expert operator.

Polishing is the final process which supplies the "sparkle" to the crystal. The old method of polishing with wood or cork wheels, brushes, and putty powder has given way to the acid bath, which is not only speedier, but gives a greater brilliancy. Next time you feast your eyes on a perfect piece of crystal think of the craftsmanship necessary to produce the shape of the article, but especially the art of the cutter who has transformed the plain shape into a thing of beauty. Silverplate, so much in demand in past years, has had to yield the pride of place to crystal.—From Mr. A. R. Stevens's talk at 2YA.

Strindberg and a Feminist.

An unusual incident occurred in the middle of the third act of Strindberg's "The Father" during a performance at the Everyman Theatre, Hampstead, London, not long ago. Suddenly, when Mr. Robert Lorraine was delivering one of his anti-feminist speeches, a woman in the front row of the stalls, exclaimed in a very audible voice: "Stop talking all this rubbish!"

There was a dramatic pause. The people in the audience held their breath. Then Mr. Lorraine, completely unperturbed, retorted: "Madame, if you do not like our play you can easily leave the theatre."

Thereupon the interrupter got up and walked out. The audience applauded enthusiastically. A few seconds later the players were carrying on as though nothing had happened.



Art-lite photo.
MISS M. BILLS,
soprano, who frequently sings from
4YA.

Another Retort.

This incident reminds me of a tale I once heard of a humble Shakespearean actor who used to perform in a booth in Cork, Ireland, some forty years ago. "Jimmy Gooseberry's Theatre" was a humble affair, the footlights being candles stuck in bottles, while the only rule as to dress was that patrons in the front row were expected to wear shoes and stockings.

On one occasion when Jimmy, thickly coated with burnt cork, was playing Othello, one of his passages with an Amazonian Desdemona was hailed with ribald laughter by some of the audience. Nothing daunted, Jimmy stepped down to the footlights and addressed the audience.

"Lave aff, now bhoyas!" he cried. "Lave aff, an' Desdemona an' me'll fight anny two of yez after the show's over"—a sporting offer that was quite the hit of the evening!

The Letters of Annabel Lee

My Dear Elisabeth,—

Grey the sky and could the blast on the morning of Labour Day, that most popular holiday, coming as it does amid everydayness of this workaday world, at just the right moment for a spell. Some donned their plaidies, however, and fared forth; many to Trentham, where it blew half a gale, which almost spoiled the fun of the fair; others to the country where, in spite of storm and stress, blossoming fruit trees flaunted bravely and lilies bloomed by the wayside. At a passing station, pink and purple and sweet in the wet wind, tossed and beckoned a garden of dear old-fashioned stocks, surely an inspiration on the part of some sower of seed, for this gay garden is a joy to the eye and refreshment to the spirit of bored travellers in dull trains, passing by on their little journeys. As the day grew up a little, the sun, which had coyly lurked in seclusion, allowed small secret glimpses of light to frisk over the hills; the sea began to shimmer, gambolling lambskins and fat, fat sheep dotted the fields, the wind-blown trees recovered tranquillity, and gradually the landscape took on the curly, comfortable look of a Birbeck Foster drawing. Two boys near me fell on and off the seat, and banged the door after the manner of boys, however attractive, and these were of that variety; one of the fairness that turns to carotid gold in a high light, with the freckles that hold the heart of susceptible females, the other with the black and waving hair, and the blue eyes of Ireland. Me they would have none of, rejecting my unimpaired overtures; being engrossed with a stolid driver who paraded his puffing engine up and down outside in the leisurely New Zealand manner. Leaving them to this mainly interest, I bundled off the train at a peaceful place on the line, which is just far enough from town to be out of the usual track of the crowd, and where, or so it seems to me, the sea beyond the grey sands and the lupins stretches out to the wide horizon more enticingly than elsewhere. Suzette's very sophisticated week-end cottage is very attractive, set as it is in a garden of pinks and poppies, her crackling wood-fire a joyful sight and sound, and her many clever labour-saving tricks making the absence of the hired help quite negligible. Her spoilt and friendly Pomeranian, a host in himself, barked vociferous welcome, and for lunch we had one of those savouries for which Suzette is famous, cooked on an electric stove, which is the most fascinating thing in the way of cooking apparatus I have seen. Suzette welcomed me in a silken, scanty royal blue frock, with a suggestion of the ubiquitous jumper style, straight behind and pouched before, with dodgy pleat or so in the skirt in front. Coming home, over Plim-

merton, there was a wonderful sunset. The sky, of a crystalline clearness and the shade familiarly known as duck-egg blue, was a background for a huge and stationary bank of golden cloud, like some awesome messenger from a Land Beyond, with fluttering, flaming satellites. A brave sight, clutching at the heartstrings; but the good old holiday-makers rustled their twopenny-halfpenny newspapers, shut their silly windows, turned up their coat collars, with never a look or a "Guid save us!" for the miracle of the heavens. Vegetables all, and perhaps because of it life is the simpler for them! Do you remember Heine, at the end of his brilliant and hectic life, writing from his mattress grave? "It is so much better to be a vegetable, and walk in the old well-trimmed path, than to be one of those fellows to whom all the roses nod and all the stars wink!" What do you think?

There is one glory of the moon, one glory of the sun, and another of plain, plodding human endeavour and achievement, the "old proud pageant of man." Of this latter was the show in the Town Hall organised by the New Zealand-made Preference League. Fain would I have led to it, driven, pushed, if need be, by the scruff of their necks, all those who beclit, patronise, or fall foul of New Zealand, my country, the boasted land of the bunnies and the breezes. Frocks there were and furs, matches and millinery, hosiery and high-steppers. I pondered the gleam and glitter of the smile of various maidens, wondering 'twas the shine of youth, which is like no other shine, or whether the vaunted Pepsodent has everything to do with it. Anyhow, to be on the safe side, I bought quite a lot of this toothy preparation, so that I may smile and smile, even though I feel like a villain. A graceful nymph in a clever and provocative dance extolled the virtue of the Gloria gramophone, and incidentally the amazing sinuosity of the dancer herself. Blithe girls trod the stage, walked the plank, like trained and mannered mannequins, showing off the latest creations for any occasion, from a party at Government House to a night-night, in which one could drop off to sleep with a beautiful feeling that one is looking one's best. Quite a definite lead was given as to coming fashions in the springtime, which also is the ring-time; and looking at New Zealand-made garments on New Zealand-made girls, one thinks again of the Tennysonian silky-sweet couplet—
In the spring a livelier iris changes on the burnished dove,
In the spring a young man's fancy lightly turns to thoughts of love.

Very intriguing were the frocks and furbelows, and fain would I have achieved a suit, sober in hue with a thin white line, excellent in weave and cut and finish, an exhibit of the Wellington

Woollen Company, and well worn by a dashing denizen of society. The leisurely long-ago was resuscitated in the fashions of a day that is dead, one English rose of a girl being particularly shy and adorable in a lace-trimmed, billowy blue gown. These amateur saleswomen included several of the Most Youthful Set, who slipped and glided through their allotted parts with the nonchalant air and extreme aloofness of the species whose jobs for the moment they jumped. Do you remark, by the way, how popular a name is Marjorie? And pretty, too, but not so pretty as the girls who bear it. Where are the gentle Janes, the bonny Kates, the Nessies, and the Jessies of yesterday? By her name ye shall date her, so choose carefully for your blue-eyed twins, and study Rossetti's lovely little list—

Cecily, Gertrude, Magdalen,
Margaret and Rosalys,

which will never go out of fashion. Clever, graceful, finished is the maiden of 1927; whatsoever her small and capable hand findeth to do, that she does efficiently. She toes the line successfully, whether it be posturing and publicity, or that harder row to hoe, the solid daily grind of "doing out the duty." Yes, to use a Dickens gay, Todgers can do it when it comes to the pinch, and New Zealand will not fail.

Speaking of Dickens, Clement May's entertainment in the Concert Chamber was a delightful one. There are those who still love the tales of the great story-teller, and to these the impersonations were a sheer delight. Mr. May is to be congratulated upon the fidelity and artistic completeness of his reproductions of the Barnard drawings; a true disciple of the novelist, his make-up alone was worth going far to see, and his acting entirely satisfying. Sydney Carton in "Before us, haggard, reckless, infinitely moving in love and renunciation; Uriah Heep, with his ugly face and miserable body, treacherous mongrel that he was; Micawber, the good-humoured, the debonaire, swaggered across the stage, optimist to the bone. For the rest, a contralto vocalist sang artistically; Mr. Norman Aitken was effective in a dialogue, and Mr. Whittle, as ever, an incomparable accompanist. But, above all, was it a Dickens hour, carrying us back to the days when enthusiasm yet survived, and we lay under greenwood tree with a book, kicking our heels in ecstasy as we toiled with Copperfield, fell for the fascinating Steerforth, starved with Jo, and thrilled to that immortal journey to the scaffold. Long and many lie the years between since Dickens was the vogue; but to many the spell still holds, and they are grateful to Mr. Clement May for thus strengthening the silken strands of remembrance.—Yours

ANNABEL LEE.



Art-lite photo.
MISS MARIE TUCKER,
pianiste a 4YA Dunedin.

Windsor, still under the influence of the reflections excited by the dream. The first thing the following morning, he was called to the telephone to hear from his servant the announcement of his father's death. So prepared was he for the communication, that he asked no questions, and accepted the news as the obvious confirmation of his own fears. Subsequently Mrs. Baird worked out with her brother, allowing for difference of longitude, the exact time of the dream, which they found to have taken place at the very moment of the disaster.

Not Rude.

"Then you deny," said the magistrate, "that you were rude to the police officer when he asked to see your licence?"

"Certainly, sir," replied the motorist. "All I said was that from what I could see of him I was sure his wife would be happier as a widow."

Some Features of Next Week's Programmes

"THE HOME OF 2YA"

"A RETROSPECT OF WELLINGTON."

The past twenty-five years has witnessed many changes and great progressive development in the life of the City of Wellington—the home of Parliament, and of the Dominion's most powerful radio station. Few men are brought more intimately into contact with civic, commercial, industrial, and social happenings than is the manager of a great newspaper. Mr. Arch. Sando, the subject of whose lecturettes is given above, is to speak from 2YA on the evening of November 10, at 9 o'clock. He is a bright and racy raconteur, who knows his Wellington like the proverbial book, and the story he will tell cannot fail to interest listeners in all parts of the Dominion. The subject will be covered in two lecturettes, the second of which is scheduled for November 17.

On the 24th, Mr. Sando will speak again, on this occasion his theme being "The Romance of the Press."

"MUSIC AND PICTURES"

The illustrated lecturette delivered by Mr. Douglas Tayler, Director of School Music, have been widely appreciated, and listeners will note with pleasure that he is again to entertain them, this time with an illuminating talk on "Music and Pictures." Mr. Tayler will be "on the air" from 2YA on Tuesday evening, November 8, at about 9 o'clock.

In addition to broadcasting Madame Winnie Fraser, New Zealand's dramatic soprano, on November 4, 2YA Wellington will have the honour on that evening of enabling local listeners to hear Mr. Barry Coney who, although frequently on the air from 1YA, has not so far been heard from the capital city.

Next week further members of the range of quartets secured for 2YA will make their appearance in an acceptable variety of numbers. Due attention to the Christchurch Carnival will be given by 2YA either by rebroadcast of the outstanding events or the announcement of results. Attention will also be given to the cricket match to be played at Wellington on November 11 and 12, when the New Zealand tourists will appear.

Programme of Symons-Elwood-Short Trio

The trios to be played this week by the Symons-Elwood-Short trio include movements from works by Brahms, Beethoven, and Mendelssohn. Those who are accustomed to associating the name of Brahms with music of only an austere quality will be very pleasantly surprised at the beautiful melodiousness and richness of harmony in the first movement of the trio in B major. The loveliness of the opening leaves an indelible impression on the memory of the listener. Beethoven will be represented by movements from his trios in C minor and D major, one of the earliest and one of the latest of the great Bonn master's efforts in this field. The charming simplicity and gracefulness of the first work are in marked contrast to the vigour and robustness of the opening of the trio in D. The well-known slow movement of the Mendelssohn trio in D minor, with its simple melody and the vivacious scherzo, will make an immediate appeal by reason of their clearness of form and

frank tunefulness. The dazzling brilliant last movement, one of the most popular of trio movements amongst large audiences, will be played on Saturday evening, as will also the droll, so-called "Gipsy Rondo" of Haydn, the last movement of one of his trios.

The whole of one of Gurliitt's trios, that in D major, will be presented on Monday evening. This is a work of a purely light nature, but is an excellent example of very popular trio-writing, and is sure to attract many listeners.

Miss Ava Symons will play the celebrated "Devil's Trill" sonata, by Tartini. The composer, one of the greatest violinists of his time, related the origin of it to a friend as follows:—"One night I dreamt that I had made a bargain with the devil for my soul. Everything went at my command; my novel servant anticipated every one of my wishes. Then the idea suggested itself to hand him my violin to see what he would do with it. Great was my astonishment when I heard him play, with consummate skill, a sonata of such exquisite beauty as surpassed

the boldest flights of my imagination. I felt enraptured, transported; my breath failed me, and—I awoke. Seizing my violin, I tried to reproduce the sounds I had heard. But in vain. The piece I then composed, the "Devil's Sonata," although the best I ever wrote, how far was it below the one I had heard in my dreams!"

Mr. George Ellwood will play as violoncello solos and languorous "Oriental," by Cui, the lovely "London-derry Air," one of the most perfect of all folk-songs, and a sparkling Bourree by Handel.

Mr. Gordon Short will play three numbers from a mighty work of thirty moods and scenes in triple time, written by the famous pianist, Leopold Godowsky. These three will be "In Old Vienna," "Paradoxical Moments," and "Rendezvous."

A number of particular interest to music lovers will be the first movement of Grieg's sonata for cello and piano, to be played on Saturday evening by Messrs. Ellwood and Short. It is of a very fiery nature, and is always a highly effective concert item.

SIR ROBERT STOUT'S "SCHOOL REMINISCENCES"

On November 7, at 9 p.m., Sir Robert Stout, ex-Chief Justice of New Zealand, and one of the Empire's most distinguished scholars, will, for the second time, speak from the studio of 2YA to his fellow New Zealanders and listeners elsewhere. This veteran lawyer, judge and statesman began life in the ranks of the teaching profession, of his association with which he retains many happy recollections. His talk on Monday evening will be on "School Reminiscences," and will, assuredly, be rich in interest to all classes of the community.

THERMAL WONDERS.

MR. ALFRED WARBRICK, TO SPEAK FROM 2YA.

No man living is better acquainted with the wonders of New Zealand's thermal regions than is Mr. Alfred Warbrick, of Rotorua, a veteran officer of the N.Z. Tourist Department. Mr. Warbrick is visiting Wellington during the first week of November, and he has courteously consented to broadcast a lecturette from 2YA. Time and date for this interesting talk will be announced over the air.

THE LYRIC QUARTET

Great variety will characterise the programme of the Lyric Quartet on November 10. The first of the five quartets to be sung will be "Foresters," a rousing hunting song. The words a familiar, being taken from Shakespeare's "As You Like It." Then will come a quiet melodious number, "Every Rustling Tree," very popular because of its beautiful harmony. "Laughing," as its name suggests, is just one long laugh. It is never sung without inciting to join in, and laugh, too, for laughing is infectious. A touch of humour will be afforded by the singing of "Pussy in the Well," melodiously based on the old nursery rhyme. The Lyrics never fail to entertain with their singing of this number. In "The Soldier's Farewell" the quartet may be relied

upon to effectively demonstrate the beauty of the harmony of this well-known and very popular song.

In addition to these pleasing concert items Mr. Harry Phipps, the first tenor of the quartet, will be heard in a solo entitled "Laugh and Sing," with its happy lilt and haunting refrain. Mr. Will Goudie (bass) will contribute "The Stoker," a rollicking sea song in praise of "the joker who works with a shovel and poker." Well-known airs will also be introduced by the quartet. "Reuben Ranzo" another rollicking sea song which is always well received, will be sung by Mr. W. Binet Brown (bass), while Mr. George Howe (tenor) will be heard in the well-known ballad "Mountain Lovers," a song always popular with all audiences.



MR. BARRY CONEY.

Mr. Barry Coney, the well-known Auckland baritone and teacher, is to sing at 2YA on the evening of November 4. Mr. Coney, who requires no introduction to New Zealanders, is visiting Wellington in connection with the forthcoming performance of Verdi's "Aida," to be given by the Wellington Choral Society. Mr. Coney took the part of "Amonasro" in the Auckland Society's presentation of the same opera, and gave an excellent rendering of the part.

Mr. Coney is to sing the solos of that part from 2YA. Chief of these is "Alleluia," by O'Connor Morris, a number which has not previously been presented at this station. His splendid voice, which has been frequently heard from 1YA, is always a delight to listeners.

is sung by "Aynceana" in Verdi's opera "Il Trovatore." It describes how her mother is burned at the stake at the behest of cruel old "Count di Luna." It also relates how "Aynceana" stole the old Count's child, intending to cast the infant into the flames, but in mistake gave her own child to the horrible death. "Eri tu che Macchiavere" is the great baritone aria from another of Verdi's operas, "Un Ballo in Maschera." At the outset it portrays the husband's righteous anger, but later in the aria we hear him in sorrowful vein as he looks back on the happiness now wrecked through his wife's unfaithfulness. "Love, Could I Only Tell Thee," by Capel, was originally sung in "Floradora." It is in the composer's best vein, and is a fine, passionate love song.

The Orpheus programme will also include "My Old Kentucky Home," a tenor solo and quartet chorus; the duet "Violets," and "Here in the Quiet Hills," a contralto solo. The two last-named numbers are in quieter mood. Altogether quite a delightful feast of music.

Mr. William Renshaw

(Tenor.)
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PHILHARMONIC QUARTET

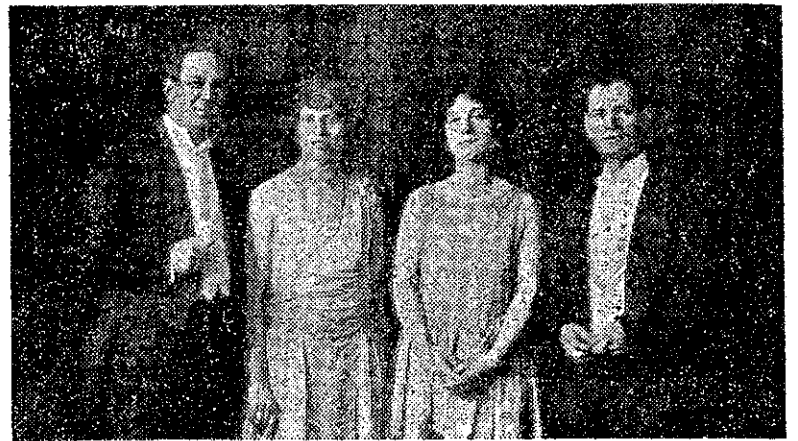
The personnel of the Philharmonic Quartet, scheduled for November 11, is particularly good. Every member is an excellent soloist, and all have sung professionally for choral societies, musical entertainments, and concerts in Great Britain, France, Australia, and New Zealand. Mrs. Ellison Porter, the soprano, has a pretty voice of limpid purity, equally suited for dainty and sacred music. She was very successful in her recent appearance with the Royal Wellington Choral Union as Lola in "Cavalleria Rusticana," and has been engaged to sing the soprano solos in the "Messiah" for the Levin Choral Society.

Miss Madge Freeman, a young Wellington contralto, is the possessor of a deep, rich voice, full of dramatic fervour. She was the recipient of a very flattering reception at the recent W.T.B. concert, and in the alto role in "A Tale of Old Japan," recently given by the

Levin Choral Society, "she met with popular favour, and should go far in her profession. She has the natural endowment of a flute-like tone."

Mr. Edwin Dennis, the tenor, is well known throughout the whole of New Zealand as a brilliant tenor vocalist. He has wonderful control of his voice, his diction is excellent, and is an artist to his finger tips. He has performed at Queen's Hall and Central Hall, London, and throughout Australia and New Zealand. He is an Associate of the Royal College of Music, London.

Mr. W. W. Marshall's bass voice is one of those rich, deep, musical voices that everybody enjoys. At the lowest note it still maintains its quality. Mr. Marshall was trained in London, where he was very successful as a performer in the principal halls, which success he also enjoyed throughout Great Britain and the Continent. As a concert performer, locally, his singing is always artistic and popular.



The Philharmonic Quartet to sing at 2YA.

CELESTE QUARTET

The Celeste Quartet will give a further programme on Saturday, November 12. The concerted numbers set down range from the joyous and spirited "Hunting Chorus" from Cellier's ever-popular comic opera, "Dorothy," to Pissuti's exquisite unaccompanied part song, "In This Hour of Softened Splendour." A wide variety of duets and solo numbers are promised. "Heart of Gold" will be sung by Miss Mabel Dyer, whose beautiful contralto voice is sure to again delight her unseen audience. This singer will also be associated with Mr. Edgar Swain in the duet "Caro Mio Ben," by Giordani. Mr. Swain will also be heard in Sanderson's

song "Harlequin," and the robust tenor can be relied upon to present an artistic rendering.

Miss Myra Sawyer's brilliant soprano voice will undoubtedly appeal in her singing of that popular number "Villanelle," by Del Acqua. In this number Miss Sawyer demonstrates to distinct advantage the artistry and exceptional flexibility of her voice. In a duet celebrated for its attractive harmony, "The Garden of Your Heart," by F. Doree, Miss Sawyer will be associated with Mr. Wm. Boardman, the bass of the quartet. This singer's resonant bass may be expected to find instant favour in the song "Sir Roger," by H. Colmann. This number is a song version of "Roger de Coverley," which loses none

THE ORPHEUS NIGHT

Some very delightful concerted numbers are to be presented by the Orpheus Quartet (Mrs. Alice Harris, Miss Lily Mackie, Mr. Arthur Coe, and Mr. Len Barnes) on the evening of Tuesday, November 8. "Rose of My Heart" is a very fine quartet arrangement of Herman Lohr's popular song. The great Russian composer Tchaikowsky will be represented by a very impressive sacred number, "The Cherubic Hymn." Compositions of this kind are frequently heard in the Russian Church, and it will be remembered that the famous Don Cossacks included quite a number of them in their programmes. The last

verse is a splendid piece of writing. By way of contrast, "Kentucky Babe" is a melodious refrain reminiscent of negro life and conveying all the quaintness of negro music and speech.

From the realm of opera several notable solos have been selected for presentation. "Fierce Flames are Soaring"

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Full Programmes for Next

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NEWS AND NOTES

(By "Switch.")

Ordinary three-ply veneer wood makes good panels for receiving or transmitting sets. Veneer is cheap and easy to obtain; it is thin and will not warp. A panel made of thin veneer wood is almost as good as a bakelite or hard rubber panel, if the wood is thoroughly dry and seasoned. It would be a good plan to bake the veneer panel in a warm oven for a half-hour to make sure that there is no moisture left in the wood.

Why is an indoor loop aerial directional? If the plane of the loop is at right angles to the direction of the transmitter, the waves from the transmitting station will reach both sides of the loop simultaneously. The currents, induced in every part of the winding under these conditions, will cancel out exactly and no difference of potential will set up across the ends of the winding. If the plane of the loop is not at right angles to the direction of the transmitting station, the waves will reach one side of the frame before the other. The currents produced in each side of the loop will then be out of phase with each other, and therefore cannot cancel out. The more nearly the plane of the loop winding is made to coincide with the direction of the transmitting station, the greater the phase difference and, of course, the greater the potential differences set up across the ends of the winding.

The more-than-enterprising manager of a movie theatre "up York State" advertised that pictures of the Dempsey-Sharkey fight would be received by radio. The broadcast of the fight was received in the usual manner; but, in lieu of television apparatus, the wily manager showed bits of old films of the Dempsey-Gibbons encounter. It does not appear from the report how many of the audience detected the trick. Valve transmission by ships has more than justified the fondest expectations. With the vast increase in distances spanned, ships are now keeping in touch with the land stations on the trans-Atlantic course, even beyond the halfway mark across the ocean. Coastwise ships have little difficulty in maintaining contact with Tuckerton even to the Caribbean and beyond. The static-infested Gulf of Mexico finds valve transmitters getting through hundreds of miles of space in broad daylight, with precision and certainty.



Mr. Norman Scurr, exponent of the Hawaiian guitar at 4YA.

—Artistic photo.

A suggested standard for future design covering the colour of valve sockets; which has been adopted by the Radio Division of the U.S.A. National Electrical Manufacturers' Association reads: "The colours for vacuum-tube sockets in receiving sets shall be as follows:—For general-purpose tubes—dark red; for special detector tubes—green; for audio power tubes—orange." This proposal is to enable rapid identification of sockets in all sets.

Interference from passing trams is sometimes very difficult to overcome, especially if one is located near the tram line. Much depends upon the kind of set one is using, and it would be better to use as little audio-frequency amplification as possible, since a disturbance of this type is usually amplified more than the incoming signals. The use of a counterpoise in place of the earth will greatly help by getting rid of any interference due to earth currents; but, if the trouble is very persistent it may be necessary to resort to the use of a loop aerial, with a resulting decrease in signal strength. It may even be necessary to shield the entire receiver to completely remove the annoyance.

It is hardly necessary to suggest that sick patients or invalids of any age should have radio receivers of their own. Radio has proven itself to be not only a source of entertainment to persons confined to their beds, but also a potent therapeutic agent, keeping the mind in condition to speed recovery. It is not enough to have another person bring in a programme and let it run. What a sick person needs is the knowledge that there is at least one thing that he can do for himself. There is scarcely any exertion in operating a radio receiver. Even a very weak invalid can turn the dials for himself if they are placed in a convenient position, for example, on a swinging table overhanging a bed.

Sunday, November 6th

1YA, AUCKLAND (333 metres), SUNDAY, NOVEMBER 6.

6.55 p.m.: Relay of church service from St. Andrew's Church. Preacher, Rev. Lamb-Harvey. Organist, Dr. Neil McDougall.

8.30: Relay of municipal band concert from Town Hall. Bandmaster, Mr. Christopher Smith.

9.30: Close down.

2YA WELLINGTON (420 METRES)—SUNDAY, NOVEMBER 6.

6.15 p.m.: Relay of evening service of the Vivian Street Baptist Church. Preacher, Rev. F. E. Harry; choirmaster, Mr. A. R. Don; organist, Mr. C. Collins.

8.15: Relay of band concert of the Wellington Municipal Tramways Band from His Majesty's Theatre.

3YA, CHRISTCHURCH (306 metres), SUNDAY, NOVEMBER 6.

5.45 p.m.: Children's song service, by Uncle Sam, from 3YA Studio.

7.0: Relay from Richmond Methodist Church of Sunday school anniversary evening services. Preacher, Rev. Harold Sharp; organist, Miss L. Straw; pianist, Miss A. Kearney; choirmaster, Mr. L. C. Quane.

8.15: Rebroadcast 2YA, Wellington.

Close down.

4YA, DUNEDIN (463 metres), SUNDAY, NOVEMBER 6.

6.30 p.m.: Relay of service from Methodist Central Mission. Preacher, Rev. W. Walker; organist, Mr. Chas. A. Martin.

8.0: Relay from St. Kilda (weather permitting) of concert by the St. Kilda Band, under the conductorship of Mr. James Dixon.

9.15: Close down.

Monday, November 7th

1YA AUCKLAND.—SILENT.

2YA WELLINGTON (420 METRES)—MONDAY, NOVEMBER 7.

11.30 a.m.: Subject to suitable conditions, rebroadcast of 3YA, Christchurch, in Carnival Week. Races interspersed with selected gramophone items.

5 p.m.: Close down.

6.0: Chimes of the G.P.O. clock.

6.1: Aunt Jo and cousins from Guildford Terrace Convent, choral work; Aunt Jo's answers to birthday letters; lecturette by Fairiel, "Indoor Games"; and Aunt Jo's story time.

7.0: News session, market reports and sporting results.

8.0: Chimes of the General Post Office clock, Wellington.

8.1: Overture—"Ride of the Valkyries," Wagner.

8.5: Quartet—The Wm. Renshaw Quartet, "O, Who Will o'er the Downs?" Pearsall.

8.9: Baritone—Mr. T. C. Wood, (a) "The Living God," O'Hara; (b) "Tommy, Lad," Margetson.

8.16: Elocution—Mr. A. Stanley Warwick, (a) "The Rose Out of Reach," Ogilvie; (b) "The Best of Wives."

8.25: Trio—Symons-Ellwood-Short Trio, "Allegro No. 1," Gurlitt.

8.35: Soprano—Mrs. Amy Dunn, "L'ete," Chaminade.

8.39: Tenor—Mr. Wm. Renshaw, "A Frivolous Ballad," Slater.

8.44: Banjo—Mr. Chas. Brazier, "Get Goin'," Mandell.

8.50: Contralto—Miss Nora Green, "Homings," Del Riego.

8.54: Quartet—The Wm. Renshaw Quartet, "Londonderry Air," traditional.

8.59: Weather report.

9.0: Lecturette—Sir Robert Stout, "Some School Reminiscences."

9.16: Baritone—Mr. T. C. Wood, "When the Sergeant-Major's on Parade," Longstaffe.

9.21: Trio—Symons-Ellwood-Short Trio, "Adagio and Finale No. 1," Gurlitt.

9.31: Soprano solo—Mrs. Amy Dunn, (a) "Evening," Ronald; (b) "Birth of Morn," Leoni.

9.37: Banjo—Mr. Chas. Brazier, "Happy Go Lucky," Grimshaw.



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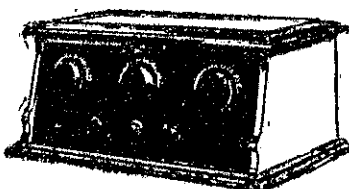
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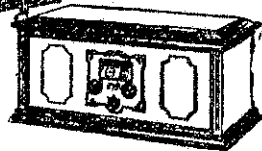


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9.41: Elocution—Mr. Stanley Warwick, (a) "Tantalus Texas," Miller; (b) Father's Dress Suit," Roberts.

9.49: Tenor—Mr. Wm. Renshaw, "Megan," Novello.

9.52: Contralto—Miss Nora Green, "Life's Sunset Bar," Russell.

9.56: Violin—Miss Ava Symons, "Sonata in G Minor," Tartini.

10.: Quartet—The Wm. Renshaw Quartet, "At Eventie" (Cavatina), Raff.

3YA CHRISTCHURCH (306 METRES)—MONDAY, NOVEMBER 7.

8 to 8.30 a.m.: Breakfast session—News items; the days' race card; conditions of roads; attractions in Christchurch for the day. Gramophone items.

11.30: Relay—Description Canterbury Jockey Club's Cup meeting at Riccarton.

5.30 to 6.30 p.m.: Children's session, by Uncle Jack.

6.30 to 7.15 p.m.: Orchestral music.

7.15 to 8: News sessions.

8.0: Relay of orchestral selections from Strand Picture Theatre Orchestra, under conductorship of Mr. Harry Ellwood.

Studio concert by 1st Canterbury Regiment Infantry Band, under conductorship of Lieut. C. H. Hoskin, and assisting 3YA artists.

Special request programme of band items.

8.10: March—Band, "Brigade of Guards," Hawkins.

8.14: Baritone solo—Mr. Eric Voyce, "The Tin Gee Gee," Field-Cape.

8.18: Selection—Band, "Favourite Melodies," Raymond.

8.25: Humorous recitation, Mr. Ronald Foster, "The Rest of the Day's Your Own," M.S.

8.29: Valse—Band, "Contemplation," Kandt.

8.34: Baritone solo—Mr. W. C. Mann, "The Ballad Monger," Martin.

8.38: Fantasia—Band, "Melodious Revue," Rimmer.

8.46: Baritone solo—Mr. Eric Voyce, "Three for Jack," Squire.

8.50: March—Band, "North Star," Turner.

8.54: Musical monologue—Mr. Ronald Foster, "The Family Lullaby," Walters.

9.0: Relay from Strand Picture Theatre.

9.15: Selection—Band, "H.M.S. Pinafore," Sullivan.

9.21: Baritone solo—Mr. W. C. Mann, "My Heart's a Haven," Heinel.

9.24: Waltz—Band, "Pink Lady," Caryll.

9.29: Baritone solo—Mr. Eric Voyce, "A Sergeant of the Line," Squire.

9.34: Chorus—Band, "Comrades in Arms," Adam.

9.39: Baritone solo—Mr. W. C. Mann, "Change o' Mind," Curran.

9.44: Cornet solo—Band, "Love's Garden of Roses," Wood.

9.49: Recitation—Mr. Ronald Foster, "Demonstration Day," Cowan.

9.54: March—Band, "Picador," Sousa.

10.0: Close down.

God Save the King.

4YA DUNEDIN.—SILENT.

Tuesday, November 8th

1YA AUCKLAND (333 METRES)—TUESDAY, NOVEMBER 8.

3 to 4.30 p.m.: Selected studio items.

6 to 7: Children's hour.

7.15 to 7.45: News and information session.

8.0: Chimes.

8.1: Relay of orchestral overture from Majestic Theatre. Conductor, Mr. Whitford-Waugh.

8.11: Light baritone solos—Mr. Reginald, (a) "Spring's Lovable Lady," Elliott; (b) "Sorter Miss You," Smith.

8.19: Soprano solo—Miss Hazel West, "There are Fairies at the Bottom of Our Garden," Lehmann.

8.23: Flute solo—Miss Ruby Brame, "I Baci," Czardi.

8.27: Boy soprano—David Campbell, (a) "Avourmeen," King; (b) "The Swallows," Cowen.

8.35: Baritone solo—Mr. James de Montalk, "Yeomen of England," German.

8.40: Instrumental—Mr. Peter Black's Trio, "Traum-der-Sennerin," Labitsky.

8.45: Contralto solo—Miss Jessie Smith, "Mountain Lovers," Squire.

8.49: Cornet solos—Mr. E. Tregilgas, (a) "The Keel Row," Rimmer; (b) "Softly Awakes My Heart," Saint Saens.

8.58: Relay of orchestral interlude from Majestic Theatre.

9.7: Weather report.

9.8: Song at piano—Mr. Peter Black, "Smilin' Through," Penn.

9.13: Soprano solos—Miss H. West, (a) "Dawn Gentle Flower," Bennett; (b) "I Did Not Know," Trotter.

9.21: Violin solo—Miss Marion McMurtrie, "Andante and Allegro" from "Concerto in D Suite," Laudy.

9.25: Light baritone solo—Mr. R. Thompson, "The Bellman," Ditson.

9.29: Boy soprano—Master David Campbell, "The Lass With the Delicate Air," Arne.

9.35: Relay of musical entr'acte from Majestic Theatre.

9.38: Baritone solos—Mr. de Montalk, (a) aria from "L'Ebre," Appollin; (b) "Trooper Johnny Ludlow," Temple.

9.46: Cornet solo—Mr. E. Tregilgas, "Arbucklenian," Hartmann.

9.51: Contralto solo—Miss J. Smith, (a) "If I Might Only Come to You," Squire; (b) "Sincerity," Clarke.

9.58: Instrumental—Mr. Peter Black's Trio, "Love's Old Sweet Song," Molloy.

10.2: A thought.

10.3: Close down.

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2YA WELLINGTON (420 METRES)—TUESDAY, NOVEMBER 8.

- 11.30 a.m.: Subject suitable conditions, rebroadcast 3YA, Christchurch, in Carnival week. Races interspersed with selected gramophone items.
5 p.m.: Close down.
6.0: Children's session—All seats, please. Train journey, Wellington to Wanganui, stopping at Johnsonville, Plimmerton; Otaki, Palmerston North, Feilding, and Marton. Uncle Jasper on board, sends birthday greetings. 6.20: Songs and recitations by the passengers, including stories by Uncle Jasper at 35 miles per hour. Radio express arrives at Wanganui at 6.59.
7.0: News session, market reports, and sporting results.
7.40: Lecture—Mr. E. A. Bradshaw, "The Products of Petroleum and Their Uses."
8.0: Chimes of the General Post Office clock, Wellington.
8.1: Overture—March, "Old Contemptibles," Ord Hume.
8.24: Quartet—Orpheus Quartet, "Roses of My Heart," Lohr.
8.10: Mezzo-soprano—Mrs. Alice Harris, "Fierce Flames are Roaring" ("Il Trovatore"), Verdi.
8.14: Cornet—Mr. Thomas Goodall, "My Pretty Jane," Hartman.
8.18: Tenor—Mr. Arthur Coe, "Love, Could I Only Tell Thee," Capel.
8.24: Trio—Symons-Ellwood-Short Trio, "First Movement, B Major," Brahms.
8.35: Duet—Mrs. Alice Harris and Miss Lily Mackie, "Violets," Wright.
8.40: Quartet—Orpheus, "Cherubic Hymn," Tchaikowski.
8.44: Cello—Mr. George Ellwood, "Orientale," Cui.
8.50: Duet—Mrs. Alice Harris and Mr. Len. Barnes, "A.B.C.," Parry.
8.56: Weather report.
8.58: Lecture—Mr. Douglas Tayler, "Music and Pictures."
8.18: Tenor solo and quartet—Orpheus, "My Old Kentucky Home."
9.21: Symons-Ellwood-Short Trio, "First Movement, C Minor," Beethoven.
9.31: Contralto—Miss Lily Mackie, "Here in the Quiet Hills," Carne.
9.37: Cornet—Mr. Thomas Goodall, (a) "Serenade," Schubert; (b) "Love's Sorrow," Shelly.
9.45: Baritone—Mr. Len. Barnes, "Eri Tu" (Masked Ball), Verdi.
9.50: Cello—Mr. George Ellwood, "Londonderry Air," O'Connor-Morrice; "Bouree," Handel.
9.57: Quartet—Orpheus, "Kentucky Babe," Giebel Ditson.

3YA CHRISTCHURCH (306 METRES)—TUESDAY, NOVEMBER 8.

- 8 to 8.30 a.m.: Breakfast session—News items; the day's race card; conditions of roads; attractions in Christchurch for the day. Gramophone items.
11.30: Relay—Description of Metropolitan Trotting Club's meeting at Addington.
During the intervals between the races a lady announcer will describe the dresses on the lawn. Band items will also be relayed.
6.30 to 7.15 p.m.: Orchestral music.
7.15 to 8: News sessions.
8.0: Chimes. Relay of orchestral selections from Grand Picture Theatre, under conductorship of Mrs. Black.
Soprano solo—Miss Edna Donaldson, "Star Eyes," Speaks.
Recitation—Mrs. E. T. Temple, "Reflections of a Penny."
Steel guitars and ukulele—Miss Elaine Moody and party, "Kaiwihau Waltz," Awai.
Baritone solo—Mr. Robt. Samson, "The Sergeant of the Line," Squire.
Cello solos—Mr. Harold Beck, (a) "Song of India," Rimsky-Korsakov; (b) "Russian Dance," traditional.
Pianoforte novelty solo—Mr. Ivan Perrin, "Coronach," Barratt.
Impersonations of various speakers—Mr. Jack Darragh, "On the life of the late Hon. Richard John Seddon, the greatest figure in New Zealand History."
Instrumental trio—Christchurch Broadcasting Trio, "Scherzo," Schumann.
Steel guitar solo—Mr. F. R. Monro, Hawaiian airs.
Soprano solo—Miss Edna Donaldson, "Gifts of the Gods," Rffe.
Steel guitars and ukulele—Miss Elaine Moody and party, (a) "In a Little Spanish Town," Wayne; (b) "Kilma Waltz," Awai.
Pianoforte novelties—Mr. Ivan Perrin, "Mocking the Classics, as played by Kerschel, Henlere, including Lieberstraum, Melody in F, Rhapsodie, Hongroise, Drink to Me Only, etc."
Baritone solo—Mr. Robert Samson, "Lighterman Tom," Squire.
Cello solos—Mr. Harold Beck, (a) "Serenade," Squire; (b) "Chanson Millagaise," Popper.
Sketch—Mrs. E. T. Temple and Mr. Jack Darragh, "A Lapse of Memory."
Steel guitar solo—Mr. F. R. Monro, "Negro Airs."
Steel guitars and ukulele—Miss Elaine Moody and party, (a) "Honey-moon Waltz," Sherwood; (b) "Dreamy Nights in Honolulu," Hampton.
Baritone solo—Mr. Robert Samson, "Ding Dong Dell," Beal.
Pianoforte novelties—Mr. Ivan Perrin, extemporisation on "Muddy Water," "Lucky Day," and "Don't be Angry."
Instrumental trios—Christchurch Broadcasting Trio, (a) "Waltz," Carreno; (b) "Hungarian Dance No. 5," Brahms.
Soprano solo—Miss Edna Donaldson, "Lullaby," Forrester.
Steel guitar solo—Mr. F. R. Monro, popular airs.
Pianoforte novelties—Mr. Ivan Perrin, popular numbers of the moment, including "The Doll Dance."
9.30: Relay of dance music by Les. Marston's Jazz Orchestra, from Caledonian Hall, by the courtesy of the Canterbury Jockey Club Ball Committee, and with the kind permission of the Canterbury Caledonian Society.
11.0: Close down.

4YA, DUNEDIN (463 metres)—TUESDAY, NOVEMBER 8.

- 3 p.m.: Town Hall chimes.
3.1: His Master's Voice recital.
3.16: Address on "Interior Decoration," by Miss M. Puechegud.
3.31: Studio music.
4.0: Book reviews by Mr. H. Greenwood, Librarian of the Athenaeum.
4.15: His Master's Voice recital.
4.30: Close down.
7.0: Town Hall chimes.
7.1: Children's session—Big Brother Bill.
8.0: Town Hall chimes.

- 8.1: Bass solos—Mr. E. G. Bond, (a) "Fisherman of England," Phillips; (b) "Old Clothes and Fine Clothes," Shaw.
8.7: Pianoforte solo—Miss A. D. Allen, "Flying Moments," Livens.
8.11: Mezzo-soprano solos—Miss Peggy Neill, (a) "Break of Day," Sander-son; (b) "The Star," Roger.
8.17: Flute solo—Mr. A. Levi, "Sonata in B Minor," Bach.
8.22: Contralto solos—Miss Gwen Cooper, (a) "Pleading," Algar; (b) "When the Great Red Dawn is Shining," Sharp.
8.29: Cornet solo—Mr. George Christie, "Till the Sands of the Desert Grow Cold," Ball.
8.33: Pianoforte solo—Miss A. D. Allen, "Liebestraume," Liszt.
8.38: Baritone solos—Mr. Avery Dale, (a) "When the Grey of the Sky," Stirling; (b) "The Perfect Prayer," Stenson.
8.45: Address—Pastor W. D. More, "Epitaphs."
9.0: Relay of orchestral selections, under the baton of Mr. Chas. Parnell, from the Empire Theatre.
9.15: Flute solo—Mr. A. Levi, "Canzonetta," Ketelbey.
9.20: Bass solos—Mr. E. G. Bond, (a) "Song of the Wagoner," Smith; (b) "Invictus," Huhn.
9.27: Cornet solo—Mr. George Christie, "Concertante," Weber.
9.31: Mezzo-soprano solos—Miss Peggy Neill, (a) "Love's Garden of Roses," Wood; (a) "In an Old-Fashioned Town," Squire.
9.37: Pianoforte solo—Miss A. D. Allen, "Pierrette," Chaminade.
9.41: Flute duet (unaccompanied)—Messrs. A. Levi and H. Nees.
9.46: Baritone solos—Mr. Avery Dale, (a) "I Don't Suppose," Trottere; (b) "You Made a New World for Me," Butler.
9.52: Cornet solos—Mr. George Christie, "The Lost Chord," Sullivan.
9.55: Contralto solos—Miss Gwen Cooper, (a) "For Ever and For Ever"; (b) "Vale," Russell.
10.0: Close down.

Wednesday, November 9th

1YA AUCKLAND (333 METRES)—WEDNESDAY, NOVEMBER 9.

- 3 to 4.30 p.m.: Afternoon session—Selected studio items.
6 to 7: Children's hour.
7.15: News and reports.
7.30 to 7.45: Talk on "Physical Culture," by Mr. Norman Kerr.
8.0: Chimes. Studio concert by the Kingsland Methodist Choir. Conductor, Mr. T. T. Garland; accompanist, Mrs. H. F. Garland; assisted by Ingall's Hawaiian Instrumentalists.
8.1: Relay of orchestral overture from Strand Theatre—Eve Bentley conducting.
8.11: Choir—Kingsland Methodist Choir, "The Wind that Blows," James.
8.16: Soprano solo—Miss Heape, "Mighty Lak a Rose," Nevin.
8.20: Baritone solo—Mr. M. Rutledge, "Bid Me to Love," Elgar.
8.25: Instrumental—Ingall's Hawaiians, folk songs.
8.33: Choir—Kingsland Methodist Choir, "The Secret," Coward.
8.38: Contralto solo—Miss Maida Davidson, "Down Here," Brahe.
8.41: Humour—Mr. T. T. Garland, "Santa Claus."
8.45: Tenor solo—Mr. M. Pawsey, "Nirvana," Adams.
8.48: Mezzo-soprano solo—Miss N. Wood, "Lie There, My Love," McCunn.
8.51: Cornet solo—Mr. Morphy, "Evening Song," Schumann.
8.54: Bass solo—Mr. W. Leather, "Anchored," Watson.
8.57: Choir—Kingsland Methodist Choir, "The Hunting Song," Benedict.
9.0: Weather report.
9.1: Relay of musical interlude from Strand Theatre.
9.11: Choir—Kingsland Methodist Choir, "The Frog," Newton.
9.16: Soprano solo—Miss Heape, "Down in the Forest," L. Ronald.
9.20: Baritone solo—Mr. Rutledge, "My Dreams," Tosti.
9.25: Instrumental—Ingall's Hawaiians, Hawaiian airs.
9.32: Contralto solo—Miss M. Davidson, "To a Miniature," Brahe.
9.37: Relay from Strand Theatre.
9.45: Tenor solo—Mr. M. Pawsey, "Friend," Davies.
9.49: Cornet solo—Mr. Morphy, "Genevieve."
9.53: Mezzo-soprano solo—Miss N. Wood, "You in a Gondola," Clarke.
9.57: Bass solo—Mr. Leather, "Border Ballad," Cowen.
10.0: Choir—Kingsland Methodist Choir, "Good Night, Beloved," Pinsuti.
10.4: A thought.
10.5: Close down.

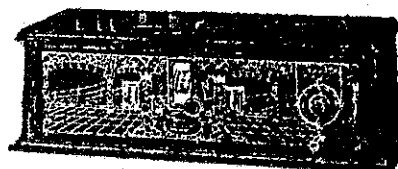
2YA WELLINGTON (420 METRES)—WEDNESDAY, NOVEMBER 9.

- 11.30 a.m. to 5 p.m.: Rebroadcast of 3YA, Christchurch Carnival—Canterbury Cup and Oaks; interspersed with gramophone items.
Evening—Silent.

3YA CHRISTCHURCH (306 METRES)—WEDNESDAY, NOVEMBER 9.

- 8 to 8.30 a.m.: Breakfast session—News items; the day's race card; conditions of roads; attractions in Christchurch for the day. Gramophone items.
11.30: Relay—Description progress Canterbury Jockey Club's Cup meeting at Riccarton.
5.30 p.m.: Children's session, by Uncle Sam.
6.30 to 7.15: Orchestral music.
7.15 to 8: News sessions.

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An American writer says: "Old folks sometimes like to get away where it is quiet and listen in for the old songs and the serious-minded lecturers. They like sermons better than young people do, because much to which they look ahead lies in that realm of mystery, which only religion attempts to explain. No high-power horn loudspeaker or cone is needed to satisfy their longings. If their hearing is dulled, a pair of light phones that do not press too heavily upon the head may be better than a more expensive device. One to three valves, one dial, a place and a set to call their own is what many of them want."

A British radio club, the Golders Green and Hendon Radio Society, recently conducted a very successful hide-and-seek competition for its members. The club's short-wave transmitter was operated on 150 metres in a concealed location; and ten parties of members, each in a motor-car with a loop receiver, a map and compass, started from as many points a few miles apart and endeavoured to find the transmitter. Only one was successful; though a second came very close.



—Artiste, photo.

Mr. M. Horn, saxophonist at 4YA.

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N.Z. AGENTS FOR NATIONAL

Why not "broadcast" instead of "broadcast"? The New York "Radio News" says: In many cases the English language offers alternative forms, and authorities differ as to which should be preferred; "practise" or "practice," for instance. At one time the past tense of "cast" was "casted"; and, while this is now quite obsolete, the American Standard Dictionary shows "broadcast" as correct, though not preferred. It is the belief of "Radio News" that, as a general proposition, the shorter form is to be preferred; as this is in harmony with the genius of the English language, which is discarding as fast as possible all signs of inflection. For that reason also, though many cling to the expression "broadcasting station," we believe that "broadcast station" is simpler and conveys the idea accurately. Observers in England during this year's eclipse of the sun noted, as was the case in America two years ago, that signals received became stronger, just before totality, and lessened with the return of light. With short waves, however, marked fading in reception of the 30-metre station PCJJ in Holland was observed; this phenomenon is attributed to the effect of the shadow of the moon on the Heaviside layer, altering suddenly the angle of reflection of these short waves, and thereby changing their skip-distance. With directional loops, a marked sudden change in the apparent bearing of stations being received was noted; an effect similar to a much slower one noticed during normal twilight. Those interested in reception of American broadcast stations will be interested to know that "summer time" terminated in the United States on September 25. Daylight saving will resume exactly six months after that date.

Programmes Continued

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2FC ON SHORT WAVE

SPECIAL TRANSMISSION.

Experimental transmission on 28.5 metres was conducted from 2FC Sydney on Monday last from 5.15 a.m. to 7.10 a.m., New Zealand time. A specially good programme was submitted for reception in Britain, Canada, and the United States, reception in Wellington being at splendid loud-speaker strength. The test was arranged by Amalgamated Wireless (A.S.), Ltd., and was also transmitted on 442 metres for the benefit of Australian listeners.

Radio stages of amplification, added to a detector valve, will oscillate, due to feedback from the plate to the grid circuits of each tube, due to capacitance between the elements of the tube. The use of a neutralising condenser is to neutralise the effect. This allows of the radio stages being worked almost on the point of oscillation, which is the point of extreme sensitivity. Stations then come in without heterodyning. Should regeneration be introduced into the detector circuit, a greater signal strength will be obtained, but the quality of the signals will not be as good. Thus for purity of tone one should exclude regeneration from a circuit using a sufficient number of valves to bring the volume of signals up to normal.

If a variable condenser is used in the primary circuit (the aerial circuit) of a receiving set, it is best to connect it on the ground side of the primary winding, with the rotary plates attached to the ground binding post, so that body-capacity effects will be minimised. The rotary plates of the secondary variable condenser should always be connected to the filament of the valve, never to the grid, for the same reason.

There are approximately 90,000,000 people who now receive radio programmes, according to a report made to Secretary Herbert Hoover by Lawrence D. Batson, of the Electrical Equipment Division of the United States Department of Commerce. About 18,000,000 sets are used. At least 200,000,000 sets would be necessary to serve all the people, there being five persons to every set.



Mrs. J. Marshall, a regular singer at 4YA.

Lead ore (Galena) has been used successfully as a rectifier of radio frequency impulses ever since the beginning of radio, and it is still in use. This crystal is extremely sensitive, but will not retain adjustment when detecting a large signal voltage; thus, this crystal is exceptionally good for the rectification of weak impulses. This crystal could be used where signals are weak. The application of the catwhisker should be light, as a heavy pressure will prevent it from rectifying.

A representative of the recent New York radio fair said that great interest was being shown in radio parts, revealing that many listeners expected to build their sets during the coming year. The smallest details of both sets and parts have been the subject of unusual attention by the younger generation of show visitors, he said.

Australian broadcasting stations are not allowed as a general rule to send over the air straight-out messages to individuals. Exceptions are sometimes made, however, as in a case which came under notice this week. A man living away up in the bush came to Sydney to undergo a serious operation. His family are beyond reach of telegraph, and it takes four days for a letter to reach his home. In these circumstances the radio inspector readily agreed to station 2BL sending "a bulletin" every day as to his progress to his friends in the country.

RADIO LITERATURE

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THESE PRICES INCLUDE POSTAGE.

3YA CHRISTCHURCH (306 METRES)—THURSDAY, NOVEMBER 10.

- 8 to 8.30 a.m.: Breakfast session—News items; the day's race card; conditions of roads; attractions in Christchurch for the day.
Gramophone items.
11.30: Relay—Description progress Metropolitan Trotting Club's meeting at Addington.
5.30 to 6.30 p.m.: Children's session, by Uncle Jack.
6.30 to 7.15 p.m.: Orchestral music.
7.15 to 8: News sessions.
8.0: Chimes. Relay of orchestral selections from Everybody's Picture Theatre Orchestra, under conductorship of Mr. Albert Bidgood (with kind permission of management).
8.15: Bass solo—Mr. T. D. Williams, "Zummerzetshire," Newton.
8.19: Soprano solo—Miss Frances Hamerton, "I Know a Bank," Lehmann.
8.22: Quartet—Christchurch Broadcasting Quartet, "The Hunting Song," Benedict.
8.26: Tenor solo—Mr. Russell Sumner, "Mistress, Mine," Quilter.
8.30: Instrumental trios—Christchurch Broadcasting Trio, (a) "Ave Maria," Gounod; (b) "Turkish Rondo," Mozart.
8.38: Humour—3YA Announcer, "My Own Punch" (funnies from real life).
8.42: Contralto solo—Miss Belle Renaut, "Off to Market, Johnny," Humphries.
8.46: Vocal duet—Miss Frances Hamerton and Mr. Russell Sumner, "You Swear to be Good and True," Cellier.
8.50: Instrumental trio—Christchurch Broadcasting Trio, "Souvenir de Sorrento," Severne.
8.55: Bass solo—Mr. T. D. Williams, "Gee Wup, Hosses," Smith.
9.0: Relay from Everybody's Theatre.
9.15: Contralto solo—Miss Belle Renaut, "Danny Boy," Weatherley.
9.19: Tenor solo—Mr. Russell Sumner, "Linden Lea," Williams.
9.23: Soprano solo and chorus—Miss Frances Hamerton and chorus, "They All Follow Me," Kerker.
9.28: Contralto solo—Miss Belle Renaut, "Ma Lindy Lou," Strickland.
9.32: Relay of band music from Olympia Show.
9.42: Tenor and bass duet—Messrs. Russell Sumner and T. D. Williams, "Excelsior," Baffe.
9.47: Soprano solo—Miss Frances Hamerton, "Morning Song," Quilter.
9.50: Humour—3YA Announcer, "Daniel and the Lions."
9.51: Soprano and tenor duet—Miss Frances Hamerton and Mr. Russell Sumner, "When We are Married," Kerker.
9.55: Instrumental trios—Christchurch Broadcasting Trio, (a) "Prelude in C Sharp Minor," Rachmaninoff; (b) "The Doll Dance," Poldini.
10.30: Close down.

4YA, DUNEDIN (403 metres)—THURSDAY, NOVEMBER 10.

- 7 p.m.: Town Hall chimes.
7.1: Request gramophone recital.
8.0: Town Hall chimes.
Special programme for dancing by the Kapai Dance Band and assisting artists.
8.1: One-steps—Kapai Dance Band, (a) "Hello, Bluebird"; (b) "What's the Use of Crying?"
8.7: Baritone solos—Mr. J. Clarke, (a) "Bedouin Love Song," Pinsuti; (b) selected.
8.13: One-steps—Kapai Dance Band, (a) "Mary Lou"; (b) "Idolising."
8.19: Violin solo—Mr. Dagg, "Serenade," Schubert.
8.23: Quadrilles—By the Kapai Dance Band.
8.30: Saxophone solo—Mr. M. Horn, "O, Star of Eve," from "Tannhauser," Wagner.
8.34: Waltzes—Kapai Dance Band, (a) "Paradise in Mother's Eyes"; (b) "So Blue."
8.40: Soprano solos—Miss Marie Tucker, (a) "The Star," Roger; (b) "Pale Moon," Logan.
8.45: Address, by Rev. H. E. Bellhouse, "The League of Nations."
9.0: Baritone solos—Mr. J. Clark, (a) "Five-and-Twenty Sailor Men," C. Taylor; (b) "Muldeer of Malagar," Trotter.
9.6: Fox-trots—Kapai Dance Band, (a) "Blue Skies"; (b) "Mamma's Gone Young."
9.12: Cornet solo—Mr. R. Shannon, selected.
9.16: D'Alberts—By Kapai Dance Band.
9.22: Waltz selection—Kapai Dance Band, "Old Airs."
9.28: Soprano solo—Miss M. Tucker, "Wait," d'Hardelot.
9.34: Medley selection—Kapai Dance Band, "War-time Melodies."
9.40: Violin solo—Mr. D. Dagg, "Souvenir," Drdla.
9.45: Saxophone solo—Mr. M. Horn, selected.
9.50: One-steps—Kapai Dance Band, (a) "My Cutie's Due"; (b) "Baby Face."
10.0: Close down.

Friday, November 11th

1YA AUCKLAND (333 METRES)—FRIDAY, NOVEMBER 11.

- 3 to 4.30 p.m.: Afternoon session—Selected studio items.
6 to 7: Children's hour.
7.15: News and reports.
7.30 to 7.45: Talk on "Motoring," by Mr. Geo. Campbell.
8.0: Chimes.
8.1: Relay of overture from Prince Edward Theatre. Mr. Geo. Poore, conductor.

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Programmes Continued

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- 8.10: Mezzo-soprano solo—Miss Kathleen Deane, "In a Little Old Garden," Hewitt.
8.15: Violin solo—Mrs. M. Fleming, "Romance Du Second Concerto," Wieniawski.
8.20: Humour—Mr. Dan Flood, humour at the piano.
8.25: Flute solos—Mr. Geo. Poore, (a) "Witches' Dance," Cox; (b) "Dainty Dance," Paling.
8.33: Baritone solo—Mr. Walter Brough, "The Sun God," James.
8.38: Elocution—Miss Nina Scott, "Daddy and the Boy."
8.43: Cornet duet—Messrs. Salthouse and Davies, "Birds in the Forest."
8.48: Soprano solo—Miss Ruth Scott, "Let's," Chaminade.
8.53: Relay of musical interlude from Prince Edward Theatre.
8.58: Humour—Mr. Dan Flood, humour at the piano.
9.3: Weather forecast.
9.4: Mezzo-soprano solos—Miss K. Deane, (a) "Waters of Minnetonka," Lieurance; (b) "The Dawn," d'Hardelot.
9.12: Violin solos—Mrs. M. Fleming, (a) "Cavatina," Henry; (b) "Largo," Cilibre, Handel.
9.20: Humour—Mr. D. Flood, humour at the piano.
9.27: Relay of musical entr'acte from Prince Edward Theatre.
9.32: Flute solo—Mr. G. Poore, "Il Vento," Briccialdi.
9.37: Baritone solos—Mr. W. Brough, (a) "Friend"; (b) "Casey the Fiddler," Wood.
9.45: Elocution—Miss N. Scott, (a) "Jimmy Johnson," anon.; (b) "Old Chap," Harris.
9.53: Cornet duet—Messrs. Davies and Salthouse, (a) "Barcarolle," Hoffman; (b) "O, Lovely Night," Cooke.
10.0: Soprano solos—Miss R. Scott, (a) "Sunlight," Ware; (b) "The Cuckoo Clock," Schaefer.
10.6: A thought.
10.7: God Save the King.

2YA, WELLINGTON (420 metres)—FRIDAY, NOVEMBER 11.

- 11.30 a.m.: Subject to suitable conditions, rebroadcast of 3YA, Christchurch, Carnival Week. Races, interspersed with a description of the N.Z. Touring Team v. Rest of N.Z. cricket match; and selected gramophone items.
5.0: Close down.
6.0: Children's session. Chimes of the G.P.O. clock, Wellington. Uncle Ernest and School Cousins items—Choral work and recitations, followed by stories by Uncle Ernest.
7.0: News session, market reports and sporting results.
7.40: Lecturette—Mr. D. G. Paris, of Wellington Centre A.A.A., "Athletics."
8.0: Chimes of the G.P.O. clock, Wellington.
8.1: Overture, "Triumphal March, Op. 56, No. 3" (Grieg).
8.5: Quartet—Philharmonic, "Softly Falls the Shades" (Hartton).
8.9: Piano—Mr. Gordon Short, (a) "In Old Vienna" (Godowski); (b) "Paradoxical Moments" (Godowski).
8.14: Bass—Mr. W. W. Marshall, "Bandolero" (Stuart).
8.20: Duet—Mr. Edwin Dennis and Mrs. Ellison Porter, "Miserere Scene" ("Il Traviatore," Verdi).
8.25: Trio—Symons-Ellwood, Short Trio, "1st Movement D Major" (Beethoven).
8.23: Contralto—Miss Madge Freeman, "The Glory of the Sea" (Sanderson).
8.38: Quartet—Philharmonic Quartet, "Bells of St. Michael's Tower" (Kynvett).
8.41: Tenor—Mr. Edwin Dennis, "Au Pays" (Holmes).
8.45: Lecturette—Editor-announcer.
9.0: Close down. Two minutes' silence, "Armistice Night."
9.2: Organ—Mr. H. Temple White, (a) "Funeral March" (Chopin); (b) "Largo" (Handel); (c) "Land of Hope and Glory" (Elgar).
9.15: Duet—Miss Madge Freeman and Mrs. Ellison Porter, "Arise O Sun" (Day).
9.19: Quartet—Philharmonic Quartet, "Old Mother Hubbard" (Wheeler).
9.23: Trio—Symons-Ellwood-Short Trio, "Andante and Scherzo D Minor Trio" (Mendelssohn).
9.29: Soprano—Mrs. Ellison Porter, (a) "Morning" (Speaks), (b) "Wake Up" (Phillips).
9.36: Duet—Mr. Edwin Dennis and Mr. W. W. Marshall, "Watchman, What of the Night" (Sergeant).
9.42: Mezzo-soprano—Miss Lily Charles, "The Fairy Laundry" (Phillips).
9.48: Piano—Mr. Gordon Short, "Rendezvous" (Godowsky).
9.58: Quartet—Philharmonic Quartet, "The Long Day Closes" (Sullivan).

3YA CHRISTCHURCH (306 METRES)—FRIDAY, NOVEMBER 11.

- 8 to 8.30 a.m.: Breakfast session—News items; the day's race card; conditions of roads; attractions in Christchurch for the day.
Gramophone items.
11.30: Relay—Description progress Metropolitan Trotting Club's meeting at Addington.
6.30 to 7.15 p.m.: Orchestral music.
7.15 to 8: News sessions.
8.0: Chimes. Relay of orchestral selections from Crystal Palace Picture Theatre Orchestra, under conductorship of Mr. A. J. Bunz (by arrangement).
During the evening programme Mr. Les. Marston's full dance orchestra will provide dance music at intervals from 3YA Studio.
8.15: Baritone solo—Mr. Leslie Stewart, "Nirvana," Adams.
8.19: Dances—Les. Marston's Dance Orchestra, selected.
8.27: Recitation—Mr. James Laurensen, "Father Riley's Horse," Patterson.
8.31: Dances—Les. Marston's Dance Orchestra, selected.
8.39: Contralto solo with chorus—Mrs. D. W. Stallard, "I'll Take you Home Again, Kathleen," Thomas.
8.43: Dances—Les. Marston's Dance Orchestra, selected.
8.51: Song at piano—Mr. E. A. Sargent, "June," Gatty.
8.55: Dances—Les. Marston's Dance Orchestra, selected.
9.0: Relay from Crystal Palace Picture Theatre.
9.15: Baritone solo—Mr. Leslie Stewart, "Sally Horner," traditional.
9.19: Dances—Les. Marston's Dance Orchestra, selected.
9.27: Recitation—Mr. James Laurensen, "The Green Tie on the Yellow Dog," Bennett.
9.31: Dances—Les. Marston's Dance Orchestra, selected.
9.39: Scottish song—Mrs. D. W. Stallard, "Doon the Burn, Davie Love" (by request), Rimbault.
9.43: Dances—Les. Marston's Dance Orchestra, selected.
9.51: Songs at piano—Mr. E. A. Sargent, "He Left Her on the Stairs," Levey.
9.55: Dances—Les. Marston's Dance Orchestra, selected.
10.3: Baritone solo—Mr. Leslie Stewart, "When You and I Were Young, Maggie," Butterfield.
10.7: Dances—Les. Marston's Dance Orchestra, selected.
10.15: Recitation—Mr. James Laurensen, "Nell," Bennett.
10.19: Dances—Les. Marston's Dance Orchestra, selected.
10.27: Irish song with chorus—Mrs. D. W. Stallard, "Eileen Allannah" (with chorus), Thomas.
10.31: Dances—Les. Marston's Dance Orchestra, selected.
10.39: Songs at the piano—Mr. E. A. Sargent, (a) "House Hunting," Squires; (b) "Under the Circumstances," Spurr.
10.43: Dances at intervals—Les. Marston's Dance Orchestra, selected.
11.0: Close down.

4YA, DUNEDIN (463 metres)—FRIDAY, NOVEMBER 11.

- 3 p.m.: Town Hall chimes.
3.1: His Master's Voice recital.
3.16: Afternoon tea music from the Savoy.
3.31: Studio music.
4.0: Social notes, news.
4.5: Music from the Savoy.
4.15: His Master's Voice recital.
4.30: Close down.
7 p.m.: Town Hall chimes.
7.1: Children's session—Big Brother Bill.
7.40: News and market reports.
8.0: Town Hall chimes.
8.1: Baritone solos—Mr. H. W. Harvey, (a) "The Fortune Hunters," Wilbey; (b) "Requiem," Homer.
8.6: Pianoforte solo—Miss A. Newman, selected.
8.10: Mezzo-soprano solos—Miss Dora Drake, (a) "Bird of Blue," German; (b) "The Pipes of Pan," Monckton.
8.16: Recital—Mr. A. Gorrie, "The Ballad of the East and West," Kipling.

BROADCAST ENERGY

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The process of broadcasting, like everything else, depends upon work being done. Energy is expended, and, therefore, work is done when one speaks; work is done when the microphone converts the sound waves into electrical vibrations; work is done when the amplifying circuits build up these vibrations, and work is still being done when these vibrations are forced out through the ether at the rate of 186,000 miles a second. Work is done when a receiving set intercepts these radio signals and converts them into music to which we listen in comfort at home.

Power of the Voice.

It is said that the energy expended by a speaker when talking in a normal conversational tone is in the order of a few microwatts, if that energy is expressed in electrical terms. A microwatt is one-millionth of a watt, a small unit. It is possible to get an idea of how small this really is by comparing it with an ordinary incandescent electric lamp. A 25-watt lamp, for instance, will barely light a fair-sized room. Suppose we divide such a lamp into twenty-five equal little lamps of one watt each, take one of them and see how well it lights the room.

Imagine one of these 1-watt lamps further divided into 1,000,000 lamps of one microwatt each, and consider to what extent one, two, a dozen, or even 100 of them, would light the room. But, if we take the energy of half a dozen of these imaginary lamps and put it in a microphone in the form of sound waves, we are able to start a symphony orchestra's concert on its almost instantaneous journey around the world.

One engineer has taken a different way to show the amount of energy in the human voice. He says that if it were possible to convert this energy directly into electricity and use it for heating purposes, it would take fifty million people shouting at the top of their voice to make a cup of tea. One can easily see that the human voice is hardly a power plant.

Just as a matter of interest, let us compare the energy of the voice with the power of a broadcasting station. We have said the energy of the voice, if converted into electrical units, is in the order of a few microwatts. Suppose we estimate it at five microwatts. If the output of a broadcasting station is 500 watts, the vast difference is readily seen. In round figures, the power of the station is 100,000,000 times greater than the voice. Or, if we are speaking of a super-power station, the difference may be around 10,000,000,000 times.



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- 8.21: Bass solos—Mr. J. B. McPherson, (a) "When a Maiden You Have Chosen," Mozart; (b) "Old Barty," Grant.
8.27: Pianoforte solo—Miss A. Newman, selected.
8.31: Soprano solos—Miss H. M. Ashton, (a) "Farewell," Liddle; (b) selected.
8.37: Recital—Mr. A. Gorrie, selected.
8.44: Baritone solos—Mr. H. W. Harvey, (a) "Alleluia," O'Connor-Morris; (b) "Vale," Russell.
8.56: Relay of dance music from the Savoy, by Ern Beecham and His Orchestra.
10.0: Close down.

Saturday November 12th

1YA AUCKLAND (333 METRES)—SATURDAY, NOVEMBER 12.

- 7.15 to 7.45 p.m.: News and sports results.
8.0: Chimes.
8.1: Relay of Municipal Band from Town Hall. Mr. Christopher Smith, conductor.
2.30: Relay of dance music from Click-Clack Cabaret by the Click-Clack Radio Orchestra, under Mr. Walter Smith.
11.0: A thought.
11.1: Close down.

2YA, WELLINGTON (420 metres)—SATURDAY, NOVEMBER 12.

- 11.30 a.m.: Subject to suitable conditions, rebroadcast of 3YA, Christchurch, Carnival Week. Races will be interspersed with a description of the N.Z. Touring Team v. Rest of N.Z. cricket match and with selected gramophone items.
5.0: Close down.
6.0: Children's session, conducted by Auntie Dot. Piano, Cousin Betty, "Fall of Pearls"; song, Cousin Moyra, "Tying Apples on a Lilac Tree"; stories by Auntie Dot; humorous recitation, Cousin Eliot, "Bell Smith"; lecturette, Mr. Johannes Andersen, "The Maori"; humorous recitation, Cousin Eliot, "Wash, Wash, Wash" (anon.); Masters Victor Goodfellow and Gordon Nash will entertain with violin and story; lecturette, Mr. Phil Sykes, "What Part Does Sport Play in Secondary Education?"

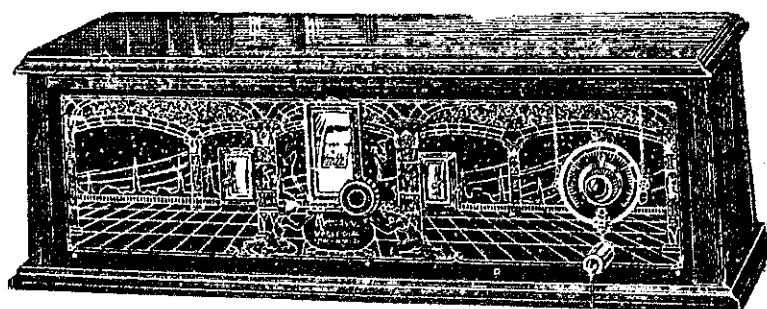
- 7.0: News session and market reports.
7.15: Sports results.
8.0: Chimes of the G.P.O. clock, Wellington.
8.1: Overture, "Evening Bells" (Idyll Ellenberg).
8.5: Quartet—Celeste Quartet, Hunting Chorus, "Dorothy" (Cellier).
8.10: Bass—Mr. W. Boardman, "Sir Roger de Coverley" (Collman).
8.15: Trio—Symons-Ellwood-Short Trio, "Finale, D Minor Trio" (Mendelssohn).
8.25: Duet—Mr. W. Boardman and Miss Myra Sawyer, "The Garden of Your Heart" (Dorel).
8.29: Tenor—Mr. Edgar Swain, "Harlequin" (Sanderson).
8.35: Trio—Symons-Ellwood-Short Trio, "Gipsy Rondo" (Haydn).
8.45: Duet—Mr. and Mrs. Edgar Swain, "Caro Mio Ben" (Giordini).
8.50: Soprano—Miss Myra Sawyer, "Villanelle" (Dellacqua).
8.55: Trio—Symons-Ellwood-Short Trio, "A Min. Sonata, 1st Movement" (Grieg).

- 9.2: Lecturette—Sir Truby King, "Child Welfare."
9.18: Contralto—Miss Mabel Dyer, "Heart of Gold" (Manney).
9.22: Quartet—Celeste Quartet, "In This Hour of Softened Splendour" (Pinsati).
9.26: Lecturette—Miss Phyllis Bates, "Ball-room Etiquette."
9.40: Relay of Manuel Hyman's Exhibition Band from the Adelphi Cabaret.

3YA CHRISTCHURCH (306 METRES)—SATURDAY, NOVEMBER 12.

- 8 to 8.30 a.m.: Breakfast session—News items; the day's race card; conditions of roads; attractions in Christchurch for the day.
Gramophone items.
11.30: Relay—Description Canterbury Jockey Club's Cup meeting at Riccarton.
6.30 to 7.15 p.m.: Orchestral music.
5.30: Children's session, by Uncle Sam.
7.15 to 8: News sessions.
8.0: Chimes. Relay of orchestral selections, by arrangement with Liberty Picture Theatre Orchestra, under conductorship of Mr. Ernest Jamieson.
8.12: Songs at piano—Mrs. Helen Murdoch, "Poor Papa," Woods.
8.16: Banjolin solo—Mr. Arthur Hodgson, "Comical Coons," Rimshaw.
8.20: Relay of dance music by Les. Marston's Dance Orchestra, from Dixieland Cabaret, by kind permission of Mr. J. Dickson.
8.27: Humorous chat—Mr. Sydney Comfort, "Birds of a Feather."
8.31: Instrumental trio—Christchurch Broadcasting Trio, (a) "Barcarolle," Offenbach; (b) "Hornpipe," Bridge.
8.42: English concertina—Mr. E. W. Heald, "American Eagle March," Sousa.
8.46: Girl soprano solo—Miss Violet Lapslie, "Where the Wanganui Flows," Benzoni.
8.55: Songs at piano—Mrs. Helen Murdoch, "Two Little Blue Birds" (from "Sunny"), Kern.
9.0: Relay from Liberty Theatre.
9.10: Banjolin solo—Mr. Arthur Hodgson, "Rendezvous," Aletier.
9.14: A fact made public for the first time—Mr. Sydney Comfort will tell you "How He Discovered the North Pole," own story.
9.18: Instrumental trio—Christchurch Broadcasting Trio, "Liselotte," Adam.
9.22: English concertina—Mr. E. W. Heald, "Collection of Scottish Airs," M.S.
9.26: Girl soprano solo—Miss Violet Lapslie, "Bird of Love Divine," Wood.
9.30: Relay of orchestral music from Olympia Motor Show.
9.40: Songs at the piano—Mrs. Helen Murdoch, (a) "The World of Dreams," (b) selected, both own compositions.
9.48: Banjolin solo—Mr. Arthur Hodgson, Darkeyland Fantasia on Nigger melodies, Read.
9.52: Serious sermonette—Mr. Sydney Comfort will give his opinions "On the Depravity of Man."
9.56: Instrumental trios—Christchurch Broadcasting Trio, (a) "Sweet Innocence," Elliott; (b) "Military March," Schubert.
10.5: Girl soprano solo—Miss Violet Lapslie, "What a Wonderful World It Would be," Lohr.
10.9: English concertina—Mr. E. W. Heald, (a) "The Lost Chord," Sullivan; (b) "When You and I Were Young, Maggie," Butterfield.
10.15: Relay of dance music from Dixieland Dance Cabaret, by kind permission of Mr. J. Dickson. Music by Les. Marston's Dance Orchestra.
11.0: Close down.

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Programmes Continued

4YA, DUNEDIN (463 metres)—SATURDAY, NOVEMBER 12.

- 7.15 p.m.: News session.
 8.0: Town Hall chimes.
 8.1: Baritone solos—Mr. R. Mitchell, (a) "Like Stars Above," McDonald; (b) "Angel of Light," Donizetti.
 8.7: Pianoforte duet—Misses Alice Wilson and Marjorie Watts, selected.
 8.12: Soprano solos—Miss Mattie Edgar, (a) "I Go on My Way, Singing," Dreville-Smith; (b) "Dawn Skies," Clark.
 8.18: Clarinet solo—Rev. G. E. Moreton, selected.
 8.22: Tenor solos—Mr. W. Mills, (a) "Four-Leaf Clover"; (b) "At Dawn-ing," Cadman.
 8.28: Pianoforte solo—Miss Alice Wilson, "Prelude," Chopin.
 8.33: Contralto solos—Miss Winnie McPeak, selected.
 8.39: Cello solo—Mr. Malcolm Robilliard, "Londonderry Air."
 8.44: Address by Mr. A. W. Wilson, manager of the Government Tourist Department, Dunedin, "Tourist Resorts of the South Island."
 9.0: Pianoforte duet—Misses Alice Wilson and Marjorie Watts, "Unfinished Symphony," Schubert.
 9.5: Baritone solos—Mr. R. Mitchell, (a) "Romance," Bonner; (b) "Silver Threads Among the Gold."
 9.12: Clarinet solo—Rev. G. E. Moreton, selected.
 9.16: Soprano solos—Miss Mattie Edgar, (a) "White Bird," Drummond; (b) "Give Me Youth and a Day," Drummond.
 9.22: Cello solo—Mr. Malcolm Robilliard, selected.
 9.26: Tenor solos—Mr. W. Mills, (a) "My Heart's Desire," Clarke; (b) "The Hawke," Clarke.
 9.34: Pianoforte solo—Miss Alice Wilson, "Refrain de Berceau," Palmgren.
 9.42: Clarinet solo—Rev. G. E. Moreton, selected.
 9.47: Contralto solos—Miss Winnie McPeak, selected.
 9.53: Cello solo—Mr. Malcolm Robilliard, selected.
 10.0: Close down.

Sunday, November 13th

1YA AUCKLAND (333 METRES)—SUNDAY, NOVEMBER 13.

- 6.55 p.m.: Relay of church service from Church of Christ, West Street. Preacher, Mr. Wilcock; organist, Mr. I. Lambert.
 8.30: Relay of municipal organ from Town Hall. Mr. Maughan Barnett, organist.
 9.30: A thought.
 9.31: Close down.

2YA, WELLINGTON (420 metres)—SUNDAY, NOVEMBER 13.

- 6 p.m.: Children's session, conducted by Rev. E. Weeks.
 6.55: Relay of evening service from the Trinity Methodist Church, Newtown (Anniversary Service). Preacher, Rev. A. N. Scotter, B.A.; organist, Miss L. E. Thawley, L.A.B.; musical director, Mr. H. J. Crewes.
 8.45: Relay of Port Nicholson Silver Band concert from the Grand Opera House.

3YA CHRISTCHURCH (306 METRES)—SUNDAY, NOVEMBER 13.

- 8 p.m.: Children's song service, by Uncle Sam, at 3YA Studio, assisted by the Cambridge Terrace Methodist Sunday School scholars.
 8.30: Relay of evening service from Oxford Terrace Baptist Church. Preacher, Rev. J. Robertson, B.A.; organist, Mr. Melville Lawry; pianist, Miss V. Haliday; musical director, Mr. G. W. Drayton. Choir of 400 voices.
 9.50: Rebroadcast 2YA, Wellington (conditions permitting).

4YA, DUNEDIN (463 metres)—SUNDAY, NOVEMBER 13.

- 6.30 p.m.: Relay of service from Knox Church. Preacher, Rev. Tulloch Yuille, B.D., M.A.; organist, Mr. W. Paget Gale.
 8.3: Relay from St. Kilda (weather permitting) of concert by the St. Kilda Band. Conductor, Mr. James Dixon.

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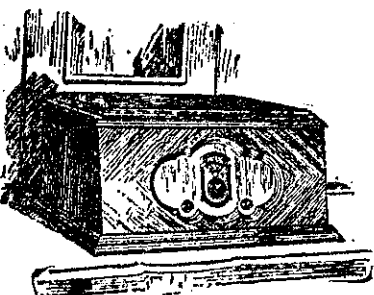
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This set surpasses any new type phonograph in quality of reproduction and volume. To appreciate how far advanced this new receiver is over other types, we invite you to compare the Erla Super-Six with any other receiver or phonograph.

It will operate on an antenna from one foot to 100 feet in length, or on a loop. In its ability to bring in distant stations, it eclipses any receiver ever made.

NATCLA RADIO COMPANY,

63 COURTENAY PLACE,

WELLINGTON.

Erla Distributors.

THE FADING INVESTIGATION

SOME INTERESTING THEORIES

Time does not permit of very much of this matter being dealt with this week, but next week an endeavour will be made to consolidate the particulars gathered from the reports, and arrive at final conclusions.

For the meantime some matter will be given regarding fading generally, and also a few extracts from reports that may have a bearing upon final decisions.

It has been established by careful research in America that the carrier and side-bands do not fade together as a unit, but each of the three frequencies thus represented may fade independently of the other two. This means that fading may be selective with regard to time and frequency, or that the transmitted wave may encounter causes that will produce fading of its own frequency components, apart from any fading that may be caused by want of agreement in time at the meeting of the high and low, or reflected and direct earth-travelling waves.

Attention has already been directed to the fact that there is a correlation between the variation of the earth's magnetic field and intensity of radio reception.

In an article published on October 21, another possible effect from earth currents was discussed. This article stated that further investigation into the matter would be prosecuted by the Carnegie Institute of Washington, and in case this should have escaped the notice of some readers, a small portion of particular interest is reprinted as follows:—

"Before the development of radio, the conception of a region in the upper atmosphere highly capable of conducting electricity was invoked as a necessary part of the mechanism giving rise to changes in earth-currents and the earth's magnetism. A similar condition of high conductivity in about the same region of atmosphere is now also demanded by some features of radio transmission. It thus seems likely that the same conducting region affects both earth-currents and radio, and on that account certain consistent correspondences may be expected between them.

"The data at present available for such comparison, though meagre, indicate that the daily as well as the annual change in signal intensity for radio waves in the radiocast of frequencies is the reverse of the change occurring in the earth-current activity. These, as well as other points of correspondence could be deduced from the correlations found by Dr. Greenleaf W. Pickard, of Boston, between the earth's magnetic activity and variations in signal strength, for it is well known that earth-currents and terrestrial magnetism are closely related. Furthermore, since good theoretical grounds now exist for expecting terrestrial magnetism to directly affect radio transmission, perhaps producing such phenomena as fading, one may also find earth-current manifestations occurring in conjunction with fading.

"Atmospheres or static, that well-known nuisance to the radio audience, is to the geophysicist an interesting phenomenon, deserving more of his attention than it has thus far received. This phenomenon has an apparent counterpart in earth-currents and makes itself most commonly evident on telephone lines, in which a ground return is used producing sounds in the receiver which resemble in a remarkable degree the clicks, crashes, grinders, etc., which interfere with radio reception.

"Similar changes are probably occurring in terrestrial magnetism, but the magnetic instruments are not capable of responding to such rapid changes. The electrical effects can, however, be easily detected and even measured or photographically recorded without great difficulty, thus admirably supplementing the magnetic measurements. With ample measurements of these magnetic, earth-current and radio effects over the same interval of time and in the same general region, doubtless much of both practical and theoretical value may be learned.

"The resistance offered by the ground at the surface of the earth to the flow of electricity also plays a part in the transmission of radio waves, and such knowledge of this property of the earth as may be obtained by 'resistivity-surveys,' similar to those made by the department of terrestrial magnetism of the Carnegie Institution of Washington as part of a study of earth-currents, would doubtless indicate the reason for unfavourable reception in certain directions from some radiocast stations and even in all directions from a few."

NEW PLYMOUTH.

On the second day of test, September 27, reception was about the same in Taranaki country districts as on the 26th, intense fades per report averaging 5. New Plymouth had better reception than on the previous night, intense fades averaging 8 per report. A set at Bell Block registered 23, the only high number outside New Plymouth, where one set registered 28 and another none, but a good number of slight were registered in this case.

Mineral deposits are generally considered to have a strong effect upon radio waves, and in this connection the vast expanse of ironsand in Taranaki may be mentioned. The writer is not at present aware of the exact area covered by this sand, but a specimen on hand from Kawhia adheres to a magnet like iron filings, so that its metallic composition and consequently high conductivity can well be imagined.

A reader at Kaituna has written to say that he gets no fading from his situation four miles from Mount Egmont. Fortunately for him, being situated near Kaponga, on the Wellington side of the mountains the radio waves have a clear run, and no fading is experienced anywhere in that district. It is down towards Inglewood and New

Plymouth that the trouble is evident, and the only regret is that there were not more reports from this area.

FINAL ITEMS FROM REPORTS.

Here are a few extracts from reports which tend to illustrate the diversity of reception, and showing that at a distance of 400 miles and more some receivers get almost perfect reception, whilst others the same distance, or much nearer, may have very poor results.

NORTH AUCKLAND.

Helensville.—"Transmission at times during fading very mushy. Exceptional volume recorded at 8.44, 9.20, to 9.23."
 Hokianga.—"Generally 2YA is good, with tremendous volume, and fading not bad enough to be a bother."

Waimate.—"The only time we have fading is when something intervenes (in the far distance), generally morose. It may be of interest to note that listeners around and in Dargaville (40 miles south of here) find 2YA fades dreadfully, and often cannot be tuned in again, and were very surprised when I said we were hardly ever troubled with even a slight fade. 2YA is easily our best New Zealand station, but 3YA is very good." (3 valves.)

Hikurangi.—"1YA and 2YA quite often come in with almost the same strength. Lecture on 'Fading' very distinct, whilst the one on 'Spitzbergen' could be followed only by careful listening."

Mangonui.—"2YA was received very poorly. Fading was exceptionally bad." (Five valves.)

DOWN SOUTH.

Oamaru.—"Announcements and lectures exceptionally clear and free from distortion of any kind. Musical items: Reverberation noticeable throughout the programme, especially in concerted items. Fairly clear reception of vocal solos; choruses blurred and dissonant; pianoforte treble clear, bass confused. Concerted instrumental items, bad reverberation, harmony confused. Violin and other instruments playing treble were fairly clear."

Gore.—"Fading practically negligible on both evenings. We have quite often had fading from 2YA, but the evenings selected were exceptionally good and the only difficulty we had was to cut down reception, and this is our usual experience."

Sutton, Otago.—"2YA strong at night as a rule, but no good in the afternoon."

Invercargill.—"2YA signals are always weak for about the first two minutes after 8 p.m. We can 'just hear' the chimes of 8. It seems as if the station does not commence with full power, but gradually increases it." (Isolated two miles.)

Lumsden, Southland.—"2YA fades very little here, and I have never known it to fade away altogether, and often have to use only four valves out of the five."

Palmerston, Otago.—"A fair amount of fading from 2YA. 3YA fades worse than 1YA since new wave-lengths came in. Daylight transmissions from both stations (? 2YA and 3YA) is wonderful and quite without fading."
 Dunedin.—"2YA always fades more

between 9 and 10 than between 8 and 9."

Myross Bush, Southland.—"As a rule we have less fading from 2YA than from 1YA or 3YA, though there is more distortion from 2YA than from either of the other stations. The 2YA announcer's voice is always clear and natural, music from studio orchestra nearly always distorted or very rough. Speeches or lectures from 2YA generally very good (clear), but musical items are generally more pleasing to the ear from 1YA or 3YA."

Hillgrove, Otago.—"I think that the best hope of improving matters lies in experimenting with different wave-lengths, if possible. We noticed here a distinct reduction in fading from Auckland when its wave-length was lowered."

Winton, Southland.—"Fading very slight. Reception too good for a proper test." (Receiver situated in flat, open country.)

A recent "Bulletin" contained the

following paragraph: Here and there in Sydney are small areas in which it is totally impossible to listen-in at any hour of the twenty-four, the most up-to-date receiving set remaining irresponsive. One of these areas is at Strathfield, on the side which faces the Liverpool Road, and another one is at Mosman, not far from Middle Head Road; there are two others also in different parts of the northern and western suburbs. As there are no power-houses or large electrical installations interfering nearby, the only feasible explanation is that the source of the trouble is somewhere in the earth, perhaps in the form of some mineral deposit. There are larger regions in the State where intermittent interruption takes place, lasting sometimes for several days, but the reception is perfectly clear at other times.

THE ELOCUTIONIST

DIFFICULT TO BROADCAST.

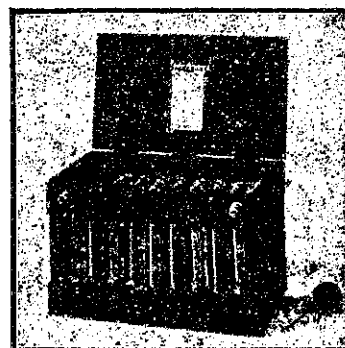
If there is one word that causes a broadcasting manager's heart to sink, it is "elocutionist." The unsuspecting individual who comes in to the studio, and offers to give a recitation on the air little knows what extremely thin ice on which he, in his ignorance of the technicalities of radio, blunders. The air still has its limitations, despite the remarkable strides which have been made, and the humble recitation is the least attractive of the hundred and one diversities offered. When we have television this will be overcome to a very large extent, but there is still the difficulty of what is known as "frequencies" in the human voice to contend with. The rise and fall of ordinary conversation is as natural as it is necessary; without it, the monotony would be intolerable. And this is the elocutionist's downfall, on the air. His listeners cannot see him, and consequently the force of action is lost. He has, therefore, to obtain effect through the inflection in his voice, and this is drastically curtailed. It takes an artist of more than ordinary ability to rise paramount above all these difficulties.

A radio valve large enough to hold a tall man now operates in the transmitter of the American station WJZ. It is seven and one-half feet high, weighs 100 pounds, and has a power of 100,000 watts.



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ANSWERS TO CORRESPONDENTS.

"T.T." (Hataitai): Galena is a satisfactory crystal for long-distance reception, but efficiency does not stop at the crystal. A high, long aerial, good insulation, and good earth and a favourable locality help considerably.

"P.B." (Otahuhu): The station heard was probably 2FC, Sydney.

"Crystal" (Christchurch): The winner of the "Radio Record" crystal set competition employs no amplifier. There are varying obscure factors that make for long-distance reception, although, of course, a high aerial of good length, first-class insulation of same, a good earth, and a favourable locality are largely contributory to success.

"ZBT": Sorry, we cannot undertake direct correspondence.

A Bandsman's Comments.

R. Whitwell (Nelson): I would like to congratulate IYA on the excellent transmission of the Auckland Artillery Band last Wednesday; also the band on their playing. Being a bandsman myself, I can naturally appreciate this kind of programme. Judging by the balance of the band it must have been very well placed before the microphone, not to mention that the band itself must also be well balanced. I think that the studio band concerts are better than the relayed ones. I would like to hear this excellent band again from IYA in the near future, and I may say we have been hoping to hear a studio concert by the Woolston from 3YA.

Fading Test at Opanake.

G. Scott (Iaranaki): I thought you would like to know how we experienced the fading test around Opanake. I was not listening in on 2YA all the time, but it was very good when I was listening, there being practically an absence of fading. I find the "Radio Record" most interesting, and look forward to it. 3YA is coming in with great volume, but IYA is unreliable.

Be Moderate.

"More Consideration for Staff" (Dunedin).—Many listeners-in are always, like Oliver Twist, asking for more, but do they ever think of "the man at the wheel"? Do they realise that every time they ask for extra nights, on which there should be transmissions, that they are putting an extra strain on the staff of the broadcasting station? The stations are operating for our pleasure, but, surely, we should show consideration towards those who have to work so that we may have it—most of the stations are running six nights a week, and this means that the staff has only a free for their own enjoyment. Let us remember this before we make further demands on their time. While writing, might I ask why it is that we have only had one Anglican Church service broadcast during, I think, the past six weeks?—[Our correspondent does not state which station his query refers to, but the aim is to treat all Churches with fairness. The absence of any particular Church from the air is not necessarily due to the company—no Church may be broadcast without permission.—Ed.]

A Plea for Australian Programmes.

W. Windsor (Westland).—I have much pleasure in saying how much I appreciate the "Record." I find it a great help, having obtained many useful hints and ideas from its columns. I would like to suggest that you endeavour to print the Aussie programmes, if possible. This would be greatly appreciated by your many subscribers, and, I think, would gain you many new ones. After New Zealand stations have closed down, New Zealand listeners commence to "tune in" the Australian stations, one after the other, in an endeavour to find the programme most suited to each individual taste. This must cause a lot of interference in the centres, and the printed programme would obviate a lot of this. I would like to again express my appreciation of the paper, and of the splendid programmes now being put over the air by our New Zealand stations, which are as good as, and very often better than, those of the other side.—[The Australian mail reaches Wellington on Tuesday forenoon, and the necessary papers reach us generally on a Wednesday, but sometimes on Thursday, and occasionally not at all. We are compelled to print early Tuesday morning. If we printed the programmes a week late they would be applicable only for the few days affected to nearby listeners. We would be very glad to oblige, but with the mails as they are we are handicapped.—Ed.]

If you want SHORT WAVE OUTFITS, COILS, CONDENSERS, or CHOKES,

—you want BREMER TULLY PRODUCTS.

If you want FINE RESISTANCES, RHEOSTATS, JACKS, PLUGS, CONVENIENCE OUTFITS, for SPEAKER, BATTERY, AERIAL AND GROUND CONNECTIONS, in any ROOM, or AUTOMATIC CONTROL,

—you want YAXLEY PRODUCTS.

If you want PRECISION CONDENSERS for WAVE TRAPS, T.C. SPECIAL RECEIVERS, DOUBLE ROTOR COILS, R.F. CHOKES, 6-1 TRANSFORMERS, NEUTRALISING CONDENSERS, IMPEDANCE COUPLING UNITS, OUTPUT DEVICES.

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If you want THE BEST SETS OR PARTS that money can buy, ASSISTANCE, ADVICE or REPAIRS,

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(The House of Service), where the HIGHEST QUALITY GOODS are sold.

ADVANCE RADIO!

Of this issue of the "Radio Record" we are mailing 3000 copies to farmers in the Canterbury Province together with a postcard outlining the possibilities of radio service and its essential value to the man on the land for weather and market reports as well as for entertainment. This is in support of the publicity campaign undertaken by the Broadcasting Company in connection with Carnival Week.

Next week 3000 copies of that week's issue will be mailed to a further 3000 farmers in Canterbury.

This effort is in pursuance of our definite policy of enlarging the radio circle in New Zealand to the benefit of all participants in that circle. We have laid down a programme to mail each week 1000 copies of the "Radio Record" to 1000 farmers together with a postcard appeal calculated to interest them in radio. This has been operating for some ten weeks. We are doing this through the co-operation of the "N.Z. Dairy Produce Exporter," which reaches monthly 60,000 farmers. We are working through their lists at the rate mentioned—except for special efforts as in the case of Canterbury—so that at the end of approximately twelve months every farmer in New Zealand reached by this paper will have had a direct appeal made to him to become interested in radio.

At the end of each month an approach is also made to the new licensees of the preceding month.

This pioneer work on our part will ultimately have its reward because radio is a modern necessity. Of course we stand to gain ultimately ourselves, but in the meantime we are satisfied to invest in publicity along these lines.

We would ask the co-operation of our readers in a progressive policy to "Advance Radio."

The reception we have met has been very gratifying, and our weekly paid circulation is now exceeding 10,000—quite apart from the extra publicity service mentioned. Our readers are increasing steadily week by week, so that we hope to be able to steadily enlarge our capacity for service to one and all. This is essentially a case of mutual interests—listeners, trade, company and paper—all interlocking for expansion and progress. Where readers can help us and the cause we would greatly appreciate their assistance. A sample copy of the "Radio Record" will be sent to any address on request. Write P.O. Box 1032, Wellington.

NEW ERA BEGINS

CHILDREN'S SESSIONS

ORGANISED AT 3YA.

Some new voices have been heard during the children's hour at the various stations this week, when the new era in the children's sessions was inaugurated.

At 3YA a full staff has been secured. Uncle Peter, who is in private life the Rev. S. Parr, principal of the Christchurch Grammar School, will, along with Mother Hubbard (Mrs. Parr), take the place of Uncle Sam on Wednesday evenings.

Mr. C. S. Booth and Miss Maynard Hall, with the expressive pseudonyms of Chuckle and Chook, will have charge of the session on Thursday evening, which has hitherto been one of Uncle Jack's nights.

On Fridays, hitherto silent, the air will resound to the voice of Big Brother, Mr. E. J. McEldowney, of the Y.M.C.A. The rearrangement means that the work of Uncle Jack and Uncle Sam will be considerably lessened. The conducting of the children's hour is a severe strain and tax on the time of those responsible, and the advent of the new "relatives" is cordially welcomed by those who have borne the heat and burden for many an hour.

It may be mentioned (though it is unnecessary to do so) that Mr. E. J. Bell (librarian at Christchurch Public Library) is the original Uncle Jack. He has been "on the air" talking to and entertaining the kiddies (and grown-ups, too) for the past fourteen months at 3YA and enjoys wonderful popularity.

Children of the West Christchurch School (under the direction of Mr. Parry) will assist Chuckle and Chook during the children's session on Thursday, November 3, 1927.

Major R. F. W. Ashworth, 13th Hussars, Reserve of Officers, and Commissioner of the Christchurch Boy Scouts' Association, will be "on the air" during the children's session from 6 to 7 on Friday, November 4, when Big Brother will conduct his first session.

The time-table and personnel for 3YA will be:—

Monday: Mr. E. J. Bell (Uncle Jack).

Tuesday: Silent.

Wednesday: Rev. S. Parr and Mrs. Parr (Uncle Peter and Mother Hubbard).

Thursday: Mr. C. S. Booth and Miss Maynard Hall (Chuckle and Chook).

Friday: Mr. E. J. McEldowney (Big Brother).

Saturday: Mr. Clyde Carr (Uncle Sam).

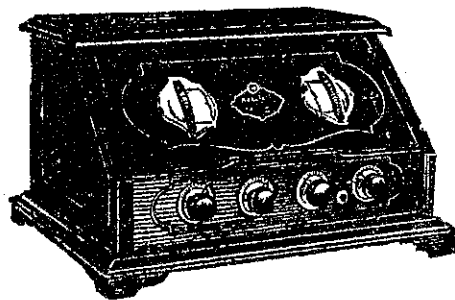
Sunday: Mr. Clyde Carr (Uncle Sam).

ESPERANTO

The fifteenth lesson of our interesting and instructive Esperanto course is published below. There now remains five lessons before the completion of the series. Students, however, may continue their studies of the language by the aid of a text-book, a copy of which is obtainable from the instructor for 1s. 6d., post free.

Students and others who desire to make inquiry regarding Esperanto, or matters pertaining to the international language, may address "communications" to "The Esperanto Instructor," New Zealand Broadcasting Company, Wellington, or care of this journal. Each inquiry must be accompanied by a stamped addressed envelope, otherwise a reply cannot be guaranteed.

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LESSON XV.

(To be broadcast from 2YA on November 10, from 7.30 to 7.54 p.m.).
Sinjorinoj kaj Sinjoroj, Bonan vesperon!

COMPOUND WORDS are formed by joining the various root words together, the qualifying word being placed first and the principal word last. Word-building on these lines is very frequent in Esperanto, and does away with the necessity of learning a vast number of words. Examples:—FULMO, lightning, SIRMILLO, a shield, equals FULMSIRMILLO, a lightning arrester; VARMA, hot, FADENO, wire, AMPERO, ampere, METRO, meter, therefore VARMFADENA AMPERMETRO, hot-wire ammeter (ammeter).

THE ORDER OF WORDS in Esperanto is generally the same as in English, with the two following important deviations:—

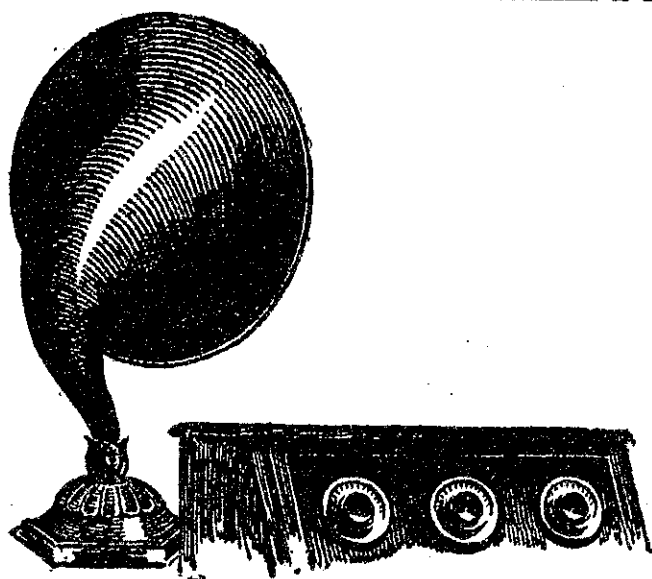
(1) In INTERROGATIVE CLAUSES

(asking questions), the word C'U is always used at the beginning of the sentence. When an interrogative pronoun (kin, kia, etc.) is used, C'U is not required. MI PAROLAS, I speak. C'U MI PAROLAS? Do I speak? C'U MI PAROLIS? Did I speak? KIU PAROLAS? Who speaks?

(2) In NEGATIVE CLAUSES (denials), the word NE (not), when it relates to a verb, is placed immediately before such verb: MI NE VILIS LIN. In other cases NE is placed before the word it modifies. MI SENDIS NE LIN SED S'IN. MALGRAU LA SIMPLA CIRKUITO, ĜI NE ESTAS NE-RADIANTA APARATO, notwithstanding the simple circuit, it is not a non-radiating set.

ADVERBS.—To avoid ambiguity, place the adverb beside the word to which it refers. LI EKSTREME DEZIRIS SAG'IG'I, he desired extremely to become wise.

Bonan nokton al c'uj!l



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SPECIAL QUOTATIONS TO RADIO
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Mainly about Construction

BY "MEGOHM"

A FULL-WAVE B BATTERY ELIMINATOR FOR HOME CONSTRUCTION

A CONSTANT AND PLENTIFUL SUPPLY OF HIGH TENSION AT LOW RUNNING COST

(Fourth Instalment.)

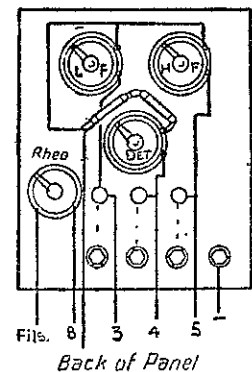
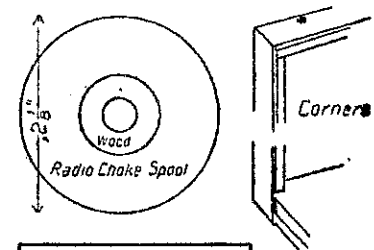
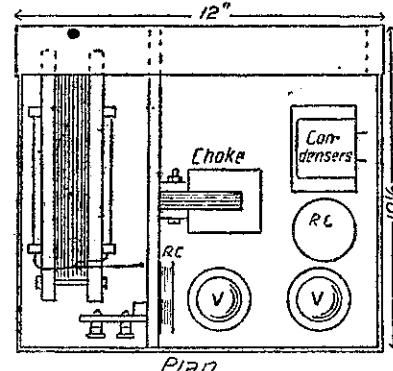
A plan of the eliminator with cover removed is given to show the position of parts. A radio choke is connected directly in series with the plate of each rectifying valve, and one of these chokes is conveniently attached to the partition alongside the valve by a screw through the centre. The other radio choke may be fastened to the baseboard in the position shown, these chokes being marked R.C. in the diagram. The bank of condensers is best placed in about the position shown, but the HT choke may be placed in any position. A good plan is to stand it on end against the partition and attach it to the latter by means of a small brass angle-piece or other means.

THE RADIO CHOKES.

The two radio-frequency chokes are constructed by cutting four circles of cardboard $2\frac{1}{2}$ in. in diameter. The centres are made from the shank of an old wire

100,000 ohms, 8s. each. In addition to these one or two fixed carborundum resistors should be included in the detector circuit. If it is desired to get down to about 30 volts, a fixed resistor of 100,000 and another of 50,000 ohms should be included as shown, by soldering the end tags together and connecting the pair between the arm of variable resistance, and the wire leading from condensers 1 and 2 and connecting to the arm of each variable resistance. The other side of each variable is connected to the bolt above its respective output fuse and terminal, and also to its respective fixed condenser indicated by the figures 3, 4, 5, below. The rheostat should be of the power type, capable of carrying 3 amps. One side is connected to one side of each valve filament, the other side to the lowest bolt on the distribution panel.

If this panel is dispensed with, this connection will be direct to one of the transformer taps most suited to the filament in use. In making such filament connections, it must be remembered that they must always be made to the same number of turns in each layer, as the action of the eliminator depends upon drawing the HT current from the electrical centre of the filament winding in actual use, and in practice the electrical and mechanical centres are sufficiently near together, even if they do



spool by sawing through and sawing off two circles 3-16 in thick. Each of these circles is glued to the centre of one of the cardboard discs, and another disc glued on the other side to form a spool with a 3-16 in. slot to take the wire. A hole is made near the centre, and the end of the 31's enamel wire passed out, and 1000 turns are put on, the end of the winding being passed out through another hole. One end of each choke connects to a plate of each valve, and the other ends to HT1 and HT2 respectively on the transformer, through the HT fuses on top.

THE FRONT PANEL.

This ebonite panel measures $6\frac{1}{2}$ by $7\frac{1}{2}$ inches. Upon it are placed the three voltage output resistances, the rheostat, and the fuses. The three variable resistances are "Royalty" type B, 1500 to

not happen to coincide, so long as equal turns are used in each layer. Deviation from this rule would be liable to introduce hum, which it is the chief function of the eliminator to cut out.

The negative HT terminal is connected to one side of all condensers, and also to the HT centre tap of transformer. Next week the construction of the high-tension choke and the outer case will be dealt with. The writer is trying out an idea that if successful will cut the consumption of a.c. down to about one-half. A report will be given next week on the matter. Constructors are advised meanwhile not to purchase valves.

The correct circuit diagram is included in this instalment.

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Music and Radio Store.
PETONE.
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Vesta "A" and "B" Batteries are selected to replace original equipment in very much the same way a "Cord" tyre is bought to replace a "fibre." The Vesta "Costs less per month of service." When buying a "Set" you are entitled to ask for the best equipment—Therefore have your dealer supply both "A" and "B" Vesta Batteries.

Sole New Zealand Distributors:

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148 WAKEFIELD STREET, WELLINGTON.

ANSWERS TO CORRESPONDENTS

FIVE-VALVE BROWNING-DRAKE.

A. J. (Tankei).—A five-tube Browning-Drake is usually impedance or resistance—coupled in place of transformer coupling on the audio side. The former is recommended rather than the latter. Mr. Browning, the inventor of the circuit, in a recent article, recommends for impedance coupling the National impedance transformers, otherwise a radio choke must be placed in series with the first choke coil and the 1mf. fixed condenser. Adding an extra R.F. valve is not a simple proposition if the valve is to give its quota of amplification. The ordinary one-radio circuit of four valves is wonderfully good when worked up to full efficiency by experimental improvement.

Using Ammeter.

R.G. (Mangonui), inquires regarding short-circuiting batteries. An ammeter must never be used on an accumulator on any account, as the construction of this instrument makes its use equivalent to a direct "short," which is ruinous to an accumulator. Even on dry batteries its use should be avoided. A voltmeter with plenty of fine wire on its coil may safely be used on any battery or accumulator. Care must always be taken in using these meters that the metal case is not allowed to touch the terminals and cause a "short."

Adding Amplifier.

A Nelson reader has been having good reception of small Australian stations on his two-valve set and wishes

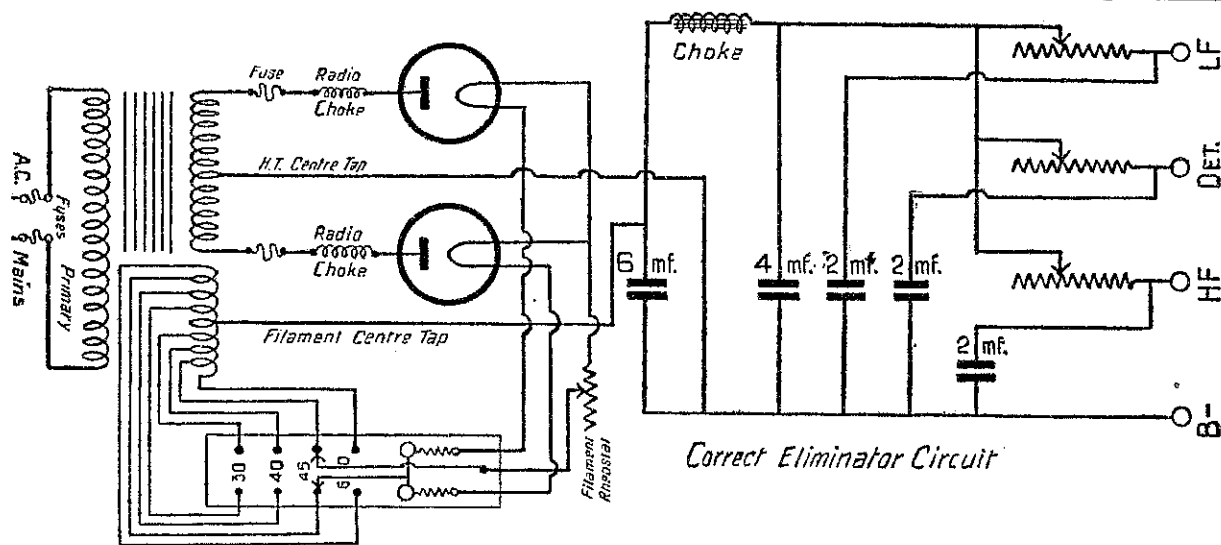
coils. Tickler turns depend on efficient construction of set, the more efficiently built, the fewer turns required to secure oscillation up to high wave-lengths. Good tone is obtained with a large 5 to 1 ratio transformer in first audio, and A13 Ferranti in second stage. Across primary of first transformer a fixed condenser of fair capacity and another smaller across plate and grid terminals of same, exact values to be determined by trial for best results. Choke output filter, and condenser of good capacity across speaker terminals. The 201A in last stage must be replaced by a good power valve, without which good tone and volume are impossible. A plentiful high-tension supply is also a necessity for good tone on the lower audio frequencies, or the sudden demands of a power valve are not met, and loss of volume and roundness is the result. A good speaker is, of course, another essential. Other information will be found in back numbers describing the circuit.

Short-Wave Adapters.

A request for particulars of how to connect a short-wave adapter to certain reflex sets will have attention.

CONNECT TELEPHONES TO MARKED POLARITY

Whenever a pair of high resistance telephones is used in the anode circuit of a valve so that the anode current to the valve passes through them, care should be taken to see that the telephones are connected so that their polarity is correct with respect to the



THE NEW A.C. TUBES

TWO DISTINCT TYPES.

There are two kinds of a.c. tube, those that have filaments in the usual sense, and those that have heaters, which operate from a.c., and which, in turn, heat a cathode, which supplies the electron stream which the radio set actually makes use of.

An American contemporary suggests that as this class of tube is somewhat in a state of development, there need be no hurry to do away with present batteries and tubes, at least while they are still good.

The heater type of tube is now fairly well-known as regards its principle, but the filament type is a later development. The stout filament type has a true filament, very heavy and rugged, heated by a lot of current at a low voltage. Eliminating the hum in this class of valve did not prove so formidable a problem in the radio and audio amplifiers as in the detector, which calls for special arrangements. One system utilises the combined plate current of all other valves for heating the detector filament.

As the rugged filament type cannot be used as a detector of the grid leak and condenser type, a heater type is recommended as detector. The rugged filament type may be used with a C-battery detector.

The heater type may be used right through the set. Hum is kept at a minimum by biasing the heater with respect to the cathode. One type of heater tube may be used in a four-prong holder, but most makes require a special five-prong holder, and one make has two heater terminals at the top of the tube.

This new departure appears to herald the production, at no very distant date, of a perfect batteryless receiver. There are quite a number of makes of the tubes on the American market, and, no doubt, any that are imported for sale in New Zealand will be those that have been proved to be the most efficient.

POWER VALVES

CORRECT USE.

Power valves are power handlers, not power producers as many think.

Of itself, a power valve will not produce more volume than a non-power valve. The value of a power valve lies in the fact that its design permits it to handle greater volume without distortion.

Most receiving sets are capable of delivering more volume to the last audio valve than can be handled without distortion by the usual types of amplifying valves. This is where the power valve is needed—in the last audio stage—where it can receive the volume developed in the earlier stages of the set and pass it on, amplified but undistorted, to the loudspeaker.

Electrical Characteristics.

The electrical characteristics of power valves are quite different from those of the customary amplifying valves. Power valves consume more B battery current and they require greater C battery voltage.

The wrong C voltage robs the power valve of its ability to handle greater volume without distortion. In addition, if the C voltage is too low the B current consumed by the valve is multiplied many fold, which rapidly exhausts the B battery. Merely substituting a power valve for some other valve in the last audio stage of a receiver will not bring about any noticeable improvement in reception. Provision must be made to allow placing the correct C voltage on the grid of the power valve, and a greater B battery voltage can be employed.

to know why, on some nights, New Zealand stations come in well in speaker and other nights only 'phone strength. This is attributable to atmospheric conditions that are not at present very well understood. There are nights when a multi-valve set only gets 'phone strength on main Australian stations, but this effect is seasonal, and most acute during summer time. Dunedin is a weak station at present, but will probably be on increased power at later date. The suggested addition of a one-valve amplifier would certainly increase volume, the increase depending to a good extent upon the transformer selected and the workmanship put into the circuit. A 5 to 1 ratio good-sized transformer is recommended, fixed condenser across primary and across 'phones or speaker—value best found by experiment. A small power valve would probably suit best.

Charging A Battery Without Mains.

A country reader states that particulars have been broadcast on how to charge an A battery accumulator by means of wet cells, and asks for particulars of how to do this. "Megohm" has no recollection of hearing this broadcast, but realises that such a system, which can be used, would be of tremendous benefit to country listeners who are away from electric mains.

Briefly put, the accumulators are charged by means of Daniel cells, to which they are permanently connected, the Daniel cells acting as a trickle charger when the set is not in use. The system is quite inexpensive to install, and is reliable. To make the best of such a system it is wise to use four-volt valves rather than six-volt in order to economise current, but as the four-volt series give excellent results, there need be no hardship on this account. "Megohm" has a good description of the system, and will endeavour to present it as fully as possible next week, with necessary diagrams, feeling sure that it will be much appreciated in isolated districts. The system is to charge small accumulators suited to their work, but does not lend itself to charging large capacity six-volt accumulators.

Improving Browning-Drake.

A Huntville reader has a 4-valve Browning-Drake with 201A valves presumably all through, but is doubtful as to having correct number of turns on coils, and is not satisfied with tone, although volume is there. The primary turns to suit the 201A in radio stage are generally 14. With .0005 variable condensers, 65 turns, space-wound for aerial and R.F. secondary

H.T. battery. This point is often overlooked through ignorance, or neglected because considered of no consequence. In actual practice it may greatly affect the sensitivity of a pair of telephones after a time, since a current flowing through the windings in the wrong direction tends to demagnetise the permanent magnets, while a current in the correct direction keeps them magnetised. Just because a new pair of telephones give equally loud signals either way round do not think that this shows that the polarity will not matter ultimately. The sensitivity of telephones depends very largely upon the permanent magnets being powerful. Cases are known where high-resistance telephones which had lost their magnetism have been restored and given a new lease of useful life simply by using them connected the right way round in the anode circuit of an amplifier valve taking a fairly large plate current.

All high-resistance telephones should have their polarity marked either on the leads or at the terminals of the earpieces. The telephone lead marked positive should go to the positive terminal of the H.T. battery, while the negative lead should go to the anode of the valve.

These remarks, of course, do not apply to low-resistance telephones used in conjunction with a telephone transformer.

S-O-S

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PART IX.—ATMOSPHERICS OR STATIC.

These disturbances are well known to most listeners even crystal users. They are due to little electric disturbances in the atmosphere like miniature lightning flashes. They may appear in many different forms; the familiar crash just like thunder, but without the rumbling after effects, then there is the rustling—something like crushing a newspaper and also the sound like hail on an iron roof. There are many modifications of these effects and so far have caused much trouble as they cannot be tuned out. The reason for this is that the static hits the aerial a sudden blow—just like someone striking a clock pendulum—and the current flows up an down the aerial at its natural frequency. Suppose two neighbouring aeriels were tuned one to 420 metres and another to 600 metres, it would be found that the atmospherics would affect each equally without the slightest regard to their different wave-length. This, therefore, is the reason why even selective sets suffer from static. It seems that static is generally more troublesome as we approach the equator and becomes less as we approach the poles. Also trouble from atmospherics is in nearly every case local. That is, suppose two sets, one in Auckland and one in Dunedin, were listening to 2YA, it is probable that the first would find great trouble from static while the latter would report perfect reception. If the first now tunes in to 1YA, he will find that the static ceases. Yes, but that is because his set does not need to amplify so much with the near station, and the static is correspondingly reduced.

The reason for static being so local is similar to the effect of using a lighted candle out of doors when a full moon is shining at night. Within a foot or so, the light of the candle will overpower that of the moon, while at a distance of several yards the effect will be negligible.

Static can be reduced at times by means of a super heterodyne set with

aerial, of course, picks up static no matter from what direction it comes.

LOOP AERIALS.

Reference was made in the last paragraph to the "loop aerial." This aerial, instead of rising to 50 feet or so, and then going horizontal to form one plate of a condenser, is wound into a coil or loop of fairly large diameter. If these wireless waves are made to pass through the coil, currents will be induced in it, as in the case of the secondary of a transformer. The position of the coil has a lot to do with the reception of the signals, however, because it is essential that the waves should pass through the coil. Two cases are shown in Fig. 1 with the coil in position "a," the waves from the transmitter X will obviously pass through it, and induce currents in, as shown in Fig. 11a. In the case of 1b, however, the wave will hit all the sides of the coil at the same time, and the effect will be as in Fig. 11b. No current will flow round the coil, and the station X will be "cut out."

It may be worth while for those whose sets permit of it to try to experiment with the position of the coils in their high frequency stages, if they find it impossible to cut out a broadcasting station to which they may be near. Those who are within a mile or so of 2YA find great difficulty in cutting it out, because the waves are so strong. They can even get full loudspeaker strength without an aerial or earth, because the coils act like loop aeriels. The relative positions of the

ceive a given transmitter has been given several most important uses. It will be seen from Fig. 1a that by means of it we are able to find the direction from which the waves come. This method gives us no clue as to the distance of the transmitter, but a simple addition will give us that information also.

If we find the direction of the station at a certain place, then move the receiver through a given distance, and then find the new direction, we will be able to make a diagram similar to Fig. IV. Where the two directions cross obviously gives us the position of the transmitter. This method is largely used in navigation in places where fogs are frequent and where traffic is dense, for example, in the English Channel. It is clearly much superior to fog horns, etc., because it gives the captain of the ship (the ship in this case being the transmitting station) definite information as to his exact position, and he can then find all the rocks, etc., from his charts and his compass.

This method can also be used to trace and track down oscillators, whose persistence is inclined to fray the tempers of the neighbours and the P. and T. inspectors. By means of a portable set on a motor-car the house can be located with ease.

BEAM WIRELESS.

The previous article gave indications for finding the direction from which the waves come. The next thing to do is to so construct the transmitter that we can have control over the direction in which the waves travel. The reasons for requiring the waves to travel in a beam

tion in front if it were entirely unshielded and placed on the hood!

As was explained in the article on fading, if wireless waves strike a flat conducting surface they will be reflected like light from a mirror. If, then, we surround the aerial by a mirror like that of a motor-car headlight, we will reflect the waves in a beam. There are, however, two main difficulties in the way—(1) The aerial must be small compared with the reflector. (2) The reflector must be large compared with the wave length. These seemed insuperable at the beginning of the investigation—about 20 years ago—but with modern progress in the production of short waves it has been found quite feasible, as the new Post Office beam stations in Australia, Canada, and India have proved.

In order to keep the aerial small with regard to the reflector it was made without a "top," that is, the aerial consists of a vertical wire rising straight up. The reflector consists of a flat sheet of metal (or a form of wire netting) surrounding the aerial, as shown in fig. V. When the waves hit the reflector they are projected in the form of a beam directed towards the receiver. When these waves hit the receiver's reflector they in turn are reflected back on to the receiver's aerial when, as will be seen from figure VI, they will be highly concentrated, and a loud signal will be heard.

Other methods of directing the waves in a particular direction have been tried, the only one worth mentioning now being the inverted L type. This aerial will both transmit and receive, with a preference in the direction opposite to

dimensions will receive equally well from all directions.

It has been stated earlier in this article that waves if they are strong enough will affect the most sensitive and selective of sets. The atmospheric being untuned will break through the best of sets, but we can if we take sufficient care cut out a near-by station fairly satisfactorily. If we go back to the condenser and coil and apply an oscillating pressure of the correct frequency an oscillating current will flow from one plate of the condenser through the coil to the other plate and back again. This current surging backwards and forwards through the coil produces an oscillating magnetic effect which can be used to induce similar currents in neighbouring coils as has been explained.

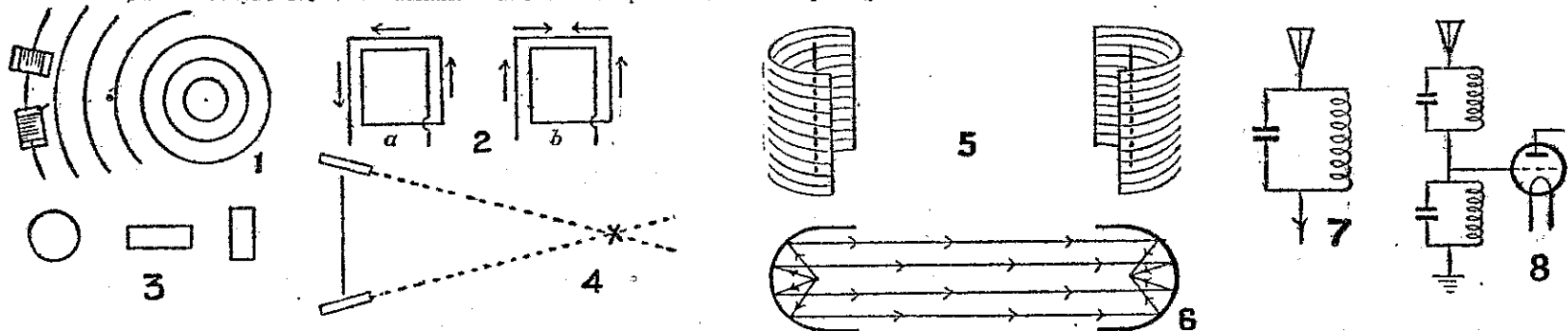
This effect will prevent any current from passing through the apparatus, as shown by the arrows of figure 7, because any electricity getting through the coil will be swept along by the surging current on to the condenser plate.

If a higher frequency is applied, then it will not be able to pass through the coil, due to its choking effect, and will pass through the condenser with ease. A lower frequency will flow through the coil and leave the condenser alone. But the correct frequency will find great difficulty in passing through, and will pile itself up on the plates, thus producing a high pressure, which in the receiving set is used to operate the grid or the crystal. We have then the peculiar state of affairs that an arrangement as shown will act more or less like an insulator to a particular frequency, and will prevent that frequency from flowing through.

Here, therefore, is the secret of the wave trap. If we fit an arrangement like this in the aerial of our set and tune it to the frequency of the station which we wish to cut out, then all other signals will pass through to our receiving set, but this one will be stopped (figure 8).

Since the wave trap is always most useful at frequencies close to those which we wish to receive, it follows that its tuning must be exceedingly sharp, and this means that resistance must be as small as possible. The wire should be very thick, 1/16" diameter is quite small for this purpose—nothing will be ridiculous, and all joints must be soldered. Because of the large wire the number of turns will be limited, and the condenser should therefore be large, and, of course, should be of good quality. If these points were considered more there would be less complaints of weakened signals or incomplete trapping.

One must take care also to see that the coils of the receiving set do not act as loop aeriels, and thus nullify the effects of the wave trap. They, or perhaps better still the whole set, should be shielded by a coating of copper or tin foil, which should be earthed so as to keep the waves out. Also the wave trap should be as near the set as possible, and the earth wire kept short or else be shielded also.



loop aerial. These sets, as will be explained shortly, have a pronounced directional effect and if the aerial is pointed in the direction of the station whose signals are required, then any other signals—broadcast music or static—coming from any other direction are neglected and ignored. The ordinary

three coils, however, must not be altered, since that arrangement (Fig. III) has been specially designed to prevent the currents in one coil from interfering with those in the other two.

DIRECTION-FINDING.

The rotation which a loop aerial must be given so as to enable it to re-

like the light from a motor-car headlight are several—(1) The elimination of interference in receiving sets in the neighbourhood listening to other stations. (2) Secrecy in war time. (3) Great reduction in the power used. Just imagine the size of the lamp required in a motor-car to give the same illumina-

that in which the flat top is pointing, but this preference is not noticeable unless the length of the top is at least ten times its height, so that with an aerial 30 feet high no appreciable effect would be obtained unless the top were 300 feet long. So that to all intents and purposes the L aerial of normal

The Children's Corner

By "ARIEL"

Dear Family,—Here we have our final inmate for the Zoo, and a truly extraordinary creature he is! As I told you last week, we are closing it down just for the summer months. Next winter I hope you will all break out into bright ideas! Several letter writers tell me they are looking forward to winning Zoo prizes when we open up again.

I think we have made a wonderful little collection, and I am very proud of my artists.

I will think of some new competitions for you soon—some nice easy ones that don't take very long to do, because most of your spare time must be spent in the out-of-doors now, as I remarked last week. How many of you have crystal sets? And have you ever wondered what it is that makes a crystal sensitive? It is the sulphur contained in the crystal that allows an electric current to pass through it. So you see, that is probably why your crystals are more sensitive in some spots where there is a large deposit of sulphur than in others where it is scarcer.

Are you beginning to think about Christmas holidays, and making lots of wonderful plans for them? What a lot of lovely, exciting things you will have to tell me when they are all over!

It's great to have a holiday to look forward to, and it's a wonderful thing to be able to do all the scrumptious things we've been wanting for such a long time, but don't you think that sometimes the most exciting part of all is the coming home again at the end? Aren't you eager to see if everything looks the same as when you left, and don't you race into the garden to have a peep at your favourite nooks and corners? Don't you love to smell the dear old familiar smells about the house? Of course you do, for after all, there is no place anywhere that is quite so interesting as home.—Your

ARIEL.

A LETTER OF THANKS

Dear Ariel,—I was very glad to know I had won the squealer prize, as I had been trying to draw a good enough inmate for your Zoo for some time. I am fond of drawing and so is my brother, and we hope to send some animals in next winter. We like the children's corner and always read it when the "Record" comes.—Will Hodgson, Picton.

Answer to Letter.

D. Ridler, Tinakori Road, Wellington.—The result of the Pokkitt and Pyk painting competition was published in the "Radio Record" on September 2, but perhaps you were not watching very carefully. If you look back you will see that the prize was won by Mervyn Jillings.

THE NIGHT EXPRESS

Each night, as soon as bedtime comes,
We step aboard the train
That whisks us off to Sleepyland,
And brings us back again.
The Dustman waves his wand and—well,
Before you understand
What's happening, you're halfway there
To sleepy Sleepyland.
E. I. R.

SOME MORE OF BROTHER BILL'S LIMERICKS

There was once a young man of Calcutta,
Whose set would do nothing but splutter,
After trying for weeks,
He got nothing but shivers
So he pitched the whole thing in the gutter.

Said the cat at the town undertaker's
When asked by the cat at the baker's,
Why he had sheared
Off his beautiful beard,
"I now grow for the crystal-set makers."

A girl, whatever possessed her,
Dispensed with a lightning arrester.
The lightning one night
Set the whole house alight,
You should have heard how her poor father blessed her!

THE DISHONEST DAIRYMAN

IF THIN MILK BRINGS ILICIT
TIN,
I THINK I'LL SKIM IT, MIX IT,
TILL IT'S THIN.

OUR WIRELESS ZOO—No. 6: "THE SURPRISE"

This is our No. 6 Animal. He is the last of the season, for the Zoo is closing down till next winter. The prize goes to Mary Steele, 10 Test Street, Oamaru.



THE SURPRISE

This freak of nature, above you see,
Was cast up from the depths of the sea,
For "Ariel's" Zoo he'd make a fine prize,
This hideous animal called a "Surprise."

Mary Steele.

THE ADVENTURES OF HENRY

Henry was a good boy, particularly good at doing exactly as he was told, never waiting to be told a second time. Even his parents said he was a good boy, and they ought to know, for they have had him for twelve years. One day Henry was busy in the kitchen hammering nails into his new rabbit hutch. His mother had a bad headache, and at last she said, "I can't stand that noise any longer. Run away, there's a good boy." So Henry, like the good boy he was, ran away; but before running, he took half a loaf and some cheese, and a nice mince pie also.

Then he started running, and ran till he was tired. Then he sat down and ate the mince pie, and started running again till he was tired. Then he sat down and ate most of the bread and all the cheese. He got up and ran again. Only a short distance this time, and then he finished the bread, and tried to run again, but couldn't. Then he began to cry. A big boy came along and asked what he was snivelling for, and did his mother know he was out? Henry told him that she did, and the big boy punched his head for being cheeky. Presently Henry met another boy, and asked his way home, and that boy told him to follow his nose, and ask a policeman. Henry could not see a policeman, so he followed his nose, which led him into an orchard. Now some bad boys had broken into that orchard the day before and stolen some

apples, and the man that owned the orchard was behind a tree watching. Of course, he dashed out and grabbed Henry, saying, "Now I have got you!" And Henry said, "Yes, he had." The man said, "None of your cheek. What's your name and where do you live?" Henry told him, but the man did not believe him, and sent for a policeman, who put the name and address down in a book, and to make sure he walked home with Henry. By the time they got there all the boys in the neighbourhood were walking behind, but Henry did not feel a bit proud of heading the procession. Two days later Henry's father got a summons, and when the Magistrate heard the story of how Henry had run away, and also about the mince pie and bread and cheese, he said he had no doubt that Henry was in the orchard for an unlawful purpose, and fined him five shillings and seven shillings costs, which Henry's father had to pay. The magistrate also told Henry's father to advise him to be careful in future. Henry's father did not give him any advice, but on the way home he bought a cane, and next morning Henry ate his breakfast standing up, as there were no cushions on the kitchen chairs. And the schoolmaster made a lot of talk about hypocrites, which Henry could not understand, but as all the other boys looked at Henry and grinned, he thought it must be something to do with him.

One day Henry's mother was out of starch, so she gave him sixpence and sent him to buy some, telling him to "Look sharp." Henry understood about the starch, but not about looking sharp. On the way down the street he passed a scissor grinder, so he asked him if he could tell him how to look sharp. The scissor grinder was not a nice man, for with his finger and thumb he gave one of Henry's ears a sharp twist, saying, "That will make you look sharp, now look it." Henry rubbed his ear, but as he had no looking glass he could not tell whether he was looking sharp or not. Besides he had been told to "Hook it." Seeing a man fishing in the canal he asked him politely, "Please sir, can you tell me how to hook it?" Now the man had been fishing all day without even a bite, so he did not return Henry's politeness, but called him a saucy young monkey, and twisting his other ear told him to "Hop it." Henry was on his way for the starch at full speed, when he cautioned against a gouty old gentleman, and kicked his foot. The old boy hopped for a dozen yards, telling all the world what he thought of boys. Henry did not stop to apologise, he was so pleased to learn how to hop it, that he continued on his way, only to find on reaching the shop that he had lost the sixpence. On reaching home his mother wished to know where he had been, and whether she had not told him to look sharp. Henry told her all, and then she sat down on the nearest chair and advised Henry to wait until his father came home. Henry thought it best to wait in bed, but he chose to stand up for breakfast again.

(To be Continued.)

The Principles of Modern Ballroom Dances

In the course of her series of talks on modern ballroom dancing Miss Phyllis Bates outlined the principles underlying various modern dances. These principles give an understanding of the trend of modern developments in this field.

BY modern dances," explained Miss Bates, "I mean those of the non-sequence type which have made their appearance during the last ten years, as distinct from what are termed 'old-time' dances, which include the old waltz, 'square dances,' such as the Lancers and those of the sequence type such as the two-step and the schottische. These are never seen in the cities now except at the one or two 'old-time' assemblies which still survive.

"The modern waltz and fox-trot, which, as we know them now, are entirely British are the two standard British dances of to-day. They represent the ideal in our ballrooms, and, performed correctly, are really graceful and beautiful. While we have been developing these two dances, America has launched several of an eccentric character on the world. We have had the 'Chicago,' the 'Blues,' the 'Charleston,' the 'Blackbottom,' and, if rumour is correct, we are to have the 'Hebbie Jeebies' very soon!

MODIFIED FOR BRITISH TASTE.

"While these dances in their original American form find considerable favour in Australia and a little in New Zealand, before being accepted by the best English teachers, they are invariably modified, sometimes out of all recognition. This is a fact which is not generally appreciated, as witness the case of the Charleston. We were continually reading condemnatory newspaper reports which really referred to either the American or the stage Charleston, and were not applicable at all to the flat English ballroom version. Nevertheless we seem content to draw our inspirations from America, and these American dances, which usually have some points to recommend them, having been 'Anglicised,' serve their purpose for a period. It seems that nowadays we must have variety, and, if these dances tend to keep the general interest alive, it is something in their favour. Unfortunately there are too many people who want to know 'the latest' to the exclusion of all else, and too many teachers ready to regard the 'latest' as a good money-maker, and who accordingly advertise it practically to the exclusion of the more worthy fox-trot and waltz. As a result there are many who get a distorted idea of the comparative values of the various dances—for instance, they place the Blackbottom or the Charleston on a level with the fox-trot or waltz. I do not discountenance innovations, but I would never sacrifice good style to novelty, and I know of nothing which will develop a dancer's discrimination and judgment so much as a knowledge of the principles governing the different dances.

THE FOX-TROT.

"The fox-trot, which made its appearance in England about ten years ago, was of American origin. It was at first performed almost as a sequence dance, most people having their own particular sequences, and consequently find-

ing it an advantage to have their particular partners as well. This is quite unnecessary now that we have developed a technique which makes it easy for the girl to follow the man's lead without knowing beforehand what he means to do. After the inception of the fox-trot teachers were soon at work on it, and changed it from a side-to-side chassée movement on the toes to a flowing walk and a three-step, taken directly forward or backward, or on turns, making use of the heels. To-day the dance consists mainly of the passing three-step, in which the feet are not brought together, and the natural and reverse open turns.

The waltz was actually changing before the advent of the fox-trot—the old operatic technique was gradually being dropped. The introduction of the fox-trot gave an impetus to this change, and thenceforward with both dances the development of the natural movement technique which prevails to-day was contemporaneous. The waltz now consists of a three-step in which the feet pass slightly on the third movement. For turns, the same three-step movement is used, but the feet make an exact close.

"In the evolution of these two dances no doubt practice at first preceded theory, but now that the theory has been fully developed we realise that they are both expressions of natural movement, and that the principles governing them are the same as those governing such simple movements of our everyday life, as the walk and the run. For instance, the fox-trot walk, except that the feet slide instead of being lifted, is similar to the normal walk, the balance travelling forward continually with the forward foot, and the three-step, which consists of a long step followed by two shorter and quicker steps, embodies the principle of the run, the weight travelling ahead of the forward moving foot.



The "Millar Cross" of the Fox Trot.

"The rhythm and tempo of the music necessarily dictate what a dance shall be, and the slow fox-trots and the waltz are both smooth and flowing rhythms. The fox-trot is in 4/4 time, which lends itself to the expression of a variation of slow and quick move-



The Walk of the Quick Step.

Photographs (left and right) posed by Miss Wilma Rathner and Mr. Colin Shorter, pupils of Miss Phyllis Bates, and winners of the Adelphi Ballroom Championship.

The Quick Step photograph was posed by Miss Wilma Spiller, who partnered the runner-up in the same event.

All photographs by—
S. P. Andrew.

ments. The first and third beats are the accented ones. The waltz is in 3/4 time, and can be perfectly expressed only in an undulating three-step. The first beat is well accented.

THE ONE-STEP.

The one-step is really an older dance than the fox-trot. It experienced a great wave of popularity in New Zealand about six years ago. In place of the one-step, Paso Doble music in 6/8 time is occasionally played. "Valencia" is an example of this music. Most people one-step to it, but the Paso Doble is actually a Continental dance, the steps of which are short and lifting and quite unlike the one-step.

"The quick-step is danced to fox-trot music but at a much quicker tempo than that suitable for the slow fox-trot dance. Also, the beats of the music are more equally accented. The steps of the dance are short and lifting. The feet are kept almost flat and the weight is slightly behind the moving foot. When going forward the backward knee bends. When going backward the forward knee bends. It is the bending and straightening of alternate knees which gives the up and down movement characteristic of the dance. The American "Chicago" and the Schottische Espagrole were the forerunners of the English quick-step.

"The flat Charleston is a popular variation of the quick-step. There is a difference in the principle of the two dances, however, as in the flat Charleston the two knees are simultaneously bent and then straightened.

"BLUES" MAY BE REVIVED.

The "Blues" are danced to slow 4/4 time, the beats being equally accented. The dance originated in America, but was modified in England. The principle is actually similar to that of the Quick-step, but "Blues" music being not much more than half the speed, the steps are longer and the lifting movement so slurred that the similarity is not apparent. We have heard very little of the "Blues" for some seasons, but a revival is anticipated and is likely to be assisted by a new type of music called "hot music" now being played in America and England.

The "Blackbottom" is decidedly an eccentric movement. Its principle is: Knee of the unweighted leg bent; knee of the weighted leg straight; tip of the weighted leg out. The bend of the knees is the opposite of the action of the quick-step. No amount of modification will ever make this dance graceful,



The Walk of the Black Bottom.

but the sinuosity of its movement and the rhythm of the music make it attractive to dance. The music is in 4/4 time, but is distinguished from fox-trot by an extra accent on the sixth half-beat, which must be indicated by the dancer in his movement.

The tango has never become really popular in England, although there has always been some demand for it. It is a most attractive dance, but does not seem to appeal to the temperament of the Englishman. It is danced to slow 2/4 time, but it needs an experienced tango band to get the proper atmosphere. The dance is based on the natural movement of a stealthy walk. The feet do not slide but are lifted slightly, the weight travels forward well over the moving foot, and the knees are flexed more than is the case in the fox-trot.

THE PRINCIPLES OF MOVEMENT.

"Fundamentally it is movement and not steps which make one dance different from another. Each dance has its distinctive rhythm and a distinctive movement to express that rhythm, and any steps introduced must, to be correct, express both the movement and the rhythm. It is possible to make a logical analysis of every dance in this way, and this analysis should form the basis for all instruction. If everybody would realise that to learn a lot of steps is not the alpha and omega of dancing, and were to insist that their teachers give them principles first and steps afterwards, all teachers would be compelled to study the logical construction of the dances they teach, and dancing would show an immediate all-round improvement in style.

Another point to note is that the more a dance adheres to the principles of natural movement, the more graceful it is—the more it departs from these principles the more eccentric it becomes.

The waltz, the fox-trot, and the tango are all based on natural movement, which is the explanation of their grace and their permanency. At present the blackbottom exhibits the greatest departure from natural movement. For this reason it is the most eccentric of our dances and will probably prove the most fleeting.

The outstanding teachers in any part of the world are those who can analyse for themselves. Mere copying can lead one into so many pitfalls that it is always wise to take the trouble to study.

CURVES IN DANCING.

Some people may consider dancing a dull subject. Possibly they prefer to think about the Einstein theory, and, if so, they may be interested to discover that all progressive dance movements have their distinctive curves. The fox-trot walk is a long low curve, the three-step of the waltz is a long high curve, the curves of the quick-step are short, like little waves, and the short curves of the Charleston are separated by little "bumps." No doubt if Mr. Einstein took up ballroom dancing he would formulate a theory so complicated that only he could understand it, and dancing might become a pastime solely for university professors. I do hope nothing so serious comes to pass.

For Prospects and Recruits

By M.I.R.E.

This column is conducted by a member of the Institute of Radio Engineers, with the purpose of giving prospective buyers information of value.

Sensitiveness of reception represents efficiency of reception naturally, but this is more readily appreciated when it is understood that distant reception merely amounts to an equation having two factors, and may be represented as follows. Successful reception equals the signal strength subtracted by the interfering effects. If there were no interfering effects, then given the requisite number of valves, any station in the world could be tuned in, and in those localities where reception was not up to standard, more valves would have to be used than in a locality where reception was normal, or above normal. The number of valves used does not alter the equation mentioned because both signals and interference receive amplification while passing through the valve system, and the relation of signals to noises remains unaltered. (Actually noises usually receive slightly more amplification for technical reasons.)

The modern general-purpose valve has an energy amplification of a certain value when used in an orthodox design or receiver. There are many brands of valves, and many more brands and designs of receivers. There are all classes of performances put up by combinations of valves and receivers. A poor design of receiver giving a hopeless performance with poor valves, may perform in a more cheerful fashion when good valves are used, and an excellent design of receiver may be quite ruined by poor valves. In spite of such a statement it is possible to state that given a receiver of recognised make fitted with valves also of a recognised make, a standard of reception may be arrived at for any style of receiver carrying so many valves. There are a dozen different designs in receivers on the New Zealand market which, if lined up together under identical battery power, would give a performance which would be practically equal so far as picking-up propensities are concerned. It can be stated quite de-

initely that any style of receiver having the same number of valves which showed a greater signal strength could only do it at the expense of sacrifice of tone or simplicity of control.

FOUNDATIONS MUST BE RIGHT.

These remarks have been made with the object of showing that there is a foundation for the statement that, given normal receiving conditions, a medium aerial of thirty or forty feet high, a six-valve set can be expected to give a performance which should include all the year round reception of Australian and New Zealand stations anywhere in New Zealand and should also bring in American and Japanese stations under good conditions of static interference.

That sentence "good conditions of static interference" is the usual fly in the ointment.

These remarks are being purposely made pessimistic, so far as real distant reception is concerned, in order to try and dispel some of the illusions existing in the minds of many people to-day.

The prospective buyer of a multi-valve set who has had his fancy tickled by the idea of sitting back with his feet on the mantelpiece every night and being entertained by the subjects of Uncle Sam and the Mikado of Japan must alter his perspective vastly or be grievously disappointed even after he has purchased the most expensive outfit obtainable in the country.

Admittedly there are hundreds of sets in New Zealand to-day which are regularly getting American programmes, but there are hundreds more which don't and never will until they shift to a more receptive locality. There are dealers who guarantee all sorts of performances for their equipments in their advertisements. If taxed with the palpable impossibility of their equipments coming up to such a standard they will cheerfully tell the same

story that Adam did about Eve and the apple—the other fellow started it. If John Citizen goes to number one dealer and is told that his set will get America, and dealer number two hesitates, many John Citizens who don't know better get suspicious of number two dealer's goods. The writer of this article would advise John Citizen to give dealer number one a wide berth in future. Unless his statement of American reception is well qualified by a warning that the occasions on which he will actually get such results are more seldom than numerous, and are dependent on conditions.

MODEST CLAIMS BEST.

Take notice of the dealer who is modest in his claims regarding distance performance, but who lays himself out to give all the information he possibly can to assist towards a realisation of the factors determining successful distance getting, and who, if necessary, is prepared to refer you to individuals owning equipments of his design, and who are likely to have receiving conditions comparable with your own, in order that you may get first-hand and unbiased information.

In passing, it is worth while mentioning that when dealing with the radio trade, always look for frankness. Treat with immediate suspicion any apparently extravagant claims.

As has been said before in these columns, trust nobody but the manufacturer, distributor, or authorised agent for information or advice regarding any particular make of machine. Extravagant claims do not live up with the guarantee of satisfaction which should always be forthcoming as one of the terms of sale.

Now, to view the distance-getter from the point of view of the dealer, it is best to take the analogy of that very useful vehicle, the motor-car. The

radio distance-getter is akin to the speed fiend. The maker of a car will tune it up and demonstrate its performance at eighty miles per hour. He picks his track, however, naturally, and he doesn't attempt the test after there has been a week's heavy rain and the track is dangerous. Furthermore, he doesn't guarantee to keep the car tuned up to the necessary pitch to enable the driver to get such a speed every time the accelerator is pushed hard down. Of course, if the purchaser of the car is prepared to pay for tuning periodically it is a different matter. However, this is more or less beside the point, the main consideration being the fact that a car which has a reserve speed of eighty miles per hour is only of real use to the owner on a race track or on special roads, so far as its reaching-out propensities are concerned. The power which is able to push the car to such a speed is, nevertheless, immensely valuable in hill-climbing, etc., at reasonable speeds.

So to return to the multi-valve radio set. Given clear conditions it can be pushed to the limit, but if there is static interference or if there is a nearby broadcast station transmitting on a wavelength near to that of the distant station it is required to receive, so inevitably will the "distance" range be closed in, just as the driver of the car is compelled to slow up because of cross roads or pot-holes. As was stated at the beginning of this article, the multi-valve set will give great reliability when receiving nearby and will give what is most important of all, permanent satisfaction because of adjustability to all conditions.

In conclusion, the writer cannot resist repeating another previous remark, and that is that New Zealand listeners have learned to run before they attempted to crawl, because of the almost universal rush after the distance, which does not always cause the enchantment to materialise, when enchantment is to be had right at home, by listening to the local N.Z. stations, and thus dodging the bughbears of radio in the shape of static and fading, etc.

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