

THE RADIO RECORD

Published Weekly

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

Vol. II., 53.

WELLINGTON, FRIDAY, JULY 19, 1929.

An Ever-Growing Industry.



BUSINESS man is exceedingly fortunate when his experience and interests are bound up with an ever-growing industry. That piece of good luck is enjoyed by the trader who is engaged in the Dairy Produce Export Industry of New Zealand, whether in the Dominion or in the Home country.

A few figures will demonstrate incontrovertibly the great expansion that is taking place in the export of New Zealand butter and cheese to the United Kingdom. In the year 1913 (by selecting this year the abnormal war years are excluded), the total exports of butter were roughly 250,000 cwts., whereas, in 1928, they amounted to over one and a quarter millions, that is, five times as much, representing an increase of 500 per cent. In 1913 the total value was £1,350,000 and in 1928 it was £10,274,000, or nearly eight times as much—an increase of 800 per cent.

In this connection it is important to consider the figures with regard to Denmark, as this small country still heads the list of exporters to the United Kingdom. In 1913, Denmark sent to the United Kingdom, 1,800,000 cwts., and 1928, 2,000,000 cwts., this increase representing only 50 per cent. expansion, as against New Zealand's 500 per cent.; that is, the Dominion's rate of increase on this comparison is ten times as large as that of Denmark.

THIS remarkable increase in New Zealand exports has a significant bearing upon the question as to whether the quality of New Zealand butter is, on the whole, slipping back. If the consumer be the final arbiter of quality, as broadly speaking we think he is, then we have this fact to recognise; the consumer absorbed, in 1928, five times the quantity of New Zealand butter than he did in 1913, and, as prices have been well maintained in this greatly increased supply, it is difficult to believe that the quality has deteriorated.

Again, it is difficult to think that the quality has gone back in the face of the many improvements that have taken place in the manufacture of butter for the Home market. Everywhere I have gone, and I have visited a large number of the principal factories, I have been shown better machinery for production, the latest scientific apparatus being eagerly sought after by the producer, while on the farms as well, there is a considerable development of improved methods.

It is almost incredible, with all this attention to the latest inventions for the production of the best product possible, that the quality should actually have gone back. My own view is that on balance the quality now is an advance upon former years. It may be true that this improvement is more from the bottom

FROM 3YA, on July 12, Mr. C. J. Pollard outlined the standing of New Zealand Dairy Produce in the Home Country. Mr. Pollard has had a long connection with all matters relating to the marketing of this important product in Great Britain and his address followed a course different from any yet delivered. Reproduced below are the main features of this talk.

upwards than from the top, but even if this be so, it is still, we think, true that the average quality is higher than it was.

THE figures in regard to cheese, although not quite as striking as in the case of butter, are also very remarkable. Taking the same two years for comparison, we find that in 1913 the total export of New Zealand cheese to the United Kingdom amounted to roughly, 550,000 cwts., while in 1928 it had grown to 1,600,000 cwts., or nearly three times as much; that is, an increase of 300 per cent., of which the value in 1913 was £1,900,000, and in 1928, £7,600,000—an increase of 500 per

cent. In talking of butter we use Denmark as a test, in cheese we take Canada; and in comparing the New Zealand export of cheese with that of Canada, the results are even more astounding.

The New Zealand tonnage, as before mentioned, shows an increase of 300 per cent., while the Canadian export in 1928, as against 1913, not only marks no increase, but is actually a decrease of 30 per cent., being 920,000 cwts., as compared with 1,300,000 cwts. in 1913.

The value of the New Zealand export is $4\frac{1}{2}$ times greater in 1928 than in 1913, and that of Canada more than one-sixth less. It is also a matter for congratulation that the export of New Zealand cheese to the United Kingdom altogether overtops the export from any other country in the world. Surely these are very striking facts. New Zealand has very much to be proud of, and as far as observation of the ruling conditions out here indicates, there seems no reason why New Zealand should not only maintain this supremacy, but should further increase it.

ONE word more on the question of direct shipments to the ports in the west and north of England. It is, of course, desirable that the fullest possible use should be made of other centres of distribution than London, but it must be recognised that London is far ahead of other markets as a recognised market at which buyers and sellers congregate to a far greater extent than elsewhere, not only London and southern county traders, but also from the west and Ireland, the east, the midlands, the north and Scotland, and even if London is not personally attended, the agents of the London importers stationed throughout the United Kingdom are active in catering for the requirements of buyers in their respective districts. London and the southern counties have also an enormous swallow in feeding the vast population of their inhabitants.

IT must not be forgotten that the population of Greater London itself numbers over eight million people, so that although the outlying centres must be studied in every way, it still remains true

—Continued on page 2.

The Dairy Industry

Wireless Telephony

(Concluded from front page.)

That the outlet in these directions is limited, and is far more spasmodic in its demand than that of the London market.

The West of England, owing to its geographical nearness to Ireland, is bound to take large supplies of Irish during the season, while the north, owing to its nearness to Denmark and the Baltic ports, is a natural home for Danish and "Cask" butter.

THE frequency per second corresponding to the lowest note on the piano is 26.6, and that of the highest note 8192.

THE middle C note on a piano represents a frequency of 256.

IN shortwave work the high-frequency choke is of paramount importance, so only a good quality component should be used.

Tests with Great Britain

THAT the Australian postal authorities have not given approval for the carrying out of wireless telephonic tests with Great Britain has held up the establishment of a commercial service between the two countries. In an interview lately Mr. E. T. Fisk, managing director of Amalgamated Wireless (Australasia), Ltd., set out the position.

"A.W.A. completed a station in Sydney nearly two years ago, for the purpose of conducting wireless telephonic experiments with Great Britain and other countries," he said.

"It was designed by our Australian workmen, and made in our own Australian workshops. It proved highly successful, both in two-way wireless

conversations, and overseas broadcasting.

"We built a similar station in Melbourne, which has also been successfully employed for overseas broadcasting.

"I was anxious to employ the bigger station in Sydney for experiments with Great Britain, but although I tried the British Post Office, the British Broadcasting Corporation, and the Marconi Company, I could not get any of them to co-operate in the tests. I think that, at that time, there was probably some prohibition against such tests on the part of the British Post Office.

"The first important use which was made of the new station at Sydney was for Empire broadcasting, and in this regard we gave a lead to the Empire. We succeeded in transmitting Australian programmes and speeches so effectively that they were re-broadcast throughout Great Britain. I also arranged for the same thing to be done from Melbourne, and since the first transmission the reception in Great Britain of programmes from 2FC, Sydney, and 3LO, Melbourne, has been a regular feature.

"After waiting some months, hoping to experiment with ordinary wireless telephone conversation between Australia and Great Britain, but failing to gain the co-operation from that end, we commenced tests with America.

Spoke to New York.

"AT various intervals we have had excellent two-way conversations with a station near New York. On one occasion a number of prominent Press representatives in Sydney conversed for two hours from my office with friends in America. Similar experiments were conducted with Java, Amsterdam, and Berlin. We have recently erected an A.W.A. wireless telephony station at Suva, and have had excellent conversation direct from Sydney.

"We have not so far been able to conduct tests with Great Britain, but, judging by Press statements, the British Post Office appears to be ready and willing to co-operate, and have been for several months past.

"I understand, however, that they are now awaiting the approval of the Australian Post Office. This, for some unknown reason, has not yet been given.

"There is a public wireless telephonic service operating between Berlin and Buenos Aires, and a few days ago I had a conversation from my office in Sydney with one of the principals of that service in Berlin. He spoke from his own house, and told me that conversations with Sydney were every bit as clear as those with Buenos Aires. This was a tribute to Australian-designed and built stations."

London-New York Service.

The length of time that will elapse before wireless telephony can be commercially used between Australia and Great Britain will depend on experiments, which have yet to be started. The best wavelengths, power required, and best times of the day for communication, would have to be ascertained. It is impossible to say how long the tests will take, or what the results will be.

Until the tests are carried out, it is also impossible to say what the cost to users will be. The London-New York service is now being successfully used commercially. The original cost of this service was £15 for three minutes' con-

New Direction-Finding Instrument for Naval Vessels

A NEW wireless direction finder has been developed by the Research Department of the Marconi Company for use primarily on all classes of naval ships as a navigational instrument.

Experience has shown that a wireless direction finder, to meet naval requirements, must be capable of taking accurate bearings from a continuous wave, interrupted continuous wave, spark or telephone transmitters over a wide range of wavelengths.

The new type equipment comprises three units—the frame antenna, the radio-goniometer, and the tuner and amplifier. The frame antenna, working on a well-known principle, consists of two fixed loops totally enclosed in strong metal tubes mounted on a pedestal. This is rigidly fixed to the deck and the leads to the receiver are well protected by being taken through the centre of the pedestal.

In the receiver the tuner and amplifier are combined as one compact unit and cover a range of from 300 to 4000 metres. To obtain this, wave-range three sets of coils are employed and by means of a single switch mounted on the front of the receiver any one set of these coils can be switched into circuit. An indicator shows which coils are in use and their wave-range.

Three shielded valves are used to provide high-frequency amplification and four tuning condensers which are calibrated in metres are used to tune the grid circuits of the high-frequency and detector valves. Each of these condensers can be adjusted independently, but a common control enables them to be varied over a range of approximately 10 per cent. on either side of the wavelength to which they are set.

For reception of continuous waves a separate heterodyne mounted in the amplifier is employed. In all seven valves are used, three high-frequency amplifiers, one detector, one note magnifier, one local oscillator generator, which can be used as an additional note magnifier if required, and one coupling valve.

In order that the "sense" of bearings over the whole waveband of the receiver can be obtained with the use of only a short vertical aerial a stage of valve amplification using the coupling valve is employed for the vertical component.

The arido-goniometer is constructed as a separate unit which can be fixed in any convenient position. Two calibrated scales from which the bearings are read are mounted on the face of the unit. The inner scale is fixed and bearings taken from this scale are relative to the centre line of the ship. The outer scale can be rotated until the figure indicating the ship's true course is at the top of the dial opposite the zero mark of the inner scale, and then, if the ship is steady on her course, the bearings read from the outer scale are true bearings.

versation, but it has since been reduced to £9 or £10.

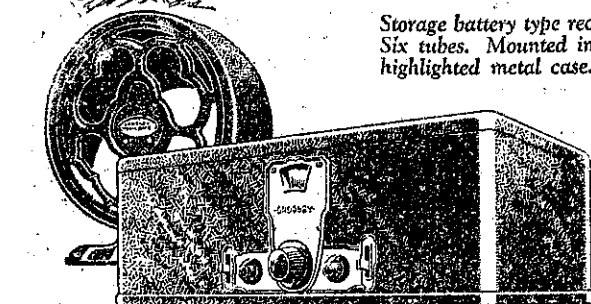
This new wonder of wireless is proving a boon to business men who desire urgent communication with persons thousands of miles away.

Will the Airplane replace the Automobile?



WE THINK NOT. Each has its own function.... each satisfies a different demand. So it is with Radio; the A. C. set best serves those who have the service of electric power line current, but to meet the demands of those to whom radio enjoyment is indispensable, to whom power line current is unavailable, or an A. C. set impractical of use, a radio receiver of storage battery type, such as the BANDBOX, has been created by Crosley to meet adequately the most exacting demands.

Storage battery type receiver. Six tubes. Mounted in gold highlighted metal case....



CROSLLEY

6 TUBE HETERODYNE
The BANDBOX

£31/10/-
COMPLETE

MAIL
COUPON
NOW!

ABEL, SKEETON, LTD.,
Wholesale and Retail Merchants,
27-29 Customs St. E., Auckland.

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

Name
Address

The Mystery of the Ether

Connection with Radio Activity



THE wave theory of light built up by Young, Fresnel and Hukghens, disputed by Newton, and re-established on a firmer foundation by Clerk Maxwell, postulates the existence of a tenuous medium, sometimes stated to possess specific mechanical properties such as density and elasticity. Actually it appears to be impossible to define its qualities in any strictly mechanical terms. Its nature is too fundamental to be compared consistently with any other known kind of matter. It is assumed to occupy all space, even inter-penetrating molecules of the most compact material substance.

"Action at a Distance."

THE phenomena of attraction, repulsion and induction demands existence of an all-pervading medium to justify the otherwise inexplicable "action at a distance."

Clerk Maxwell's Theory.

IT would obviously be too highly complicated and artificial to imagine that two such universal media should exist simultaneously and independently of each other. Nor is it necessary to do so, for Clerk Maxwell has shown on mathematical grounds that the properties necessary to explain the transmission, reflection and diffraction of light rays are just those necessary to produce the known effects of magnetism and electricity. In short, he showed that the electro-magnetic medium must be identical with the luminiferous ether.

It is known that light vibrations originate from the oscillations of charged particles (electrons) of incandescent matter, and so give rise to alternations of electric and magnetic fields. Similarly the rapid movement of the electrons constituting the oscillating current in a transmitting aerial set up wireless waves in the ether.

Matter and Ether.

THE ultimate constitution of matter has been resolved into terms of protons and electrons, which are simply positive and negative charges of electricity. Since electricity and magnetism are both held to be different aspects of the same fundamental happening, namely, a definite stress or strain set up in the ether, the very existence of matter itself is thus made dependent upon this omnipotent medium.

From another point of view the development of wireless science in general and broadcasting in particular, has brought the existence of the ether into common or everyday practical experience. In short, whichever way one turns, the question of etheric energy seems to be a focus of modern scientific interest and enquiry.

There are, of course, schools of thought which set up various alternatives to the ether. For instance, the quantum theory as developed by Planck, together with other recent discoveries connected with the study of radio-activity and molecular physics, appear to offer fresh evidence in favour of a corpuscular theory of radiation similar to that advocated long ago by

Newton, and afterwards discarded in favour of the luminiferous ether.

According to another theory put forward by Thomson, the electro-static and electro-magnetic "lines of force" imagined by Faraday are actual realities, and consist of "strings" which are attached to the electric charges emitting radiation, and along which

driven to doubt first one maxim and then another until they finally cast it all aside and decided to rely entirely upon their own practical investigations.

In exactly the same way, practical electricians, particularly those who are interested in the development of wireless science, are realising more and

Is there such a medium as the ether which continues to occupy a most prominent part in modern scientific discussion and speculation? The latest arguments for and against this intangible "something" are laid out in this fascinating article by J. C. Jevons in "Modern Wireless."

vibrations such as wireless waves are transmitted.

Modern Speculations.

FINALLY, Einstein proposes to replace the conventional "ether" by a four-dimensional space-time continuum in which space and time are inextricably mixed.

Here the known properties of the electro-magnetic and luminiferous ether are replaced by "fields" or "warpings" of space.

A "field" which gives rise to purely magnetic action when viewed from one set of co-ordinates appears as a purely electric field when viewed from another set of co-ordinates in relative motion to the first.

In other words, electricity and magnetism are identical in substance, but have different appearance according to the standpoint of the observer.

For instance, a unit charge of electricity, insulated and at rest in space relatively to an observer, possesses all the properties associated with static electricity. If, however, the same unit charge is moving relatively to the observer at the speed of light, it acquires all the known magnetic properties of an ordinary electric current.

"Etheric Energies."

PROFESSOR EINSTEIN has quite recently developed his "field" theory to cover the known laws of gravitation, thus fusing the mechanism of electro-magnetism with that of gravity in one comprehensive generalisation.

Sir Bampfylde Fuller now enters the arena to provide us with further provocative speculations. In his book on "Etheric Energies" he investigates the significance and reactions of the medium, which he conceives to be the vehicle not only of radiant energy such as light and heat, magnetism and electricity, but also of gravity, movement and sound.

The author draws an early distinction between text-book axioms or standard theory and the results so often secured by practical experiment. In this connection he points out that the brothers Wright—the pioneers of aviation—having set out with absolute faith in existing scientific data, were

more that precise dogmatic definitions and explanations are often irreconcilable with increasing knowledge. In short, when exploring the unknown one must learn to rely more upon experiment and less upon mere doctrine.

Space and Time.

REGARDING the doctrine of Relativity, he says: If the movement of a thing is simply a change of place in relation to another thing, its measurement is not prejudiced by the movement of the latter. We are simply concerned with relative positions, and the two movements can be compounded.

On the other hand, if movement affects spacial dimensions, time must enter as a factor of space, combining with it to make a "space-time continuum." This the author states is in direct conflict with all experience. He cannot conceive of the mingling of space with time, and regards the uncomprehending acceptance of the doctrine of Relativity as one of the most disconcerting facts in the mental history of our time.

It is clear, he holds, that all substance is pervaded by ether—ether is present everywhere in the material world—for heat and light are transmitted terrestrially as well as celestially. Light and heat from a fire cross a room as those from the sun traverse inter-stella space. The method of transmission must be the same.

Etheric vibrations must be assumed to be devoid of thickness. They radiate spherically, but, as they spread, their intensity diminishes only in accordance with an inverse square law, and not inversely as the cube of the distance. The sphere of distribution must therefore be composed of radiating lines which possess superficial area but not thickness. For if they did possess thickness, the diminution of the intensity would be greater than that given by the inverse square law. The conception is also in accord with the fact that etheric movements can cross one another without interference.

All ether energy is in the nature of a vortex. When a material object, such as a wheel, is in rotation, it produces a centrifugal force from its centre outwards, because its circumference moves more rapidly than its centre. A

liquid in rotation may act in a contrary fashion, developing a centripetal or inward force. A whirlpool, for example, draws things strongly inwards towards its centre. This tendency increases as consistency of substance diminishes.

In a whirlwind the resultant force is violently inwards. It is justifiable, therefore, to assume that an etheric vortex would develop a very powerful indrawing force.

Ether Vortices.

IMAGINE that the rings of electrons and the central nuclei which form the ultimate basis of matter are ether vortices, one within the other, each extending its influence spirally across the surrounding ether so as to produce an indraught. The extended overlapping influence of such ether vortices would then attract adjacent atomic systems, and so give matter its coherence.

The radiation of heat is due to an unbalancing of these vertical forces, created by friction, or electrical action, or other external agency, and a consequent streaming away of heat energy. Light radiation is treated on similar grounds, light being stated to differ from heat only in that its effects do not endure after the withdrawal of the etheric energy that causes them.

Miniature Solar System.

COMING to electricity, the author points out that matter is conceived by modern science as a miniature solar system in which variously grouped circles of electrons revolve around central nuclei, as planets revolve around the sun. The nuclei differ in nature from the electrons; their essential element is a proton which possesses peculiar properties of its own.

He conceives both electrons and protons to be vortices, rotating in different directions, and the orbit around which the electrons move to constitute a third vortex. Positive electricity is then identified with the proton vortex, and negative electricity with the ring or orbit vortex of the electrons.

An electric current is the result of a disturbance in a balanced system of such vortices, leading to a rapid interchange of adjacent vortices and the final detachment of a core vortex at the end of the conductor.

When an electric discharge takes place across a spark gap, a series of very rapid oscillations occurs, the effect of which is to throw off a stream of broken spiral vortices alternately revolving in contrary directions, according to the direction of the momentary current which generated them. These fly off into space in all directions, and so form what we are accustomed to think of as electric waves.

Polarisation.

These spirals may travel outwards in loops progressing in a sidelong fashion, or after a time may change their mode of progress and advance face forwards like a screw. This corresponds to known alterations in the polarisation of transmitted wireless waves.

It is not possible to follow the author further in his conception of (Concluded on page 4.)

RADIO

Here is the latest and
most modern knowledge

"Modern Wireless"

By Robert W. Beare

Know more about
Radio—"MODERN
WIRELESS" will
teach you—

All the most recent discoveries and developments, the knowledge newly gained by the world's foremost radio engineers is incorporated in "Modern Wireless." It brings you right up-to-date—gives you a mastery of radio and its principles, that you could gain otherwise only by years of intensive study. No matter how much you already know, "Modern Wireless" will teach you more.

The work contains valuable introductions by Arthur Burrows and Capt. Eekersley, full-page plates, keyed diagrams and easy "how-to-do-it" pictures. It is the most complete outline of the evolution of radio broadcasting.

It will show you how to improve results from sets already installed—how to build receivers—nothing is missed, it covers the whole subject, educative for the novice in its clear simple language, yet helpful to the practised experimenter and specialist.

Learn more about "Modern Wireless." Clip the coupon below, NOW!

You can study
while you pay.
Deposit 5/- and
make small
monthly instal-
ments.

FREE—
An Illustrated Booklet on
"Modern Wireless" is yours
for the asking.
CLIP the COUPON BELOW

JAMES JOHNSTON, LIMITED,
Publishers, 217 Princess Street,
DUNEDIN.

Please send me your Free Illustrated Booklet on "Modern Wireless" and particulars as to your offer to deliver the complete set of three volumes at once on receipt of the first payment of 5/-. The balance to be paid in a few monthly instalments.

Name

Address

(Post this coupon in an unsealed envelope, stamped 3/4d.)

K10

Children's Sessions

FROM 1YA.

TUESDAY, JULY 23: Once again we spend the Happy Hour with Uncle George, who will have cousin Jeff with him, playing the piano.

WEDNESDAY: To-night Uncle Tom has cousins Kirk and Joan who sing duets so sweetly together with him. There will be stories and jokes as well.

THURSDAY: Gather round to hear what Peter Pan has for this evening—catches, jokes, and conundrums, and, of course, musical items from cousins.

FRIDAY: Nod and Aunt Jean invite all the little ones to join them for a Happy Hour on Friday. More verses from Aunt Jean and Maori songs from new cousins.

SATURDAY: How do you do, Radio Family? Cinderella hopes all well, and ready to join in the fun, and to listen to the stories and songs that are to be heard from 1YA.

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

FROM 2YA.

MONDAY, JULY 22: Uncle Jeff will be here, so young listeners will have a happy hour in Radioland with Cousin Eva and all her little friends.

TUESDAY: Uncle Jim with greetings and stories, and the pupils of Mrs. W. G. McCartie to help him with their merry tunes and songs.

THURSDAY: Uncle George, Cousin Dorothy, with Vibraphone solos and songs, and Cousin Dick with his merry bagpipes will entertain.

FRIDAY: With Big Brother Jack and Robinson and Cousins from Chilton Street, St. James's School, Lower Hutt, coming to the Studio to-night, so a treat is in store for Radioland.

SATURDAY: Uncle Toby and Aunt Gwen with the children's friend, Cousin Zac, will have cheery tunes, stories and greetings for all little folk this evening.

SUNDAY: The Children's Song Service will be conducted by Uncle George, assisted by the Church of Christ Sunday School Choir.

3YA SESSIONS.

MONDAY, JULY 22: Scatterjoy spreads sunshine softly over the shadow, While Merry Maids murmur in music so mellow.

WEDNESDAY: Mother Hubbard humming her healthful hush-a-byes, Uncle Frank finding fun as fairies flutter by.

THURSDAY: Uncle John joking in jingles so joyous, While Avonside choristers chant carols in chorus.

FRIDAY: Storyman spinning his sagas and song, And Sandman spreads slumber, stepping softly along.

SATURDAY: Aunt Pat playing pretty pianoforte pieces, Peterkin's pirates pleasing nephews and nieces.

SUNDAY: Sunday Song Service softly steals o'er the air, Such sweet, soothing singing should smooth away care.

NEWS OF 4YA.

MONDAY, JULY 22: The Knox Boys' Orchestra, out on their own, With a chap that can play the merimbaphone, One with a fiddle, and another with a flute, And the chap that plays the saxophone, you'd never want to shoot.

TUESDAY, JULY 23: Then the little gadget, for, don't you see, Brother Bill is joking with the fam-i-lee, The programme is going on from 6 till 7 o'clock, And Ken and Ray and Lila will help to give a pleasant shock.

WEDNESDAY, JULY 24: They've been at 4YA before, But does anybody care about that? Miss Mollie Andrews's pupils? Sure, We'll all listen in. That's flat.

FRIDAY, JULY 26: Said our Aunt Nita, "No vol could be sweeter, I've got some dandy pupils to recite at 4YA." Said Big Brother Bill, "Here's a night that you can fill, And the family will be so glad they won't know what to say."

SATURDAY, JULY 27: Forbury School were coming before, But the Inspector came a'knocking at their front door, He's the sort of fellow that you can't shoe away, So they're coming down to-night to 4YA.

The Mystery of the Ether

(Concluded from page 3.)

energy is propagated through space, nor to touch upon many other aspects of this fascinating volume. Sufficient has, however, been said to show that, although he may not always succeed in carrying conviction, the author has undoubtedly tackled his subject along original and thought-compelling lines.

His book is one that should be on every advanced radio student's bookshelf.

IT has been shown that in order to obtain real bass notes with a horn of the conical type, a 20ft. horn would be necessary.

RADIO is making great strides in Sweden, and an order has recently been placed with an English company for the supply of a broadcast transmitter for Stockholm. This is to be designed for 60 kw. in the aerial.

ACCORDING to the "Wireless Age" a giant high-voltage rectifier, which is now practically complete, has been sold to Russia. It gives a power output of 750 kw. at a voltage of 15,000, and works on the mercury-vapour principle. Eighteen rectifying valves are used to supply current to the anode of a radio transmitter. A contract has been made for the supply of a large amount of radio equipment, of which the above-mentioned rectifier is part, and the other items include a 20-kw. short-wave telephony transmitter, and several other high-power receivers.

RADIO developments are taking place very actively in Russia, and, as evidence of this, a party of Soviet engineers have gone to New York to engage in technical conference with the engineers of the Radio Corporation of America. It is anticipated that a similar return visit will be made by American engineers to Russia in 1930.

A NEW broadcasting station has been set up at Bratislava, in Czecho-Slovakia, with a power of 12 kw.

BROADCASTING affairs in Italy are controlled by the Italian Broadcasting Company, and the latest addition to the system is a new short-wave broadcast transmitter for communication primarily with Italian colonies. A contract for this station has been secured by the Marconi Company, and the design will be generally similar to that of station 5SW.

THE Marconi Company has also secured the contract for short-wave telegraphy and telephony transmitters on behalf of the Belgian Government. This station is intended for communication between Belgium and the Belgian Congo and also between Belgium and South America.

A GREAT deal has been spoken of the Prague wave-length scheme and about the recent conference at which the B.B.C. Chief Engineer was present. At this conference, which ended on Saturday, April 13, the agreement of various European Governments was obtained to a broadcast wave-length plan. This is known officially as the Prague Plan, and it follows upon decisions at the previous Washington Convention. According to the latter, broadcast wave-lengths may be dealt with only by Government action.

ACCORDING to a London paper, 4000 television sets are now being manufactured by the Baird Television Company in preparation for the series of experimental broadcasts which may with luck begin this month, or, if not then, when the Potter's Bar regional station is complete.

THE Soviet authorities, according to a message from Riga, have recently started a new propaganda wireless service in China from the station at Khabarovsk, which is situated on the Manchurian frontier. Any listeners who happened to pick up this station will probably have heard the propaganda broadcast, as the talks are usu-

ally sent out in Chinese, English, and Korean.

FRANCE is going to institute State control of broadcasting stations in France other than those belonging to the Government. This new radio department will be under the Premier, and, according to the "Scotsman," users of crystal sets will pay a fee of 3s. 4d. a year, while 10s. will be charged to listeners in possession of valve sets. To-day there are about 800,000 listeners in France, of which 600,000, it is estimated, have crystal sets.

THE B.B.C. has built a room at the Brixton experimental station for the sole purpose of measuring sound. This room is absolutely square, and has no windows or fireplace. Heavy felt and curtains of cotton waste drape the walls and ceiling. In fact, the room is dead in more senses than one.

IT is understood that a Beam wireless station is to be erected in the new Vatican city, and that on great occasions the Pope himself will broadcast to the world. The Roman Catholic community is taking a great deal of interest in this new departure.

IT is said that in the United States, where radio is in the hands of private enterprise, one particular concern spent a million pounds in a year on programmes. This compares rather curiously with the 1927 expenditure of the B.B.C., which was only £500,000. American listeners get their programmes for absolutely nothing, whereas listeners in this country provide the cash for everything connected with broadcasting.

A MESSAGE from Minneapolis states that General Harbord delivered an address referring to the merger of cables and radio in Britain. General Harbord stated: "This new combined British communications interest will affect American relationships in every part of the world. There will hardly be a port or principal city on the planet not in reach by British communications. American trade in every quarter of the globe cannot but be profoundly affected. General Harbord deplored the White Act of 1927, which forbids the purchases of radio systems by cable companies and vice versa in the United States.

THE last quarter of 1928 produced an increase of 301,314 listeners in Germany, making a total of 2,635,567 on January 1, 1929. Bavaria having a scattered peasant population, has inaugurated a scheme designed to increase listeners. Every listener who canvasses a new listener and gives his name and address to a certain radio paper gets a money prize equivalent to the value of a month's radio license.

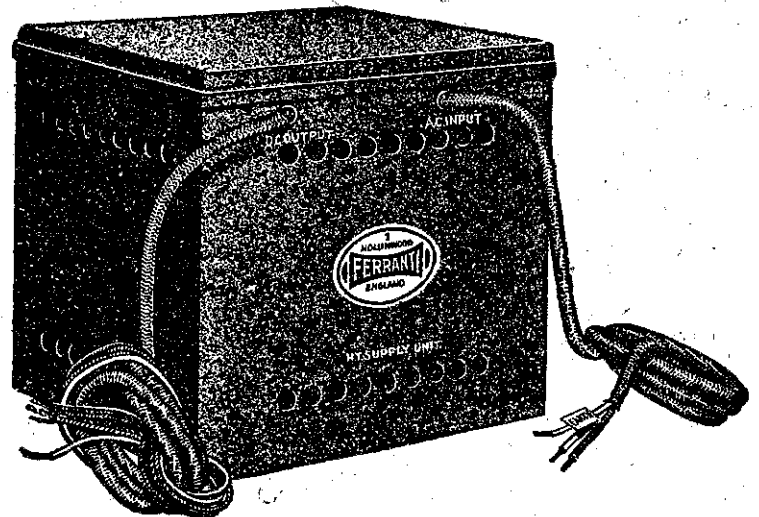


adjust itself to any desired wave-length. "I think not," states an English writer. "I should say that experts in this country are aiming at less fantastic things."

THERE is so little sale for L.F. amplifiers as separate units, states an English magazine, that it is refreshing to learn that Prof. J. Gray, of Columbia University, is using them for the measurement of the energy of living tissues. If his scale has a zero mark, I offer to lend our office boy as a subject to check the calibration. I never saw so much tissue with so little energy. Reading further, I note that the measurement is really one of the heat energy of the tissues. On that basis, our office boy would burst the apparatus if he were asked to tear off yesterday's sheet from the calendar.

ACCORDING to a report the General Manager of the Austrian Broadcasting Co. informed a Vienna club that effort was everywhere being made to develop a receiver with automatic and highly selective powers, which on the pressure of a button will instantly

THE FERRANTI H.T. SUPPLY UNIT



A WONDERFUL ACHIEVEMENT

Unvarying Supply
200 Volts 100 M.A.

A. D. Riley & Co. Ltd.,
Auckland Wellington

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

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

The New Zealand Radio Record

P.O. BOX. 1032, WELLINGTON.

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

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

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

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

WELLINGTON, FRIDAY, JULY 19, 1929.

RADIO EXHIBITIONS.

INTEREST in both Wellington and Dunedin is concentrating upon the forthcoming Radio Exhibitions. Arrangements in each centre are well in hand, and those responsible feel assured of attaining definite success in comprehensive displays of the latest radio apparatus calculated to interest the public. The advance that radio has made in the technical field of late has been remarkable, particularly since the development of the all-electric set. This more than anything else of recent years has popularised radio, in providing a receiver that is, to a greater degree than ever before, fool-proof. Where electricity is available, the A.C. set is enjoying a wonderful popularity, and the indications are that this will continue. Especially in rural districts is it proving popular. The battery occasions some little trouble, which many wish to avoid. In certain districts the battery has a sphere of usefulness with which nothing will interfere. The battery-operated set will not disappear from radio, because it offers definite advantages, and will continue in spite of the A.C. receiver. Each type of set has its place, and in the Exhibition about to be staged the best in each field will be submitted for the consideration of the buying public.

THE Wellington Exhibition will be opened by the Postmaster-General, the Hon. J. B. Donald. Mr. Donald has already proved himself a fluent speaker over the air, as he was broadcast from Station 1YA on the occasion of the opening of the Auckland Winter Show. That he is specially interested in radio Mr. Donald has already shown, and we think the cause of radio in this Dominion will not suffer at his hands.

SOME letters of special interest appear in this issue in our Mail Bag Corner. These are from listeners in the country who have felt impelled to reply to observations concerning programmes made recently by other correspondents. The striking point about these indications is the emphasis they lay upon the service that radio renders to the country dweller.

THIS, too, is the note that has struck the Editor-Announcer of the Radio Broadcasting Company as a result of a recent comprehensive tour of the Dominion, carried out by himself in connection with the important relays made recently by the Company from various provincial centres. Radio has a special appeal for the country dweller,

C. R. RUSSELL M.Sc.,
M.I.R.E., A.M.I.E.E. (Lon.)
CHARTERED ELECTRICAL
ENGINEER.

Designs and specifications for hospital and large radio installations. Design and testing of radio receivers, transmitters and apparatus. 194 Oxford Terrace, Christchurch. BOX 606.

HOW TO USE SYDAL

Sydal is a scientific compound, and it is concentrated. To get the best results very little is required. Before washing your hands take a very small quantity of Sydal out of the jar, and rub it very well into your hands. Then wash them in the usual way. Sydal is non-poisonous and safe on the tenderest skin.

and it is interesting to know the emphasis that these typical country correspondents lay upon their enjoyment of it, in contrast to what they regard as the pin-pricking criticisms of essentially city dwellers.

THIS point of view is of particular interest in face of the progressive policy announced last week by the Company in its plans for extending service to country dwellers. By either A.C. sets or battery sets, it is now possible for practically every corner of the Dominion to derive a high degree of service from the existing YA stations. The technical efficiency of that service would, of course, be increased by suitable relay stations established at strategic points; and that objective, we take it, will not be lost sight of by the Company. Rather it will be brought nearer of accomplishment as the numbers of distinctly rural listeners increase. Testimony such as is afforded by the letters of correspondents this week is valuable as a corrective of the slightly one-sided view that may develop on the part of city listeners.

Broadcasting from Radio Exhibition

2YA Prepares Interesting Special Programmes

ONE great attraction at the Radio Exhibition which will appeal to visitors will be the actual performance of programmes for broadcasting. This will be done in full view of the public, so that visitors to the exhibition who have never before witnessed the "staging" of a radio programme, will be able to see how it is done. They will also have the opportunity of seeing many artists who have so far been known to them only over the air. The full programmes will not be broadcast from the Town Hall, only sections, thus giving time for visitors carefully to inspect the exhibits.

THE OPENING NIGHT.

THE official opening of the exhibition will take place on Thursday evening, the ceremony to be performed by the Postmaster-General, the Hon. J. B. Donald.

The Wellington Municipal Tramways Band will supply the instrumental items of the evening's entertainment, the vocal portion of the programme being provided by the Welsh Choir (who provided listeners with some very fine choral numbers on St. David's Day), and the following artists: Miss Nora Gray (soprano), Mr. Ernest Short (baritone), Miss Hilda Chudley (contralto), and Mr. G. Austin Blackie (tenor). The popular entertainer at the piano, Mr. E. A. Sargent, will be heard in several numbers. It is the intention of the station to give half-an-hour's programme from the exhibition and then switch back to the studio for approximately twenty minutes to give the visitors a chance to look at the various exhibits. The programme during the Radio Exhibition will commence at 8 p.m. and conclude at 10.30 p.m.

FRIDAY'S PROGRAMME.

ON Friday evening a further relay from the Radio Exhibition will be carried out, the programme on this occasion being furnished by the Wellington Harmonic Society and the 2YA Orchestra, assisted by Mr. Will McKeon, who will recite two humorous numbers. The Harmonic Society, which performs under the baton of Mr. H. Temple White, will present a varied programme of part songs and vocal solos, the soloists being Miss P. Liddell (soprano), Mrs. W. J. Coventry (contralto), Mr. E. W. Robbins (tenor), and Mr. E. McLellan (bass).

SATURDAY'S RADIO VAUDEVILLE.

FOR Saturday night, which will be the closing night of the Radio Exhibition at the Town Hall, a special vaudeville programme has been arranged.

The artists contributing to the programme will be the Melodie Four, Mrs. Winifred Birch-Johnson, Mr. Len Ashton, Mrs. G. Reeves, and Mr. James Connell. The Melodie Four will sing as concerted numbers Holloway's "Cornfields Medley," "Mosquitoes" and the ever-popular "Drifting and Dreaming." Mr. Sam Duncan (tenor) will sing Purcell's "Passing By," and baritone solos by Mr. James Connell will be "Like Stars Above," and "The Gay Highway." Mr. Frank Bryant (tenor) will sing "The Joy Bird," and Mr. W. W. Marshall, "Stonecracker John." Mr. Len. Ashton will render (by request) "Nelly Bly" and "Our Village Concert," a well-known Mel. B. Spurr number. A further item of interest to be given by this artist will be "Like the Big Pots Do," a number from the pen of Tommy Handley, the well-known B.B.C. comedian. Mrs. H. G. Reeves's banjo items will be "Footlight Favourites" and a "Popular Song Medley" arranged by herself.

The items by 2YA Orchestra will include Friedman's "Slavonic Rhapsody," a selection from the musical comedy "Sunny," a novelty number, "In a Bird Store," a flute and clarinet duet by Messrs. Brown and Langtry (members of the orchestra), Winter's arrangement of marches known as "Martial Moments," and several dance novelties. A feature of the programme will be Mrs. Winifred Birch-Johnson's whistling solos and comic songs. Mrs. Birch-Johnson's items are always bright and entertaining.

Country Appreciation

The Great Joy of Radio

AS readers of the "Radio Record" are aware, Mr. J. Ball, editor-announcer of the Broadcasting Company, has recently made a tour of the Dominion for the purpose, primarily, of meeting listeners in the provincial districts, and, incidentally, of conducting relay broadcasts from Invercargill, Timaru, Hamilton and Whangarei. Mr. Ball reports that one of the most pleasing and outstanding features of a most interesting tour has been the almost innumerable expressions of warm appreciation of the service rendered by the company. Country listeners everywhere, he says, have expressed to him in glowing terms what many of them have not hesitated to describe as their great indebtedness to radio. "I don't think you can possibly realise all that our set has meant to us." "Radio has given us a new and wider interest in life." "We should feel utterly lost without our receiving set." "The very last thing we should think of parting with." "Believe me, radio in our home is regarded as just as much a necessity as our daily food—it's one of the very last things we should care to do without." And, in the vernacular of a way-back shepherd at whose one-roomed shack the service car pulled up, "Too right! I'll tell the world: I tune in before I put the billy on and let 'er go till I turn in, and it's great!"

"These are but a few of the gems of appreciation culled from my notebook," said Mr. Ball, "and every one of them is an inspiration. The man who could hear these country people talk about what radio means to them, and not feel thrilled by the knowledge that he is permitted to assist, even in the smallest degree, in the rendering of that service, would be sadly lacking in imagination and sentiment. Let me, in conclusion, cite just one other instance of this widespread appreciation. At the meeting of the Taumarunui Radio Society, which I addressed recently, Mr. D. H. Hall said that he had been asked by a Hikimutu settler to convey a message to me, as the representative of the Radio Broadcasting Company. The settler had had his set for two years, during which time he had been completely satisfied with the service rendered by the company. Moreover, he was of the opinion that, could the residents of the towns realise the immense benefit the country people derived from the broadcast service, they would make fewer complaints."

Exide BATTERIES

MEAN DEPENDABILITY.

Installed at 2YA Wellington.

All sizes. From 9/- each.

EXIDE SERVICE STATION

79 Kent Terrace, WELLINGTON.

Big Attractions from 2YA

Radio Pageant of Maori Race

DURING the first week in August there will be some outstanding attractions at 2YA.

The principal event will be the Radio Pageant of the Maori Race, which is to be presented on August 8. For the purpose of producing this entertainment a contingent of Maoris will come from the Wanganui district. They are busy practising and rehearsing. This entertainment will be on the same scale as was the pageant presented by 2YA in February, last year.

Featured also on the week's programme will be a talk by the Bishop of Aotearoa who recently spoke from 3YA, to the great delight of all listeners.

Two lectures, to be given by Mr. Horace S. Cottrell, of Napier, will also be truly New Zealand. Mr. Cottrell is an experienced writer and entertaining lecturer. In his first talk he will describe the gannet nesting ground at Cape Kidnappers. This is a charming story which will appeal to every listener. Mr. Cottrell's other lecture will deal with the myths and legends, as well as the historical facts connected with the Hawke's Bay coast.

On August 22 there will be a relay from Hastings—a concert arranged by the Hawke's Bay Radio Society.

Royalties on Radio

New Zealand's Fortunate Position

A RECENT Press cable told how radio traders in Great Britain are perturbed by a decision of the English courts in regard to royalties on valve sockets, which means that traders (or manufacturers) must pay the Marconi Company 12s. 6d. on every valve holder used in a set. On a five-valve set this means £3 2s. 6d., which, of course, has to be added to the price. The cable states that a great falling off of sales is the result.

This was the result of an appeal of the Marconi Company against the decision of the Comptroller of Patents which had reduced their scale of royalties from 12s. 6d. per valve holder to a minimum charge of 5s. on the first valve holder and 2s. 6d. on each additional valve.

The radio trade in New Zealand and Australia is in a much happier position. The rights of the Marconi Company are held here by Amalgamated Wireless, which is a semi-Government organisation. About two years ago the question of royalties arose, and, at the suggestion of Mr. E. T. Fisk, managing director of Amalgamated Wireless, arrangements were made by the Governments of New Zealand and Australia which relieved dealers and manufacturers entirely for a period of five years from the obligation to pay royalties. Listeners, of course, do not pay either, the only royalties paid being by the transmitting companies. Thus the price of receivers is kept to a minimum, enabling New Zealand and Australian manufacturers to compete on favourable terms with the rest of the world where heavy royalties are paid.

Have you procured your copy of

"N.Z. Radio Listener's Guide?"

Dealers and Booksellers 2/6; Post Free 2/9—P.O. Box 1032, Wellington. Now Available.

A Surprise Night

Proposal for Auckland

A meeting of the 1YA Musical and Dramatic Committee was held at the Auckland Studios on Friday, July 5, at 8 p.m., Mr. Karl Atkinson presiding.

It was proposed that a "Surprise Night" be held at 1YA, and it was decided to accept the proposal and leave the advertising matter in the hands of the station management. It was also recommended that the company endeavour to arrange for an alternative programme to take place between Wellington and Auckland, in which a debate would be included.

Another recommendation was that an elocutionary competition be held for children, three sections for girls and three for boys, and that the date be arranged by the company.

A lengthy discussion took place regarding the holding of a two-hour song recital with special annotations on the composers of the songs, also piano items suited to the atmosphere created by the singing, and it was decided to accept this proposal.

The committee decided to meet again on August 2, 1929.

Intuition

THE lady was discussing many and varied topics with her neighbour, when the subject of wireless came up.

"Oh, yes," said the first, "my husband is an absolute expert at wireless—What he doesn't know is not worth knowing."

"Really?" said the other, doubtfully.

"He's simply marvellous," continued the first lady. "The other day I went and hung all my washing along his aerial wire—while he was out—and, sure enough, he came home early and started to listen-in. And without looking outside he knew what I'd done! He said immediately that it sounded a proper 'washout!'"

Ranfurly Shield

Broadcast on Saturday

THE first Ranfurly Shield match, that between Hawke's Bay and Wairarapa, will be played at Masterton, on Saturday, July 20. The Wairarapa Rugby Union has given the Broadcasting Company permission to relay a description of all the Ranfurly Shield matches played under its jurisdiction, so arrangements are being made for the match on Saturday to be described. Simultaneous broadcasts will be made from 2YA, 3YA, and 4YA.

It is interesting to note that it was the first Ranfurly Shield match played in Masterton, just two years ago, that marked the first broadcast from 2YA.

Dominion-wide

Broadcasts

Relay Line Difficulties

IT was the intention of the Broadcasting Company to arrange for the relaying to all stations of the concerts to be given by the Queen Alexandra Band (Wanganui), on Tuesday, July 30, and by the Whangarei Band on Sunday, August 11, but the Post and Telegraph Department has advised that a relay line from Auckland to Wellington will not be available on those dates.

Therefore, the Dominion-wide broadcast of the Whangarei concert will have to be postponed till a later date. The Wanganui concert will be broadcast by 2YA, 3YA, and 4YA, but not by 1YA.

Well Worth Reading

That is the opinion of those who have read the new booklet, "A Vital Business Matter," issued by the Public Trust Office. It contains much valuable information for the business man and deals with loans, financing, managing estates, and other interesting matters. All business men should read the booklet—

"A Vital Business Matter."

Free copies may be obtained from any Office or Agent of the Public Trustee, or post free from the Public Trustee, Wellington.

Broadcast Music for Coming Week

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

—Shelley.

By
Bolton
Woods

The Queen Presents Arms.

THE opera "The Golden Cockerel" is a queer, imaginative work by Rimsky-Korsakov. The censor refused to sanction its performance during the composer's lifetime, and his difficulties with the authorities in this matter are said to have hastened his end. When the work was given in Petrograd it was thought to be over-taxing for the actors to both sing and dance, so at further performances the singers sat at the sides and the dancers interpreted, in pantomime, what was sung. The best known number from the opera is the "Hymn to the Sun." It is sung by the Queen of Shemakha, to the foolish old King Dodon, who has gone out to fight her, for she was coming to invade his kingdom, but instead he is conquered by her charm. Mr. F. Parsons will play the "Hymn" as a violin solo at 4YA on Monday, July 22.

"The Two Larks."

THEODOR LESCHETIZKY, the great teacher of so many brilliant pianists, including Paderewski, found time to compose several delightful pieces for the piano. The best known is "The Two Larks," a work which really seems to voice the wonderful song of the skylark soaring to greet the day. Rippling cadences answer each other, and an exquisite freshness permeates the composition from beginning to end.

Miss L. Martin will play "The Two Larks" at 1YA on Wednesday, July 24, when the programme will be presented by the members of the Jubilee Institute for the Blind.

Yradier's Masterpiece.

THE well-known and popular favourite "La Paloma" ("The Dove") seems to have had its birth in Cuba.

Now it has become a kind of national song, sung and heard everywhere, not only in the island of its origin, but throughout all South American Spanish countries. Its lyrics are pleasantly sentimental, and carry a poetic thought in the following lines:

"If at thy pane a beautiful dove comes winging,

Say thou wilt love it, close to thy heart oh press it!

But say thou'lt follow it, dearest one, ever,

Even to my mountain home."

The 1YA Orchestra will play an arrangement of the song "La Paloma" on Saturday, July 27.

Romany Melodies.

IN his fascinating book, "Nights and Days on the Gipsy Trail," Irving Brown says that the gipsies have kept alive and helped perfect to the highest degree the folk arts. He writes: "Those of Hungary, especially, are the greatest folk musicians in the world, according to Liszt, who paid them the sincerest form of compliment—that of imitating them. Liszt is only one of the great composers from Haydn to Dvorak and Enescu, who have learned and borrowed from them. The debt which music owes to this race of natural born artists is immense." The Studio Orchestra will play "Gipsy Songs" by Dvorak at 2YA on Monday, July 22.

A Musical Globe-trotter.

PROFESSOR GRANVILLE BANTOCK'S career has taken him all over the world, and many different lands have given him the inspiration for his music. He received his training at Trinity College, London, and at the Royal Academy of Music. His first tour was with a musical comedy company when he almost circled the globe. Since then he has held the posts of Musical Director at New Brighton Tower, Principal of the Birmingham and Midland Institute School of Music, and Professor of Music in the University of Birmingham. In his choice of subjects for musical treatment he has frequently been attracted by Eastern and pagan ideas, poetry, and mythology.

Mr. E. W. Robbins will sing Bantock's "A Feast of Lanterns" at 2YA on Tuesday, July 23, and Miss Agnes McDavitt will sing "The Peach Flower," by the same composer, at 2YA on Monday, July 22.

Napoleon's Ghost Rises.

ONE of the most dramatic songs ever written is "The Midnight Review," by Michael Ivanovitch Glinka, who has been called "the father of modern Russian music." The words by Joukovsky, are based on a legend of Napoleon, whose ghost is said to rise at midnight on the field of Waterloo, and hold a review of the dead. A ghostly

drummer summons the infantry, a bugler calls the cavalry, and lastly the leader himself appears on his old charger, and reviews the spectral army before him. Nothing more dramatic than the music of this scene can be imagined. Mr. E. McLellan will sing "The Midnight Review" at 2YA on Friday, July 26.

Bearing the Torch.

ONE of the modern members of the Russian school of composers who could look back with pride to the inspiring teaching of Rimsky-Korsakov, at the St. Petersburg Conservatoire, was Antony Arensky. He has composed almost all kinds of music, operas, ballets, cantatas, and church music. More than his contemporaries he has carried on Tchaikovsky's tradition, though with less dramatic force than the great master. Undoubtedly many of his pieces are destined to enjoy a lasting popularity. The 3YA Broadcasting Trio will play "Elegia and Finale," by Arensky, on Wednesday, July 24.

A Chamber Musician.

IT was his symphonic poem "Isabella" which first established Frank Bridge's reputation as a composer to be reckoned with. At first a student of the violin, he entered the Royal College of Music and studied for four years with Sir C. V. Stanford. He conducted at Queen's Hall and at Covent Garden, and was for some time viola player in the Joachim Quartet. In 1923-24 he visited America, and conducted his own works with the Boston and New York Symphony Orchestras, and at the Pittsfield Festival. The 3YA Broadcasting Trio will play a suite of dances by Bridge, minuet, gavotte, Valse Russe, and hornpipe, on Sunday, July 21.

Hauntingly Beautiful.

"ELEGY," by Massenet, has been transcribed for almost every instrument, and has been sung by singers of every range of voice. It possesses a haunting beauty, and its strange melancholy has an extraordinary fascination. It was composed as part of the incidental music to "Les Erinnyes," by Leconte de Lisle, which was first produced in 1873. Miss Vera Martin will sing Massenet's "Elegy" at 3YA on Wednesday, July 24.

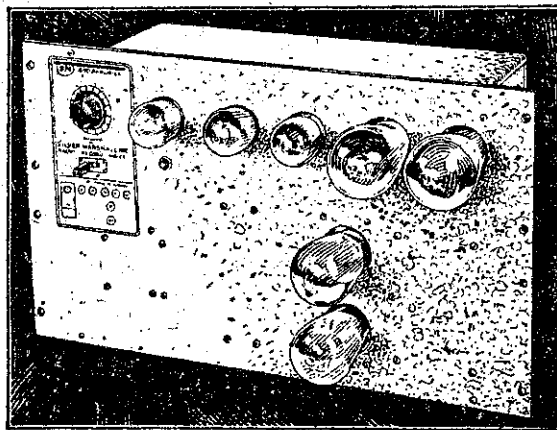
Blessed With Fortitude.

THERE is something rather pathetic in the fact that Raff is now known almost solely by the one melodious piece—Cavatina. He was one of the most industrious composers who ever lived. It is recorded that on one occasion, on coming back to a composition class after a brief illness, he chided them for laziness, announcing proudly that during the few days he had been off duty he had composed a string quartet, several vocal choruses, and various

It Puts the "Talk" in "Talkies."

THE

S-M 690 Super-Power Amplifier



Specially designed for use in Picture Theatres, Football Grounds, Sports Stadiums, Racecourses, or wherever an amplifier of tremendous power is required in conjunction with the highest quality reproduction of voice and music.

This special amplifier operates through three stages—two of them power push-pull—and is arranged for microphone, radio or single or double record input work.

It has 15,000 to 16,000 milliwatts distortionless power output.

The S-M 690 Super-Power Amplifier is now being used in various "Talkie" installations throughout New Zealand.

Could you have better PROOF of its capabilities.

It's a Silver-Marshall Product.

N.Z. MASTER AGENTS

BOND & BOND, LTD.

AUCKLAND.

smaller pieces. His immense industry was in keeping with a great strength of character which enabled him to endure severe privations in early life. Most people would have been crushed by the handicaps which he, as a young man, had to face. However, he eventually achieved real distinction both as a composer and as a teacher. The 3YA Broadcasting Trio will play Raff's "Cavatina" on Monday, July 22.

Grave and Gay.

BRAHMS' Op. 1 (published in 1853, when he was twenty) was a work for the piano. He began his career as a pianist, and during his early years of composition he tackled the Piano Sonata form several times. He next wrote some half-dozen sets of variations. Then for about a dozen years he almost entirely ceased to write for the pianoforte alone, his next piano work being a set of eight pieces, four entitled "Capriccio" and four "Intermezzo." The "Intermezzo in B flat minor" makes expressive use of harp-like motifs; the whole in a spirit of tender reflection, in a mood almost of melancholy. The "Capriccio in B minor" is in lighter mood, suggestive of gay dance rhythms, the background for a ballet of care-free sprites.

Miss Dorothy Davies will play the "Intermezzo" and "Capriccio" at 3YA on Thursday, July 25.

A Tell-tale Spirit.

THE story of Edward German's opera "Merrie England" is laid in the glorious days of Queen Elizabeth. The story is simple. Walter Raleigh is in love with Bessie Throckmorton, Maid of Honour to the Queen. He has given her an acrostic which she has lost, and which has been found by the witch Jill-all-alone. It is given to the Queen, who thinks it is for her and is quite pleased. On discovering that it is not, she orders the lovers to be banished, and the witch to be burned. The Earl of Essex accompanies the Queen on a trip through Windsor Forest, and causes the apparition of Herne the Hunter to appear, tradition having it that the ghost appears only when the monarch meditates a wrong. The Queen relents and all are pardoned.

Miss Valda McCurdy will sing the "Waltz Song" from "Merrie England," and Mr. H. Drew will sing "The Yeomen of England" from the same opera at 4YA on Tuesday, July 23.

"Crossley" Radio Station

THE following paragraph from an American trade magazine is of more than passing interest:—L. B. Scott, Ltd., Crosley Distributor in Christchurch, New Zealand, has sent us this clipping from the "Radio Record," leading Radio Journal in New Zealand. It is only further proof of the great work that WLW is doing in the world: "Receiving sets, one of which was supplied through the generosity of several Aucklanders, are a great boon to the leper colony which inhabit that little Fijian island Moko-gai. There the patients have been hearing with splendid clarity the big 50 kilowatt station WLW, operated from Cincinnati.

For Sale or Exchange.

See page 40 for column of casual advertisements.

Incomparable Beauty *plus* Unequalled Performance

STEINITE

All-Electric RADIO RECEIVERS

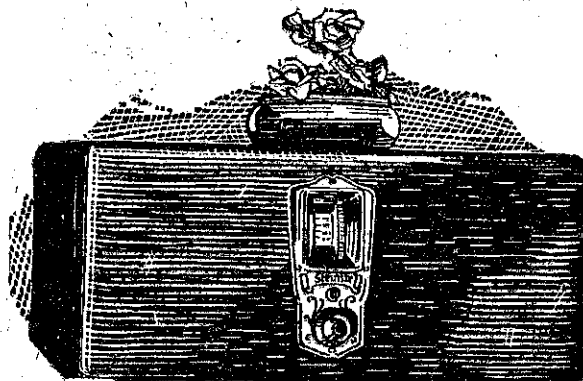


TABLE MODEL

TABLE MODEL (above). A seven-valve A.C. (including Rectifier) Electric Set Receiver which was sold by thousands of American dealers last year. This is the famous Steinite Radio. It is an amazingly compact, yet marvellously efficient receiver in a cabinet of Tanguile, finest of Philippine woods, finished in Duco. It is the greatest value in radio. Retail price, complete with valves:—

Centres	£29
Inland	£30

MODEL 40 (at right).—Eight valves. A.C. Electric Receiver (including rectifier), two 171A power valves in push-pull amplification. Completely outclasses anything in the lower-priced market, compares more than favourably with all high-priced radio sets. In a full-sized hi-boy cabinet with hand-rubbed finish. Built-in and super-electric-dynamic loudspeaker reproduces the entire musical and vocal range with startling fidelity. Retail price, complete with valves:—

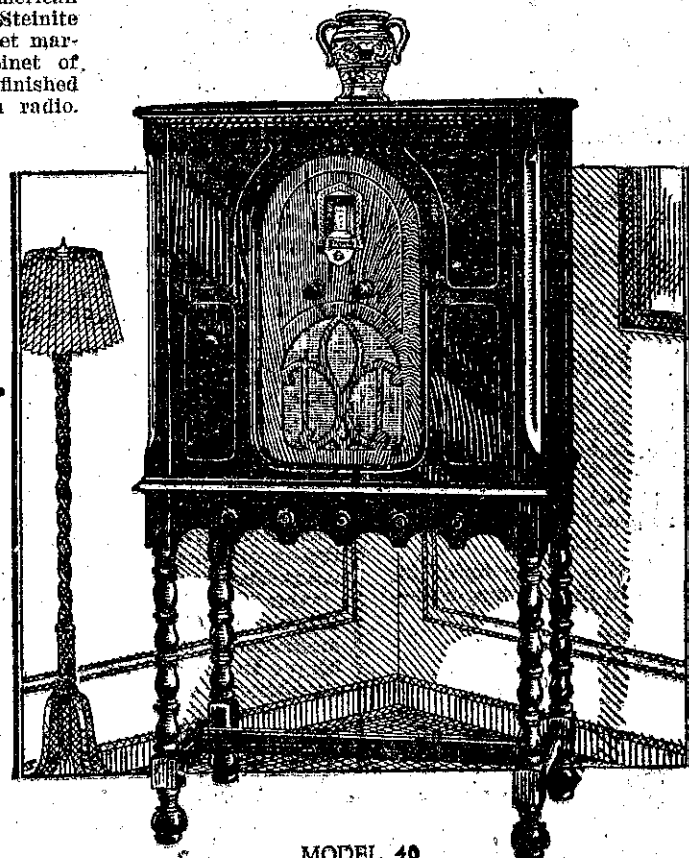
Centres	£52/5/-
Inland	£53/10/-

Ask your dealer to demonstrate these models to you, or write for fully illustrated literature to
N.Z. Master Agents:

RADIO Ltd.

Commerce Building, Anzac Avenue,
AUCKLAND.

Such is the Steinite All-Electric; and you will marvel also at its beauty and performance. It will thrill you from the time the switch is turned on until the last note has died away. Its beauty will delight you. Every little detail has been carefully planned out so as to give Steinite cabinets a charm which cannot fail to please. Compare Steinite with any other All-Electric Receiver on the market. What other set can compare for beauty and performance, or offer such remarkable value for such a moderate price?



MODEL 40

Why Perpetuate the Racing Ban?



THE attitude of the Joint Committee on this question is one, surely, on which the sporting community is entitled to ask explanation. In order that the company's attitude in regard to the matter may be made quite clear to every interested licensed listener, and to the public generally, Mr. A. R. Harris, the general manager of the company, has authorised us to make public through our columns the communication addressed by him to the New Zealand Racing and Trotting Conference, under date March 8, 1929, in which the case for radio listeners was fully set out, and the conference's objections to broadcasting, as understood by the company and the public, traversed in detail.

Offer by Company.

THAT communication reads:—

"We have reason to believe that the decision of the New Zealand Racing and Trotting Conference prohibiting the broadcasting of descriptive reports of racing and trotting meetings may have been occasioned by a misconception of the Broadcasting Company's policy relative to this branch of its service, and to the consequent belief that the company desired to secure from the conference an unrestricted privilege.

"We have, therefore, pleasure in requesting the conference to be good enough to reopen the question, and to consider our application in the light of the company's policy as stated hereunder.

"It has been pointed out to us (on your behalf) that the broadcasting of all race meetings throughout New Zealand would be a practice inimical to the sport, in that it would tend to arouse the open hostility of that sec-

Reasoned Application by Broadcasting Company Refused

tion of the community by which horse racing is held in disfavour. We believe we were the first to recognise this danger when, as the outcome of our earliest broadcasts, we received from country clubs in all parts of the Dominion requests to include their meetings in our rota. In the circumstances we quite agree that it would not be in the

Alternatives Discussed.

"IN making this renewed application for authority to broadcast metropolitan meetings, we desire to point out that the alternative suggested by the conference, viz., the broadcasting of a realistic report of the day's racing at some time subsequent to the last race

can be put over in less than ten minutes.

"(6) Quite obviously, the descriptive report could not be put over after 8 p.m. without giving widespread offence, as from 8 o'clock onward is the session reserved exclusively for musical and elocutionary entertainment.

"(7) Apart from the very definite bar of impracticability—which we trust we have made clear to your conference—it is questionable whether the method suggested would not be regarded even by interested listeners as a tiresome and belated make-believe of no real value.

Objections Reviewed.

"The method suggested is, in our opinion, undesirable so far as the interests of the conference are concerned:

"(1) Because the broadcasting of a lengthy and stirring description of the day's racing at a time when the great majority of listeners of all classes are listening-in would be infinitely more calculated to arouse the hostility of those opposed to racing than would a descriptive broadcast straight from the course at a time when a much lesser number, comprised chiefly of those interested in the sport, are listening-in, especially when the evening broadcast would be accentuating the hostility of those who were being deprived of a large part of the news service, to which they have been accustomed.

"(2) Because the absence of the broadcast straight from the course is resented by many keen followers of the sport whose circumstances have deprived them of the pleasure of attending the meeting.

"We shall be glad if you will be good enough to bring this application before the executive of the conference, or of any committee which may be authorised to deal with the matter, at the earliest opportunity, as you will realise that in the event of a favourable decision we are desirous of recommending this service as soon as possible.

"Our application is specifically for authority to broadcast metropolitan meetings on holidays and Saturdays, but should the conference deem it to be expedient that we should broadcast the full programme of these meetings we shall be prepared to do so, as upon consideration it appears to us that abstention from broadcasting on the few days which are not holidays might draw public attention to the reason for abstention.

"We shall be pleased to arrange for a representative of the company to attend any meeting at which this matter may be dealt with, should such attendance be desired by your conference."

No Effect on Conference.

IN reply to the above communication the company was advised that the application could not be dealt with before the full conference of the combined committee of the New Zealand Racing and Trotting Conference in July. In order that there should be no possibility of the matter being inadvertently overlooked, the general manager of the Broadcasting Company, under date the 6th inst., sent to the secretary

THE Joint Committee of the Racing and Trotting Conference, sitting in Wellington during the past week, reaffirmed its decision of last year, and again rejected the Radio Broadcasting Company's application to be permitted to render a service greatly desired by many thousands of listeners throughout the Dominion.

WHY?

interests of the sport, or the public, to make a practice of broadcasting race meetings generally.

"We are also in accord with the view expressed by the conference concerning the economic disadvantage of unduly attracting public attention towards the sport on days other than holidays. As to whether or not the practice of the racing clubs is in accordance with the precept of the conference is a matter which may be regarded as irrelevant to the Broadcasting Company's application; we recognise that there are necessities—such as the equitable and satisfactory apportionment of racing dates among the many clubs—which render impracticable a strict adherence to this principle.

A Limited Service.

"THE writer, in discussing the matter with interested persons, has made it clear that the company fully appreciated the fact that it would be undesirable to broadcast all race meetings, and that it did not intend to do this even if permission were granted by the racing authorities.

"All the Broadcasting Company wishes to do—ALL IT HAS DESIRED TO DO FROM THE OUTSET—is to broadcast metropolitan racing and trotting meetings on public holidays (including Saturdays) for the benefit of those interested people who could not attend the meetings, and at a time when such broadcasts could not possibly interfere with the business and industrial occupations of the community.

"Our broadcasts would be restricted entirely to the main metropolitan meetings, involving a very limited number of broadcasts per annum. The Broadcasting Company is quite prepared to accept the responsibility for this policy of restriction, but, if so desired, would be pleased to confer with any committee set up by the conference to deal with this matter.

"The conference need have no fear of the present Broadcasting Company ever over-doing the broadcasting of racing or trotting meetings.

of the day, is quite impracticable so far as the Broadcasting Company is concerned, and, in our opinion, particularly undesirable so far as the interests of the conference itself are concerned. The method suggested is impracticable, because—

"(1) The broadcasting service is necessarily based on a classified schedule under which the respective features of the services are broadcast at certain fixed times which experience has shown to be the most suitable for the particular service.

"(2) As the last race of the day usually eventuates between 5 and 6 p.m., it follows that the broadcast suggested by the conference would have to be put over after 6 p.m. (Any time between 5 and 6 would be useless, as during that hour the great majority of people are returning to their homes.)

"(3) Under the existing schedule, the children's session occupies the air from 6 to 7 p.m., and we feel sure your conference will realise that any interference with the session for the purpose of putting over the story of an afternoon's horse racing would provoke an outburst of popular disapproval from one end of the Dominion to the other.

"(4) The hour between 7 and 8 p.m. is exclusively reserved for the broadcasting of news and information, covering a wide range of subjects of universal interest, i.e., market reports, sporting results of all kinds, British Official Wireless cables covering items of international moment, general news, special announcements, and informative lectures.

"(5) The broadcasting of a descriptive account of the day's racing would occupy at the very least twenty minutes, and in all probability would take not less than half an hour, and would inevitably involve such a dislocation of the news service as we are confident would not be tolerated by the great body of listeners, especially as they have learned by experience that the bare results of five or six race meetings

Are You Having Trouble?

Does your Set fall short of expectations?

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

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

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

Absence of Signals.
Dead Spots.
Weak Reception.
Distortion, Noises.
Howling and Neutralization.

Now available from all Dealers at 2/6 or

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

N.Z. RADIO RECORD

P.O. Box 1032. Wellington.

of the Racing Conference a reminder of the company's application, with a request that his letter of March 8 last should be submitted for the consideration of the combined committee. This, presumably, was done, with the result that the application was again rejected. Why?

Why?

"On the pretext that broadcasting plays into the hands of bookmakers?

Surely not, because it is common knowledge that long before radio came into being the bookmakers had instituted a very complete, comprehensive, and efficient intelligence service of their own, by means of which practically every member of the illegal profession in every part of the Dominion is promptly informed of the result of every race, both metropolitan and provincial.

"On the ground that broadcasting interferes with the commercial and industrial occupations of the community?

The terms of the Broadcasting Company's application leaves not the slightest justification for that excuse.

"Because broadcasting is supposed to prejudicially affect the attendance at meetings?

Against any such mere supposition must be placed the substantial decline in the volume of totalisator receipts recorded since broadcasting was banned by the conference.

Then, WHY?

Football Broadcasts

Motion Rescinded

THE monthly general meeting of the Amateur Radio Society of Wellington was held on the evening of July 9 at the Cambridge Terrace Congregational Church schoolroom. Mr. Byron Brown, president, occupied the chair, and there were about two dozen present.

A resolution was carried at the annual meeting of the society, held in May, asking the Broadcasting Company to discontinue relays by 2YA, Wellington, of descriptions of football matches on Saturday afternoons, other than international, intercolonial, interprovincial and cup final matches. A reply was received from the Broadcasting Company as follows:—"As a result of the general interest which is associated with sporting events, and owing to the fact that Saturday afternoon is practically universally set aside for the playing of sporting fixtures in New Zealand, the company has laid down as a general principle that sporting events, when available, will be broadcast on Saturday afternoons from each of its stations, in place of the customary gramophone concerts. Various sports are held in each centre, but it is impracticable to broadcast them all at the one time, and attention is therefore given to Rugby football unless some other special sporting fixture is available and warrants prior consideration. Our experience is that these sporting broadcasts are of great interest to the majority of our listeners, and we do not propose to curtail them at the present time."

At the June meeting of the society, prior to the above letter having been received from the Broadcasting Com-

pany, Mr. I. M. Levy gave notice of motion as follows:—"That this meeting rescinds the motion regarding the broadcasting of football matches on Saturday afternoons, and in the event of this motion being carried the Broadcasting Company be notified accordingly."

At this month's general meeting the above motion was brought up for consideration, being moved by Mr. Levy, seconded by Mrs. Ponman.

In moving the resolution Mr. Levy said that it had been the established policy of the society since its inception to prevent that body being used as a cat's paw by any person or persons in forwarding their own likes or dislikes if they were calculated to interfere with the pleasure of a substantial proportion of the general body of listeners, although, in this instance, he did not doubt the good faith of those behind the original motion.

The original motion should not have been accepted, seeing it was contrary to the policy of the society, whose correct attitude should be neutrality. Still, the position was not irretrievable, and

the rescinding motion, if carried, would correct an error committed at the general meeting.

The relaying of football matches every Saturday afternoon, no doubt, had a large number of advocates, and the society had no right to assume the right to ask for any change in such an arrangement, seeing that owing to its limited membership it was anything but representative of the general body of listeners. The society had adopted an unwarranted attitude in this matter. Those who sought to restrict the football relays claimed that they were supported by the majority of listeners.

This was a rather bold claim, as the true wishes of the general body of listeners could not be ascertained without a plebiscite. Personally, the speaker knew that several male patients, including returned soldiers, looked forward eagerly to the Saturday football relays. Supposing, however, that the majority of listeners were in favour of restricting the football relays, had the minority no rights? Those who desired musical programmes had five afternoon musical sessions,

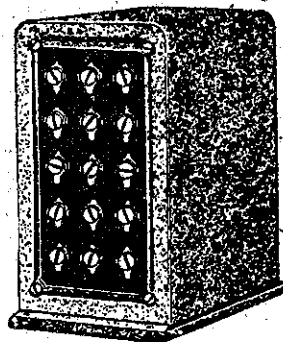
not to mention the six evening sessions. Was it not fair, then, that one afternoon be devoted to football relays, especially as Rugby was New Zealand's national game, and had spread the country's fame far and wide?

The speaker admitted that he had not witnessed one football match during his twenty-six years' residence in New Zealand, and he would much prefer musical items to the football relays, but it would be decidedly selfish on his part to advocate the reduction of football relays. There must be a reasonable amount of give and take with regard to broadcast programmes. The whole matter could not be decided by so unrepresentative a body as the society. Yet the society had done splendid work in the past, and a number of its recommendations had been adopted by the Broadcasting Company.

Some mention had been made of the futility of the speaker rescinding the motion seeing that the original motion had already been forwarded to the Broadcasting Company, but it should be remembered that the speaker gave

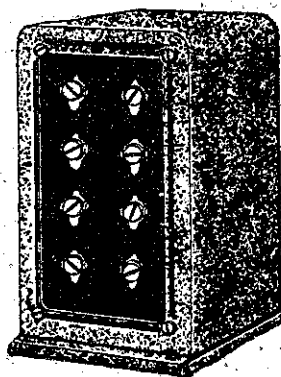
(Concluded on page 17.)

PILOT Triple-Block A.B.C. Power Supply Units



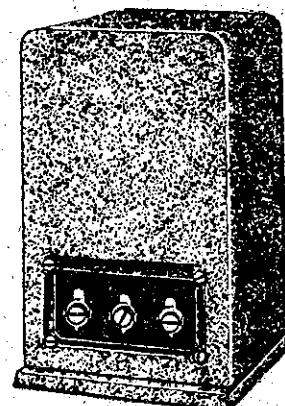
No. 398.

Transformer Block.



No. 396

Condenser Block.



No. 395

Double Choke Block.

TO provide for the A, B and C radio receiver and amplifier circuit current and voltage requirements using present-day alternating current tubes, Pilot have designed and recently placed on the market three units: the No. 398 Power Transformer, the No. 396 Filter Condenser Block and the No. 395 Double Choke Unit.

All three of these units are very compact, each of them being approximately 5 1/2 in. high, 5 in. long and 3 in. wide, allowing them to be used in various positions in a receiver or amplifier, the over-all dimensions of an entire A B C power unit being relatively small compared to the size of the power supply units previously available. All three of the units are mounted in substantial steel cases having a black Japanese lacquered finish, all connections being brought out to genuine moulded bakelite connection plates with brass inserts. Special large flat-bed machine screws screw into these inserts, circuit connections being soldered to the connection terminals under each screw head. To make it practically impossible to wire these units incorrectly in any circuit, the screw terminals are numbered, the numbers themselves being moulded in the bakelite terminal block. All blueprints and construction information for the use of the units show not only the schematic connections of the electrical system of the unit itself, but indicate clearly all terminal numbers.

Any Battery Model Radio Set can be converted at low cost into Electric Model Receiver.
PRICE LIST AND INFORMATION FREE!

Harringtons N.Z. Ltd.

THE LEADING HOUSE FOR RADIO SUPPLIES.

40-42 WILLIS STREET :: :: WELLINGTON.

Branches at Auckland and throughout Australia.

MANY listeners still operate their sets without a power valve in the last stage. The writer has made several converts to the use of power valves, but occasionally he has met individuals who retain the idea that the ordinary audio valve is sufficient to do the job well. The fact is that the ordinary audio valve fights shy of the lower bass notes. A prominent authority says: "Almost all modern American factory-built receivers are being provided with output valves, which permit an undistorted output of at least two or three watts, and often five! It is not that five watts of output are required to produce a normal volume of sound on the medium frequencies, but that they are essential if the low tones are to be produced in proportion to the others without distortion."

THE dinner music sessions by 2YA, Wellington, have made number of local listeners well pleased with the present broadcast service. The gramophone records are now better chosen than ever, and they are admirably reproduced. As one listener put it to the writer, it would cost scores of pounds for a private person to purchase the multitude of different records put across the air by 2YA, Wellington, in a year, and the license fee for broadcast listening is only 30s. per annum.

ACCORDING to the details forwarded by "Neuro" (Kilbirnie) his neutrodyne set is causing howling and thus interfering with the pleasure of other listeners. The trouble has obviously been occasioned by changing the positions of his valves after his set was properly neutralised. Seeing that "Neuro" confesses to being an utter novice

in radio matters he should obtain the services of a competent radio friend to re-neutralise his set, which can be accomplished in a couple of minutes. Tinkering about with valves, changing their positions in a neutrodyne set is a reprehensible practice which spoils the efficiency of a neutrodyne and interferes with the pleasure of other listeners.

A FRIEND who has just taken up broadcast listening is somewhat puzzled as to what he should do about his pet fox-terrier, who insists on howling when a soprano vocalist is heard from his loudspeaker. The dog enjoys all forms of music and lies blinking in front of the sitting-room fire listening to the radio, but as soon as a soprano starts he emits the most dismal howls. When he is turned out of doors he gets under the house and makes each soprano song a duet, but discordant enough to harass the soul of any true music-lover. At first the dog thought a

stranger was in the house when Mr. Drummond, the announcer at 2YA, gave out the items, and "Spot" rushed from room to room barking excitedly. He got over this idea after a smack or two with a strap, but he still persists in howling with the sopranos.

WHEN the household canine pet exhibits such bad form as to join in with the radio items the best plan is to hold the four-footed vocalist near the loudspeaker, and when he attempts to howl, discourage him with a strap. After one or two smart flips with the strap the dog will be converted into respectability, and will observe the common decencies of the best-conducted families. The writer hopes his friend with the howling dog will follow this advice and restore the amenities of his household.

JUDGING by the remarks heard by the writer from numerous listeners, the recent rebroadcasts by 2YA, Wellington, of the shortwave descriptions of the All Blacks' football matches in Australia, caused all-round delight with the Broadcasting Company's enterprise in making arrangements for the rebroadcast of 2ME, Sydney. One hears of groups of friends gathered round loudspeakers in many Wellington homes listening with intense excitement to the thrilling descriptions of the football contests. Not to have a radio set, nowadays, is to be behind the times.

LISTENERS who were fortunate enough to hear the relay by 2YA, Wellington, of the concert by the band of the German cruiser Emden last week wax enthusiastically over the delight it afforded. The writer knows of listeners who went to the Town Hall, hear the band, but being unable to squeeze in to the crowded auditorium returned home and enjoyed the concert, per medium of radio, by the fire-side.

THE amateur set-building competitions to be held at the forthcoming Radio Exhibition in Wellington, although conducted by the Radio Society, are open to all listeners whether members of the society or not. A local "fan" has constructed a crystal set in a box not much larger than a safety matchbox, and the set works admirably. He cannot be induced to enter it for the "novelty" set competition, being content to hide his light under a bushel. This is a case of undue modesty, besides depriving others from viewing a most interesting exhibit.

THE lecture on moving coil loudspeakers given at the recent general meeting of the Wellington Radio Society was by Mr. L. H. Wright, who

made his debut before the society on that occasion. Mr. Wright is a young Englishman, now resident in Wellington, who is well steeped in radio knowledge both theoretical and practical. He has also a gift for imparting knowledge to his listeners. Possibly, later on Mr. Wright may be induced to give another lecture for the society.

IT was, indeed, a happy thought of Mr. Pat Hanna and his "Diggers" to broadcast their entertainment in connection with the Returned Soldiers' reunion at His Majesty's Theatre, Wellington, last week. Many a digger and nurse who were unable to attend the merry reunion must have felt grateful to be able to hear the splendid musical and elocutionary items which came across the air from the 2YA relay.

RECEPTION from Australia has been very fickle of late. Some trans-Tasman stations excel on one night while others are indifferent and on the succeeding night affairs are reversed. And on some nights static has been intense so that it was anything but a pleasure to listen to the Australian stations. On a few nights the Japanese stations have been picked up by Wellington listeners recently but even those stations have been exceedingly uncertain.

REGARDING the new programme service to be supplied to the Australian "A" class stations this month, the "Sydney Wireless Weekly" says: "For, by some means, the idea that something outstandingly new in the way of broadcast entertainment will be heard has been circulated. Its source would, perhaps, be difficult to trace, but no doubt in some quarters it was believed that it would serve to evoke curiosity in the new programmes. But it is one thing to stimulate pleasurable anticipation and another to realise it. And it is fairly certain that it cannot be realised in these first programmes. What new broadcaster can present a programme startlingly, outstandingly different? In the past five years of broadcasting every available artist and feature has been broadcast, and the most a new entrepreneur can do is to concentrate the best of the past features into the first few weeks."

"BAT" (Ngalo) writes asking to know whether he is likely to obtain crystal set loudspeaker reception of 2YA, Wellington. He says his masts are about forty feet in height, and his aerial is about 60 feet in length. Seeing that a resident of Lower Hutt, about seven miles from 2YA is obtaining very fair loudspeaker reception with his crystal set, from 2YA, the chances of doing likewise at Ngalo are favourable, especially in the case of "Bat," who says his masts are on an elevated position. Providing "Bat's" crystal set is equipped with a good detector and his "earth" system is good he should obtain loudspeaker reception.

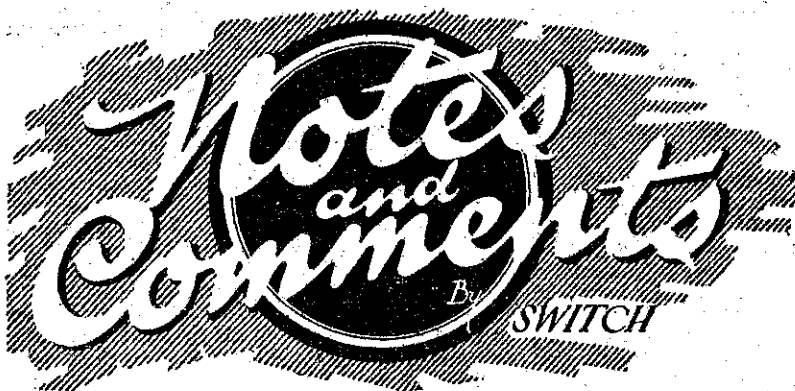
Have you secured your copy of

"N.Z. Radio Listener's Guide?"

Dealers and Booksellers 2/6; Post Free 2/9—P.O. Box 1032, Wellington. Now Available.

For Sale or Exchange.

See page 40 for column of casual advertisements.



Longest
Life,
Honest
Rated
Capacity



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

FOR SALES AND SERVICE—

Apply to and receive Satisfaction
from one of the following Agents:

Auckland: BATTERY SUPPLIES LTD.

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

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

97 Dixon Street, Wellington. Phone 20-057.

Christchurch:

STORAGE BATTERIES FOR ALL PURPOSES
WATKINSON'S LTD.
STARTING-STOPPING IGNITION EQUIPMENT

261-265 TUAM ST.

Between Madras and
Barbadoes Streets.
Telegrams: "Vesuvian,"
Chch.

P.O. Box 118, Phone 2244

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

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

The NATIONAL ELECTRICAL and ENGINEERING Co. Ltd.

**AUCKLAND, WELLINGTON, CHRISTCHURCH,
DUNEDIN, HAMILTON, WANGANUI, TIMARU.**

Sole N.Z. Distributors for . . .



FADA RADIO ALL-ELECTRIC SETS.

Single illuminated dial receivers, indirect heater valves, push-pull power amplifier, gramophone jacks, etc. Without exception this is the best radio for the money ever known.

THIS IS THE FAMOUS FADA TONE QUALITY.



BRITISH THOMSON-HOUSTON

Speakers and Gramophone Pick-up.
Dynamic Speaker, R.K. (Rice Kellog).
New Magnetic Cone Speaker.
World-renowned Headphones.
Gramophone Pick-up with Tone Arm.
Filter Units.



GRAMOPHONE MOTORS

Complete with turntable, auto stop and speed regulator.

"TUNGAR" BATTERY CHARGER

Will solve your battery troubles—also charges motor car batteries.

See these at the

Radio Exhibition

—to be held at—

WELLINGTON TOWN HALL

On 25th, 26th, and 27th JULY.

Or write for Illustrated Literature covering full details and Prices to any of the above Branches.

Justice to the South.

I READ with interest the article in last week's "Radio Record" regarding the part played by radio in the recent West Coast earthquake disaster. There is one omission, however. I would like to see remedied and that is a reference to the splendid way in which the local radio station (VLB) rose to the occasion. The operators there had a very trying time, as theirs was the task of keeping up communication between the s.s. Kaituna at Westport and the rest of New Zealand, for the first two days after the disaster. Consequently they had to bear the brunt of the heavy traffic long before arrangements were completed to send two radio operators to the West Coast to take over the equipment on one of the ships there. I think it only fair under the circumstances that some appreciation should be shown the efforts of these men to whom we are all indebted for the bulk of the news during the first few days. Why is it, may I inquire, that Southland is always passed over, no matter what the subject may be? Is it the little "green god" of jealousy or is it that Northerners are merely unwilling to share a little of the "cake" with their brothers in the South Island?—NOT A RADIO OP.

[Why does the South imagine jealousy when none exists? If your merits are not known whose fault is it? Blow your own trumpet more.—Ed.]

Relaying 2YA.

"VARIETY" is evidently one of those selfish persons who does not care a hang for other people as long as his likes and dislikes are pandered to. When he complains about 4YA re-broadcasting 2YA on Saturday nights, he forgets that this is the only chance that hundreds of crystal set users have of hearing anything outside Dunedin. If "Variety" does not like listening to 2YA, he must have a queer taste for music, as this station, especially on Saturday nights, "puts over" the best programme of any of the New Zealand or Australian stations. Is the set "Variety" has incapable of bringing in Auckland or the Australian stations on Saturday nights? Hoping that the Broadcasting Company will continue to carry out these splendid re-broadcasts regardless of those who are horn growers.—"FIVE VALVES" (Dunedin).

Spirited Reply to Listeners' Suggestions.

HAVING perused the "Views and Suggestions of a Listener," I feel impelled to comment on same. Surely this person must imagine that radio was made for him and him alone. I for one hope that he does not renew his license, as if he does, he may possibly

Our Mail Bag

Will correspondents please practice brevity, as heavy demands are now made on space. All letters must be signed and address given as proof of genuineness; noms de plume for publication are permitted. Address correspondence Editor, "Radio Record," P.O. Box 1032, Wellington.

keep up his "howl" until someone takes notice of him, but as he has no license, well, "why worry"? Long may he live without one. With reference to "sameness," does his landlady expect him to eat all that is on the menu? Even if he did he would undoubtedly suffer from acute indigestion for his temerity in doing so. Surely he can find some items that please him for his very high sum of £3 per year, what an expenditure to be sure for 365 nights' entertainment, exactly 54d. and a "bit" per night. Then as to gramophone records, we are not all "Carnegies" and cannot all afford both gramophone and radio, so we poor people manage to enjoy all the great recordings per medium of the radio. Personally I have given many records as presents, solely because of the enjoyment that they gave me per medium of the radio. I would never think of going and trying hundreds out at the music emporiums, but can easily ring up for a certain record to be posted or delivered when I require one. Re the children's hour, this is now ideal. My little fellow, three years old, is in dreamland soon after 6 o'clock, so that now he can squat by the loudspeaker after tea until bedtime, whilst Daddy, who gets home late from business, can enjoy a little quiet music with the newspaper.

With reference to "jazz," candidly, I also hate it, especially the "canned" variety, but I do not have to listen to it, and when I am tired of the rattle and bang, I go to bed or curl up and have a quiet snooze on the Chesterfield. Now, we come to the really choice part of the argument. Because his set is a dud, all of us country folk have to pay the penalty and Wellington must go on the air with reduced power! Ye gods! Let us all subscribe and present him with his own station, pay his artists and generally run the show for him,

for pure unadulterated cheek, this takes the bakehouse. We in the distance from Wellington would have to close down our sets unless Christchurch and Auckland were coming in exceptionally well, as Wellington is the stand-by of the small set owner. I suppose we ought to be satisfied with a faint whisper for our 30s. Let the stations carry on, they are doing famously, and by all means improve when possible, but do not forget the huge majority of listeners are more than satisfied, and it is only because they are satisfied that persons like your correspondent has the luck to monopolise a whole page of your valuable journal, thereby depriving us of some interesting matter instead of having to read his sickening piffle. Trusting that you will give equal prominence to the satisfied listener's report.—"RATIONAL" (Hastings).

Another Straight Reply.

On reading the views of a listener, "Eos," I feel disgusted at the pettiness of some people. What does he expect for his 30s. a year? I have a six-valve set, resistance coupled. I have listened in since December, 1926; that is over 2½ years have I been a licensee. It costs me nearly £20 a year to run my set. I live about 20 miles inland from Taumarunui in the backblocks, am a working man since the war. But I am most enthusiastic about the broadcasting programmes as presented by the Radio Broadcasting Company of New Zealand Ltd. I admit at first I frequently switched over to our Australian neighbours, but for over twelve months now I have rarely tuned in other than New Zealand stations, being so well, in fact completely satisfied with the fare presented by the YA stations. I have not missed more than about seven days in the whole 2½ years, tuning-in every night, and to me this daily experience is beyond my highest expectations. I may here state that in the world of music and Bohemian life and among the so-called aristocracy in my younger days I had had probably more experience than "Eos," since I have been almost all over the world and seen better times before the beastly Great War, and I get and tune-in nightly with the greatest joy and knowledge of the splendid entertainment awaiting me. I do not desire to take up more of your time, but if I felt like "Eos" I would be ashamed to make a song about it, and go on buying gramophone records! Another thing

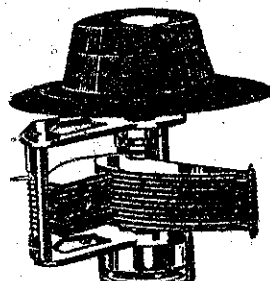
strikes me, his attitude in refusing to pay his license fee and yet listening-in is, to say the least, not in order. I wonder the Radio Broadcasting Company went to the trouble to respond; I should have issued instructions for a summons to be taken out, and until "Eos" has done so, ignored his letter. Keep on with your good work—R.B.C. and R.R.—F.C. (Taumarunui).

Views on Broadcasting.

I REFUSE to believe that any man after having a receiving set for two years would remain off for three months. If I could not afford my present outlay of about 3s. per week for my five-valve set, well I would cut down my smokes by 30 per cent. and retain the set. Familiarity breeds contempt, and if some listeners remember this fact and would listen only once or twice a week to the concert programmes they would appreciate them much more. We would all get tired of Melba, Clara Butt, or Santley if we heard them every night. As for 2YA announcer, he is not first-class, I admit, but his pronouncing has improved in the past year, and we cannot expect him, or any other announcer, to avoid stumbling occasionally over foreign words. 'Tis true his voice is pleasant, but what I object to is that he spoils the effect by a drawing-room trick, as "datyee," "ye-ess" for "yes," and "no-oh" for "no," and with a drop in voice on the last syllable, which should be missing, as well as the drop.

As for jazz, it is fine, lively music, and I enjoy it about once a week; other times I wish it in Honolulu. Dancing I detest, and when a lecturette on that comes on I go to Auckland. The news session when Mr. Ball was announcing was a treat, and it is still from Auckland and Christchurch, but why we require to get the prices of meat, butter, etc., from three and sometimes four different firms, in one night, and from one station, I know not. The children's hour is really good, and instructive to adults as well as to the young. I think a great mistake has been made in making room for the dinner music, at the expense of the kiddies' hour. Many records are stuff to me, and then I switch off, but many records put over the air are A1, and you could not do better, if as good, with studio items.

Now, about 2YA being too strong. City listeners can buy sets which will



DUBILIER

RADIO PRODUCTS

Grid Leaks
1/6 each

Fit these Variable Condensers into your Receiver. The 200-to-1 Ratio Vernier will bring in Stations not heard before.

.0003, .0005 Complete with Dial 15/-
.0001 Midget, each 6/6

A. E. STRANGE

404 WORCESTER ST.,
CHRISTCHURCH

The Government
Tourist Dept's.
Booking System
Considered by Experts
The Best in the
World

Offices in all Main Centres

cut out any station, and as rural listeners require 2YA at a high power, is it not up to them to do so? Some things over the air I detest, but I have some respect for the opinions of others, and one man's meat is another man's poison, so let us all play the game and give and take, not all take, and radio will rub along all right, and we will soon have thousands more listeners in, and consequently more money for an improved service. The Broadcasting Company must cater for all tastes, but I think the singing and the music is either too high class or too common. A much greater number of well-known songs (standard) and of music which would be understood by listeners, not necessarily with A.T.C.L. after their name, would be much appreciated.—**LUX CUM AMORE** (Rangataua).

The Abbey Service.

I WONDER if any listeners had the pleasure of hearing the Westminster Abbey service from the American stations. I was looking for a stray Jap after 2YA closed down on Sunday night, and heard a man describing the Poet's Corner at the Abbey. Then came the announcement that KGO, Oakland, along with the other stations, controlled by the National Broadcasting system, had been rebroadcasting through 5SW the thanksgiving service from Westminster Abbey. The announcer added that as it was 8.10 a.m. he was going to bed, after which the stations closed down. The description of the Poet's Corner may have been given from KGO, but I think it more likely that it was 5SW talking, as it was immediately prior to the announcement concerning the rebroadcast. The headquarters of the national broadcasting system would probably enjoy good reception of 5SW, and as KGO was coming over really well it seems we missed an interesting and unique broadcast.

It is interesting to note that the N.B.S. saw fit to keep their sixty stations on the air till 3 a.m. Pacific time and 6 a.m. Eastern time, for the purpose of giving this rebroadcast. I think it is very gratifying to find the American nation taking such an interest in English affairs. I would like to thank the R.B.C. for their ambitious effort on this occasion, and to congratulate them on the success of their recent rebroadcasts of 2ME, Sydney. The descriptions of the All Blacks' contests are much appreciated, and our thanks are due to the R.B.C. for affording us these opportunities of hearing our team at work.—H.R.P., Kereru, Hastings.

[A good many New Zealand listeners heard the Abbey service from New Zealand stations.—Ed.]

Wireless Appreciated.

I WOULD like to say a word of appreciation for the many fine entertainments from over the air. Having to cater for "all kinds and conditions" it is impossible to please everybody but we feel that the company does its best. We are always disappointed if Thursday evenings fail to be a "band" night, most particularly do we love to hear sacred music played by the band. I think most people greatly appreciate it, too, for it has a charm all its own when so played. We always look forward to the Sunday evening services and all honour to the "uncles" who give such splendid children's services, too. What we would do without our wireless I do not know. There is

very rarely an evening that we have without it.—F. (Nelson).

Gramophone Records.

IN reply to your article written by "Eos" in last week's "Record," I would like to pass a few remarks. To begin with, in my opinion, the quality of the programmes have increased ten fold during the last twelve months. Certainly they are not perfect yet, but most assuredly the trend is in the right direction. With reference to gramophone music "Eos" complains that we receive too much, but, as pointed out by the R.B.C. manager, it is less than 25 per cent. I will say, however, that there are a good number of old and worn-out records at 2YA. I have a small growl to vent about the dinner music. Why does the company inflict some screeching soprano, or sour bass on to peaceful citizens when they are endeavouring to digest their dinner. I do not concur with the tacet idea either. The dinner session, however, was a wonderful addition. I live in hope that the orchestra will "tune up" in the near future. "Eos" condemns the dinner hour most severely by referring to it as "about a dozen doubtful records." I imagine that his set must be a dud, if this is his reception. I venture to say that he had better dispose of it, and buy some first-class liver tonic with the proceeds. In finishing off, a word about the license fee: I do not consider this to be excessive—the relays are worth them alone.—"PUKEKAWA" (Wanganui).

Salvation Army Broadcast.

THE sentiments expressed by "Fed Up and Then Some" are beyond comprehension that we who appreciate the Salvation Army's efforts to broadcast on the Sunday in question are left entirely out of the discussion. I do not think "Fed Up and Then Some" and those who approve of his views understand and appreciate the Salvation Army broadcast on the day mentioned. It is a difficult matter to please everybody especially those whose outlook in life is hindered by prejudice and selfishness. May I say to "Fed Up and Then Some" and his friends: Give us fair play. This old world is sad enough without all the thousands-and-one grumblers in existence.—N.Z. SCHOOLBOY (Wellington).

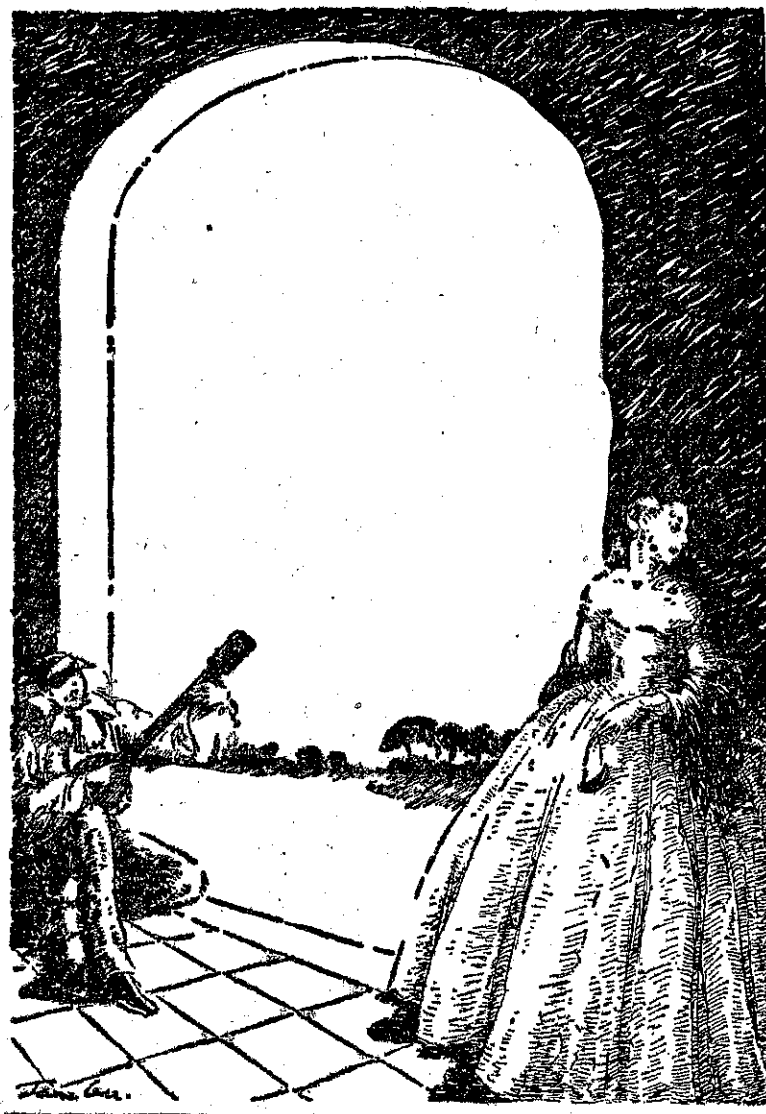
"Nothing Short of Insulting"

SOME of the letters published are amusing, while others again are nothing short of insulting to the Broadcasting Company. 2YA especially gives such good service that if they do not please the people there is surely something very much the matter with them. The only thing we find is that 2YA fades a good deal, but apart from that is A.L. To-day's football relay from Sydney was not as clear as usual, but that was due to the atmosphere. It has been particularly clear the last two relays, and we are indebted to the R.B. Company for the trouble they have gone to. Radio for us up here is a boon in many ways.—A.F.B. (Russell.)

Have you secured your copy of

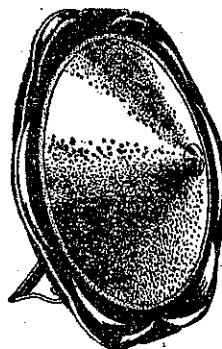
"N.Z. Radio Listener's Guide?"

Dealers and Booksellers, 2/6; Post Free 2/9—P.O. Box 1032, Wellington. Now Available.



The New Mullard A.C. Valves will fit any American Electric Set and improve the results.

—“a most melodious sound of all that mote delight a daintie ear.”



Model "C" Speaker.
£4 0 0

A LULLABY stealing in delicately—an overture poured forth, rich, full faultlessly rendered. In imagination you have seen the singer, watched the orchestra. This sense of realism is possible with the Mullard Pure Music Speakers.

You can choose from several models that vary in design and price, but all of which are manufactured to satisfy the most critical listener.

A Mullard Speaker with Mullard P.M. Valves in your set holds the secret of perfect radio. Ask any good Radio Dealer to demonstrate.

Mullard

MASTER - RADIO

N.Z. Selling Agents: SPEDDING, LTD., Box 462, Auckland; Box 1531, Wellington; Box 922, Christchurch; Box 516, Dunedin.

The Wellington Radio Exhibition

Exhibits Outside the Trade



ROBABLY the most active and enthusiastic body of radio listeners in New Zealand is that section of the listening and transmitting community known as the Association of Amateur Transmitters. With the head office in Auckland, this strong organisation has branches in the main cities of the country. From head office a journal representative of the whole society is regularly published, while the Canterbury branch publishes its own magazine, "The Canterbury Radio Journal."

The amateur transmitters of the world form a great brotherhood united by strong bonds. With transmitters ranging in power from a few watts to several kilowatts, these amateurs in all countries are able to hold two-way communication with those on the other side of the globe. Most of the New Zealand amateurs can claim at least more communication with England and the Continent. Some more fortunate have "worked" the foreign countries on telephony, but as this requires a fairly expensive plant there are few to be found amongst the amateurs. An amateur aims to develop resource, and a good amateur claims to be able to establish a communication at least over a radius of a few hundred miles or so with any old wireless "junk" and a wire fence.

The amateurs always aim to aid one another and to aid anyone who is interested in wireless with a view to ultimately putting him on the air. Having found someone more than passively interested in radio he is entitled to join the Amateur Transmitters' Association, and some particular members mark him off for particular help. He is guided along lines of study and special slow morse is put over the air to assist him. When he finally takes his examination and qualifies as a transmitter, every assistance is given in the selecting of the components and the setting up of his transmitters.

"Ham fests" are held at regular intervals. Amateur transmitters gather together for a conference, lasting usual-

ly for several days. These are quite a feature with amateur transmitters.

Exhibition Activities.

AT the Wellington Radio Exhibition these amateur transmitters are having a stall. In it will be exhibited twelve or thirteen active transmitters, the details of which are as follow:-

portable crystal controlled transmitter with a power of 50 watts.

2GK's transmitter is of the master oscillator type, with a power amplifier. A Hartley H.C. circuit, taking 18 inches of space, is the exhibit of 2GO. Another portable receiver will be on show—that of 2BC, a Split Colpitts, which measures 3ft. x 3ft.. 2GR has

An Epoch-Making Event

THE Radio Exhibition, the plans of which are now rapidly being drawn to finality, promises to be the most outstanding event in New Zealand radio history. Nothing of its kind has ever been attempted before, but success seems assured from every aspect. With the whole-hearted co-operation of the trade, the Post and Telegraph Department, the Wellington Amateur Radio Society, the Broadcasting Company, and the Amateur Transmitters' Association, it is difficult to picture anything but an outstanding success.

The idea of the exhibition has been to let the public see the very latest apparatus that is obtainable. We feel certain that there are a very large number who are withholding from purchasing for fear that they will later on see something they like better. The Exhibition has been planned so that within half an hour or so a prospective listener can see all that the trade is offering. It is extremely doubtful that the form of the exhibits will be materially changed for some considerable time. Radio appears well stabilized, and radical changes are not pre-eminent.

On this and the following page the activities of bodies other than the trade have been outlined, and our readers' attention is directed to them. We regret that at this date, we have been unable to detail the plans of the Post and Telegraph Department, but visitors are assured that something really worth while is coming from that quarter.

The transmitter and receiver of 2GA: This is a unique exhibit. The transmitter and receiver are arranged in a case 12 x 5 x 5 inches, the transmitter itself being of no greater dimensions than 5 inches each way. Dry cells are carried to operate both receiver and transmitter, and a switching device enables it to be changed over at will. This particular receiver has been in constant use and proved itself fully reliable. 2GA is also exhibiting a

a Hartley 18 inches long, using a 10-watt valve. 2BE has a 150-watt Hartley 2ft. square and 4ft. high. Within these dimensions is enclosed the whole transmitter arranged in tiers. On the bottom is the power pack containing the rectifying valve and the filter. Above this are the valves and the inductance coils, and so on, each tier representing a step forward. In no case is power or signals sent back to a lower level. The power enters at the bottom and leaves at the top as modulated current ready for the aerial.

A 'phone transmitter, with both modulator and oscillator, is the exhibit of 2AJ. In addition, there are several short-wave receivers, embodying the latest ideas in this class of receiver.

The stall will be covered with QSL cards denoting that signals from these transmitters have been heard all over the world. In addition, it is hoped to have a large map with tapes leading from the cards to indicate their country of origin.

Milestones in Radio History.

The "Radio Record" stall at the exhibition will be a departure from the others in that where the trade will be exhibiting the very latest that radio science can produce, this stall will be exhibiting apparatus that is long since antiquated. An endeavour will be made to trace the growth of radio as represented in its apparatus.

Noteworthy will be a series of cells depicting the methods in which electric

power has been obtained. The first exhibit of this series will be the simple voltaic cell of 100 years ago. This was no more than two plates immersed in a solution of dilute sulphuric acid—a very feeble current could be extracted, and instruments will be employed to show how this feeble current flows from one plate to another. The next cell of importance is the Daniels cell, which for some considerable time was the standard cell for obtaining current electricity. This consists of a plate of copper immersed in copper sulphate and a zinc plate immersed in a dilute sulphuric acid kept from the CuSO₄ by a porous pot. A steady current could be taken from such a cell for some considerable time, the voltage of each being approximately one volt. These cells were objectionable, in that they were both bulky and comparatively inefficient. However, they served their purpose in the march of electrical science.

Following the Daniels cell, the Leclanche cell which to-day forms the basis of dry battery power was evolved. This comprised a central porous pot filled with manganese dioxide surrounding a carbon rod. This porous pot was immersed in a weak acid solution in which stood a zinc rod. It was found that a voltage of 1.5 could be taken off this intermittently, but as soon as a continuous current was taken a gas collected round the zinc, the internal resistance rose, and the cell had to be left for some considerable time to recuperate. However, this was a distinct advance on anything yet invented.

The dry cell is merely an adaptation of the Leclanche, and this is the basis of our dry batteries. Sections of various cells comprising "A," "B," and "C" batteries will be on view, and there will be someone to tell the visitor all about them.

Following the Leclanche cell, the accumulator was evolved. This is entirely different from the others, in that electric power has to be put in before it can be taken out—in other words, electricity is stored, but with its form changed from active to inert electricity. An accumulator in a dismantled form will be on view, and visitors will be able to see exactly what is inside that heavy black object that they have laboriously to carry to the charging station to be regularly charged.

But electricity derived from the dynamo is tending to replace battery power, and the latest development of radio science will be represented by a power amplifier obtaining all its power from the 230-volt mains with which our houses are wired.

Besides these interesting exhibits of historical importance, there will be on view home-constructed models of more than passing interest. Of these, we can but mention a huge eliminator which will deliver half an ampere of current at a voltage at anything from 1 to 2000 at half ampere. A home-constructed electro-dynamic speaker in dismantled form will be on view to visitors.

Experts from the "Radio Record" will be in attendance, and will be ready to discuss problems with anyone who may be interested.

The AIRZONE AC3

Will be arriving just after the exhibition closes, and will be on display at all Airzone Dealers.

Three models, using the new Philips "Wonder" Series and "Superseries" A.C. Tubes, and offering exceptional power from the three super-valves employed.

N.Z. Distributors:

J. A. Smyth & Co.

71 VICTORIA STREET :: :: WELLINGTON.

THE Amateur Radio Society of Wellington, which is conducting the competitions for constructors on behalf of the Radio Exhibition Committee, was founded about six years ago, before broadcasting as we know it to-day, was inaugurated.

Wellington during the infancy of the Radio Society was served intermittently and regularly by low-power broadcast stations maintained partly by voluntary subscriptions from the trade, and listeners. The programmes comprised gramophone records lent by kind enthusiasts, and items by local and occasionally visiting talent.

Where assistance is on a purely voluntary basis, a service is difficult to maintain, and, as the operating and maintenance charges of the broadcasting plants were considerable, little wonder that the service was such that broadcast listening by the general public made very little progress. It is due to those hardy pioneers of broadcasting, however, to mention that they undoubtedly firmly established the cult of broadcast listening in New Zealand. There were "outside" stations in Auckland and Dunedin in those primeval days, which afforded Wellington listeners a good deal of pleasure by their excellent programmes and transmission. But, again, their maintenance was based partly on voluntary contribu-

tions, and it was abundantly evident that New Zealand, if it wanted to keep abreast of the times, must establish a national scheme of broadcasting supported by compulsory financial contributions by both the listeners and the radio trade.

From the outset the Amateur Radio Society of Wellington came under the control of broadcast listeners, though the original idea of the founders was that amateur morse transmission should take a prominent place in the activities of the society. So strong, however, was the broadcast listening section of the society from its very inception that any move towards the carrying-out of amateur morse transmission was never discussed after the initial meeting of the society.

Those who prominently opposed amateur transmission pointed out that the logical trend of radio was towards broadcast listening, and that in a few years the number of amateur transmitters in New Zealand would constitute only about three per cent. of the number of radio licensees. That this estimate was fairly accurate is borne out by the official figures of to-day.

It was regarded, at the outset, as obvious that the interests of broadcast listeners and amateur transmitters were not the same, and, unfortunately, were, at that time, in conflict owing to a good deal of annoyance caused broadcast listeners through interfer-

ence by amateur transmitters who were not then employing the ultra-short-waves now in vogue.

In justice to the amateur transmitters, it must be explained that broadcast receiving sets were far more difficult to operate during that period, and a reasonable degree of selectivity was not obtained, either through lack of skill on the part of the listeners, or inherent faults in some of the circuits employed by them. In individual instances there were faults on the other side.

Feeling ran pretty high at times between the broadcast listeners and the amateur transmitters, so that any suggestion that the Amateur Radio Society should establish a morse transmitting station was tabooed. The hatchet, however, has long since been buried.

WHEN the Radio Broadcasting Company of New Zealand commenced operations about the end of 1925 it marked the dawn of a new era of broadcasting in this country, and in less than three years the number of licensed listeners throughout the Dominion rose to over 40,000. With the general progress of radio, vast improvements have been made in radio receiving circuits and all forms of equipment, and the public of to-day have the benefit of the concentration of years of scientific research and experience.

The Amateur Radio Society of Wellington has increasingly striven to be of service to the general body of broadcast listeners, as well as its own members. The general meetings have, excepting in few instances, been open to the general public. Per medium of lectures by the most expert radio men of the community, the society has endeavoured to assist the broadcast listener whether he be a home-constructor or merely one who desires to learn the principles governing radio reception and reproduction. The care and attention of radio equipment, the most desirable type of components to use, and the reason thereof, have also been exhaustively dealt with in these lectures at regular monthly meetings, generally held now in the Congregational Church Schoolroom, Kent Terrace, on the second Tuesday of each month.

While not claiming to be the mouth-piece of the general body of broadcast listeners, the Wellington Society frequently acts as a medium in placing before the Broadcasting Company representations considered likely to increase the popularity of the broadcast service. In a number of cases these suggestions have been adopted by the Broadcasting Company, and the friendliest relations exist between the company and the society, even though their opinions may not always coincide.

In keeping with the policy of the Wellington Society, it has consented to conduct the competitions for constructors, and also the essay competition on behalf of the Wellington Radio Exhibition Committee. These competitions are strictly confined to amateurs whether members of the society or not, and it is anticipated that there will be numerous entries in all four competitions.

In the constructional competitions neatness of work and design will be important factors in determining the prize-winners. The society has obtained the services of a radio technician of outstanding ability to act as judge.

Radio Society

(Concluded from page 11.)

notice of his rescinding motion before a reply had been received from the company. The best relations existed between the society and the Broadcasting Company, and if the society desired to retain the respect of the company it was only fit and proper that the rescinding motion be carried and forwarded to the company to disclose the more considered attitude of the society with regard to the football relays.

The chairman (Mr. Byron Brown) briefly endorsed Mr. Levy's views, and asked whether anyone had anything to say on the matter. As there was no response he said all that remained was to put the motion to the meeting.

The motion was then put, and was carried unanimously.

A somewhat dramatic incident occurred after the motion was carried. A lady asked the chairman whether she could say a few words. On permission being granted she stated that her husband, who was bed-ridden and blind, looked forward eagerly to the Saturday afternoon football relays.

The chairman remarked that there were without doubt many scores of other stricken men who shared the sick man's fondness for the football relays.

IN reply to a letter from the society urging that the Sunday afternoon sessions of 2YA, Wellington, be extended till 5 p.m., the Broadcasting Company stated in a letter: "We will be very pleased to bear the suggestion in mind that the Sunday afternoon session at 2YA be extended to 5 p.m., although at the present moment circumstances will not permit of this being carried out. At the same time, you will appreciate that the service given by 2YA has recently been extended above that given by our other stations by the introduction of a dinner music session, and in the circumstances any further increase in the service must first be considered in respect to our other stations. We will, however, bear your suggestion in mind for further consideration." Members pointed out that the dinner music sessions had resulted through representations by the society.

The remainder of the evening was devoted to a lecture by Mr. L. H. Wright on moving-coil loudspeakers. This was listened to with the greatest interest, and an account of it appears elsewhere.

Radio for Flats

RADIO catering for flat-dwellers is a problem which is perhaps more acute in New York than in any other part of the world, and various systems for apartment houses (or what we would call "blocks of flats") have been introduced lately. In the new Kehaya apartment building in New York there are 118 flats, and these are all connected to a certain radio distribution system, very much after the same manner as central heating arrangements. The plant has been insulated by the Radio Corporation of America, and all the tenant of a flat has to do is to plug his set to one of two single-wire aeri-als, when he can tune to any desired station.



Next Week's Features

1YA Features

THE Pitt Street Methodist Church service will be on the air on Sunday evening. The Rev. L. B. Dalby will be the preacher.

ON Tuesday evening the Olympians will provide the major portion of the vocal programme, their items including a quartet from "Rigoletto" (Verdi), "Lola's Song" ("Cavalleria Rusticana"), "There is a Flower" ("Maritana"), "Willow Song" (Sullivan), "O tu Palermo," "When We are Married" ("Belie of New York"), and "The Mikado's Song" ("The Mikado"). Miss Mollie Wright, cellist, will play "Sonata in G" (Samaritini), while the Studio Trio will be heard in selections from Puccini's great opera, "La Boheme" and from the "Cabaret Girl" (Kern). Outstanding on the programme will be the presentation of Act 1 of the opera "Carmen" (Bizet), fully explained by Mr. Karl Atkinson, president of the Auckland Gramophone Society.

THE members of the Jubilee Institute for the Blind will again present a programme on Wednesday evening, when a well varied selection of items will be performed. The Institute Band, choir, and orchestra will contribute numbers, and judging from the last performance of these artists a hearty welcome awaits this evening's fare.

AN outstanding programme for the week will be presented on Thursday evening in the form of a novelty evening, entitled "What did you do in the Great War, Daddy?" Although humour will predominate throughout the performance, popular war-time songs will be featured, together with sketches and suitable dialogue. From approximately 9.30 until 11 p.m. dance music will be broadcast.

THE programme on Friday evening will be opened with a relay of musical items from Lewis Eady's Hall. The ensuing programme from the studio will include Miss Madge Clague (contralto), Mr. John Bree (baritone), and Mr. Eric Waters (pianist). Two short organ recitals will be presented by Mr. Arthur E. Wilson, assisted by Miss Doreen Logan (soprano). Another interesting "Topical Talk" will be given by Mr. A. B. Chappell, M.A., while the Studio Trio will be heard in



MISS CONSTANCE FLAMANK.

Very successful at competitions, Miss Flamank (contralto) is frequently heard from 3YA.

—Steffano Webb, photo.

"Peer Gynt Suite" (Grieg), and "Four Bavarian Waltzes" (Franck).

The variety programme to be performed on Saturday evening will include the Basham-Briggs Duo, in vocal duets and solos, the Hebrew Two in humorous sketches, the Bohemian Duo

in novelty items, and Mr. Thomas Harris, elocutionist. The Studio Orchestra will perform popular orchestral items and an hour's dance programme will conclude at 11 p.m.

2YA Items

THE service conducted in The Terrace Congregational Church on Sunday evening will be broadcast. The Rev. C. Wickham will be the preacher. Afterwards there will be a relay of the concert to be given by the Port Nicholson Silver Band in the Grand Opera House.

ON Monday evening an interesting programme will be given by the Philomel Ladies' Choir and assisting artists. The choral items will include Vincent's "Ave Maria" with orchestral accompaniment and the same composers' "The Night Bells." As well as full choral numbers there will be soprano and contralto solos, duets and a vocal trio. The soloists will be Miss Muriel Hitchings (soprano), Mrs. W. H. Phillips (contralto), Miss Veronica McKenzie (soprano), and the Misses Agnes McDavitt and Zoe Millar (contraltos). Miss McKenzie and Miss McDavitt will sing as a duet Schubert's "Serenade" and Pinsuti's "In this Hour of Softened Splendour" will be sung as a trio by Miss Muriel Hitchings, Miss Agnes McDavitt and Mrs. W. H. Phillips. The assisting artists will be Mr. Claude Moss (baritone) and Mr. Sidney Tingey (elocutionist). Mr. Moss will sing Herman Lohr's "Pagan" and "When Song is Sweet," also an old French number, "Le Carillon du Verre." Mr. Tingey will recite a scene from "Aiglon," in which a French soldier tells of the hardships of the army at the time of the Emperor Napoleon. The Studio Orchestra will play the overture to "Mirelle." Rubinstein's orchestral number, "Two Songs" (the cornet soloist being Mr. W. Sneddon), Dvorak's "Gypsy Songs," "Songs of Italy" (by Lohr), and for their concluding number Moszkowski's "Waltz in D."

A BRIGHT programme of a light and popular nature will be presented on Tuesday evening, the contributing artists being Mr. E. W. Robbins (tenor), the Two Boiled Owls (in humorous sketches), Messrs. Claude Hoare and Edward Silver (in jazz piano and popular song numbers), and Mrs. M. R. Lightbody (soubrette). The orchestral items will be the "Entry of the Boyards," "Suite Romanesque" and two compositions by Drigo—viz., "Licho" and "Pas de Bohemiens."

The programmes on the other evenings of the week when the Radio Exhibition is on, are referred to elsewhere.

3YA Features

THE Rev. H. Williams will be the preacher at St. Mary's Anglican Church on Sunday evening, when the



MRS. BERYL WINDSOR.

The living at Ross, on the West Coast, Mrs. Windsor frequently appears at 3YA. The last occasion was when she recited one of the prize poems (her own composition) in the recent 2YA Poetry Competition.

—Photo, Steffano Webb.

service will be broadcast. The organist and musical director will be Mr. Alfred Worsley. In the brief studio concert which will follow, until the rebroadcast of 2YA commences at 8.15 p.m., mezzo-soprano solos will be sung by Miss Anita Graham, and there will be instrumental numbers by the Studio Trio. The Wellington rebroadcast will consist of the concert to be given in the Grand Opera House by the Port Nicholson Silver Band.

MONDAY evening's programme will be of a very popular nature, being contributed by Derry's Military Band, Miss M. Lewis (mezzo-contralto), Miss Betty Hilliard (singer of popular songs), Mr. Peter Macdonald (tenor), Mr. George Titchener (humour), and the Studio Trio. A very interesting programme will be presented by Derry's

New Lines for the Home Builder

Jewel 0-250 Voltmeters, Panel mounting type, £2/2/-.
Latest Type Vernier Dials 4/6.
Sub-panel Brackets 3/6 pair.
Resin Core Solder 6d. per spool.
Best quality high grade English Electric Solder Irons 14/6 each.
Aerial Earth Switches 1/6.
Folding Loop Aerials 22/6.

Non-removable Top Terminals 3d.
Insulated Bus-Bar 10ft. Coils 1/-.
Latest Type Loloss Neutrodyne Coils 22/6.
J. B. Condensers, the finest in New Zealand, in sizes .00015, .00025, .0003, .0005 mfd, from 12/- each.

Send for Copy
of our new Price
List.

L. B. SCOTT LTD.
Manchester and Worcester Streets,
CHRISTCHURCH.

TAKE
Pulmonas
RELIEF BY INHALATION
FOR COUGHS
AND COLDS

Military Band under Mr. J. M. Scott on Monday evening. Besides some old favourites a number of new selections will be introduced. The band items will comprise two marches, "University of Pennsylvania" and "Peace Centennial," "Bohemian Dance," a selection from "The Arcadians," a waltz, the "Anvil Chorus" from "Il Trovatore," and the tone picture by Ketelby "In Camp of the Ancient Britons."

THIS tone picture was suggested by a visit to Worlebury Camp, Weston-super-Mere, and represents the reverie of a visitor to a seaside resort where may still be seen the remains of an early British encampment. The piece begins with the sacred grove of the Druids and the invocation before the battle; then follows the march of the ancient Britons, the advance of the Roman legions, the battle and defeat of the Britons and their retreat. The invocation then merges into a waltz, as if being played by a band on the front, bringing the listener back to the present day. With an exuberant climax typifying the holiday spirit the piece is brought to a lively conclusion.

THE programme on Wednesday evening will open with the presentation of Act 2 of "Carmen," with the full description by Mr. W. H. Dixon, Professor of Singing. The programme this evening will be of great merit. The vocalists will be Mrs. Mary Rogers (soprano), Miss Vera Martin, Mr. Bernard Rennehl (baritone), while Miss Lily Hughes will recite, "The Lesson of the Watermill" and "How the Great Guest Came." Mr. Harold Beck will play cello solos and there will be selections by the Studio Trio.

ON Thursday evening the vocal portion of the programme will be Irish. This will be a very popular entertainment. Among the songs to be sung will be such well-known ones as "The Harp that Once Thro' Tara's Halls," "The Last Rose of Summer," "The Meeting of the Waters," "The Minstrel Boy," "Silent O'Moyle," and "Eileen Maivourneen." Madam Gower Burns will sing Alfred Hill's "Irish Cradle Song." This will be the first public rendition of the work in Christchurch. The other vocalists for the evening will be Miss Dorothy Spiller, Mr. Ernest Rogers, and Mr. Filer.

CONTRIBUTING to the instrumental side of the programme will be the Studio Trio and Miss Dorothy Davies, the brilliant pianiste, who will play two selections by Brahms and Saint Saens's "Etude en forme de valse." There will be a number of special orchestral recordings.

ON Friday evening, when the concluding portion of the programme consists of dance music which continues till 11 p.m., the vocal programme will be provided by the Valencia Quartet, who will be heard in concerted and solo numbers, mostly well known old favourites. There will be humorous Scottish songs and stories by Mr. Jock Lockhart. Among the selections to be played by the Studio Trio will be the "Barcarolle" (from "Tales of Hoffman") and Dvorak's "Slavonic Dance No. 2." Violin solos will be played by Miss Irene Morris. The dance music played by the Bailey-Marston Dance Orchestra at 3YA is always a

recite "If" (Kipling), "The Fool," and "Lochluvar" (Scott).

OPENING the programme on Wednesday evening will be a selection by Mr. Leslie Harvey on the Christie organ at the Empire Theatre. These relays are proving very popular with listeners, for Mr. Harvey is a past-master of the keyboard. Two sketches by Miss Anita Winkel and Major F. H. Lampen—"Waiting For a Bus," and "Phyllida Flouts Me"—are also on the programme. There will be Scottish humorous songs by Mr. Buster Brown and Scottish ballads by Mr. George Crawford (tenor). From 9.30 to 11



THE VALENCIA QUARTET.

A very popular combination singing at 3YA. From left to right—Mr. W. Bradshaw, Mrs. Lucy O'Brien, Miss Mary Taylor and Mr. E. J. Johnson.

very attractive feature of the week's programmes, for this band invariably presents the very latest in dance music. In addition to the selections by the orchestra, Mr. Les. Marston will contribute a saxophone solo, "Rabinola."

On Saturday evening 3YA will re-broadcast 2YA.

4YA Notes

THE service at Hanover Street Baptist Church, where the preacher will be the Rev. E. S. Tuckwell, will be broadcast on Sunday evening. Afterwards there will be a relay from His Majesty's Theatre of the concert to be given by the Tramways Band under Mr. A. Morgan.

ON Monday evening the first act of "Carmen" will be presented at 4YA. The vocalists of the supporting programme will be the Majors, whose concerted numbers will be "A Spring Song" and "Who Will O'er the Downs So Free." The solo items will be "Gentle Shepherd," "Loye Triumphant," "Son of Mine," "She is Far From the Land," "Break, Break, Break," "Vorrei," "I Heard You Singing," and "I Hear a Thrush at Eve." There will be recitations by Miss Tui Northey and instrumental selections by the Studio Trio.

THE band concert on Tuesday evening will be provided by the St. Kilda Band under Mr. James Dixon, the assisting vocalists in a miscellaneous programme being Miss Valda McCurdy (soprano) and Mr. H. Drew (tenor), while Miss Beryl Cooper will

"Worth the License Fee"

1YA Plays Highly Praised

A LISTENER in the country writes thus concerning the two plays recently enacted before the microphone by the Auckland Little Theatre Company, under the direction of Mr. Kenneth Brampton:

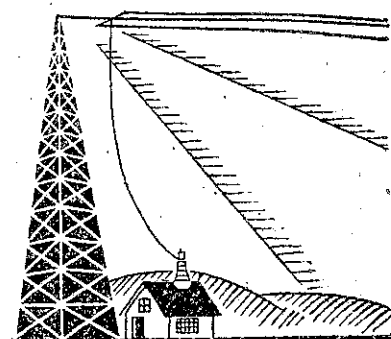
"I consider the two plays alone, 'Outward Bound' and 'Bird in Hand' worth the license fee for the year, apart from anything else, to say nothing of the cello and piano recital from 2YA. These fortunately came on nearly perfect nights, and at our firesides we had in these transmissions what would have cost us about 6s. a head to enjoy even if we happened to be in town. Several of our neighbours appreciated the 'Bird in Hand' as much as we did, and we all look forward to future plays like these, which make an interesting and most enjoyable break in the usual programme."

Use Our Booking Offices in Advance

S-O-S

TRAVEL IN COMFORT BY CAR

WELLINGTON — PALMERSTON
NEW PLYMOUTH



Let US broadcast a word!

—we want every cook and every housewife to hear about a famous Chef's secret of light, fluffy scones, and dainty, golden-brown cakes.

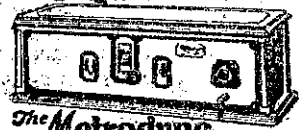
It is simply: "Mix a few spoonfuls of ANCHOR SKIM MILK POWDER into your mixture you make." You'll marvel at the new lightness it gives to baking—the increased food value—the rich flavour—and the longer period of freshness.

Ask your grocer for a trial tin TO-DAY!

Price 1/2 per Tin
Say "ANCHOR SKIM MILK POWDER, Please"

Write now for Free Recipe Folder to "Anchor," Box 844, Auckland.

7 Tube Set Single Dial Radio



The Metrodyne

Model 75, £21/10/-, less valves.
Model 200, £21/10/-, less valves.

Easy to Tune—Handsome.
Full Details on Request.

ROYDS-HOWARD CO., CHCH.

Radio Tricks

A CORRESPONDENT in the Far Far North gives an instance of the vagaries of reception. He states:

"A Kaitia listener who belongs to New Plymouth is disappointed that he cannot now pick up 2YB, although he had good reception of 2YB plant when it was in operation at Wellington. Car own experience at Herikino is just the reverse. We could not hear a sound from 2YB transmitter when tested at Christchurch and Wellington, but now we can hear the football from 2YB on Saturday afternoons at strength almost equal to 2YA. We also are Taranakites, so listen in there, as we know, at least by name and play, most of the local players."

For Sale or Exchange.

See page 40 for column of casual advertisements.

Full Programmes for Next

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

Sunday, July 21

1YA, AUCKLAND (333 METRES), SUNDAY, JULY 21.

- 8 p.m.: Afternoon session—Selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Further studio items.
 4.30: Close down.
 6.0: Children's session, conducted by Uncle Leo.
 6.55: Relay of Divine Service from Pitt Street Methodist Church. Preacher, Rev. L. B. Dalby; organist, Mr. Bickerton; choirmaster, Mr. Leather.
 8.30 (approx.): Selected studio items.
 9.45: Close down.

2YA, WELLINGTON (720 KILOCYCLES)—SUNDAY, JULY 21.

- 8.0 p.m.: Afternoon session—Selected studio items.
 4.30: Close down.
 6.0: Children's Sunday service, conducted by Uncle George.
 7.0: Relay of service from Terrace Congregational Church. Preacher: Rev. C. Wickham. Organist and Choirmaster: Mr. Harry Brusey. Anthem: "Ho! Every One that Thirsteth" (Walmsley) (soloist, Mr. Bernard Lankshear). Organ Voluntary: "Evening Song" (Bairstow).
 8.15 (approx.): Relay from the Grand Opera House, Wellington of concert by the Port Nicholson Silver Band, under the conductorship of Mr. J. J. Drew.
 Close down.

3YA, CHRISTCHURCH (306 METRES), SUNDAY, JULY 21.

- 8 p.m.: Afternoon session—Selected gramophone items.
 4.30: Close down.
 5.30: Children's song service.
 6.15: Hymn chimes from the studio.
 6.30: Relay of service from St. Mary's Anglican Church, Merivale. Preacher, Rev. H. Williams. Organist and musical director, Mr. Alfred Worsley.
 7.45 (approx.): Studio concert.
 Mezzo-soprano solo—Miss Anita Graham, "How Lovely Are Thy Dwellings" (Liddle).
 Instrumental—Christchurch Broadcasting Trio, (a) "Minuet," (b) "Gavotte," (c) "Valse Russe," (d) "Hornpipe" (Bridge).
 Mezzo-soprano solos—Miss Anita Graham, (a) "A Birthday" (Woodman); (b) "The Wild Rose" (Schubert).
 8.15 (approx.): Rebroadcast of 2YA, Wellington (relay from Grand Opera House, Wellington, of recital by the Port Nicholson Silver Band, under the conductorship of Mr. J. J. Drew).
 Close down.

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

- 8.0 p.m.: Town Hall chimes.
 8.1: Selected gramophone items.
 4.30: Close down.
 5.30: Children's song service, conducted by Big Brother Bill.
 6.30: Relay of service from Hanover Street Baptist Church: Preacher: Rev. E. S. Tuckwell. Organist: Mr. Upton Harvey. Choirmaster: Mr. H. P. Desmoulins.
 8.0: Relay from His Majesty's Theatre of concert by the Tramways Band, under the conductorship of Mr. C. Morgan.
 9.15: Close down.

Monday, July 22

1YA, AUCKLAND (333 METRES)—MONDAY, JULY 22.

SILENT DAY.

2YA, WELLINGTON (720 KILOCYCLES)—MONDAY, JULY 22.

- 8.0 p.m.: Chimes of the G.P.O. clock.
 8.1: Selected gramophone items.
 8.40: Relay from Messrs. Kirkcaldie and Stains tea-rooms of music by the Trio.
 4.0: Selected gramophone items.
 4.30 and 4.50: Sports results to hand.
 4.55: Close down.
 5.0: Children's session, conducted by Uncle Jeff.

- 6.0: Dinner session:
 Orchestral—Philadelphia Symphony Orchestra, (a) "Danse Orientale" (Glazounov); (b) "March of the Caucasian Chief" (Ivanoff) (H.M.V. Record E521).
 Tenor solo—Jno. McCormack, "Softly Thru the Night" (Schubert) (H.M.V. Record DA458).
 6.12: Tacet.
 6.15: Orchestral—New Light Symphony Orchestra, "Scene De Ballet Marionettes" (Glazounov) (H.M.V. Record B2754).
 Baritone and male quartet—Jno. Goss and Cathedral Quartet, (a) "Haul Away, Joe"; (b) "What Shall We Do With a Drunken Sailor?" (Arrgd. Terry) (H.M.V. Record B2420).
 Cello solo—Pablo Cassals, "Le Cygne" (Saint-Saens) (H.M.V. Record DA776).
 6.27: Tacet.
 6.30: Orchestral—Philadelphia Symphony Orchestra, "Toccata and Fugue in D Minor" (Bach) (H.M.V. Record D1428).
 Baritone solo—Lawrence Tibbett, "Drink to me Only" (Calcott) (H.M.V. Record DA886).
 6.41: Tacet.
 6.45: Violin solo—Isolde Menges, "Ave Maria" (Schubert), (H.M.V. Record D1313).
 Bass-baritone solos—Peter Dawson, (a) "I Rage, I Melt, I Burn"; (b) "O Ruddier Than The Cherry" (Handel).
 Waltz—Philadelphia Symphony Orchestra, "Tales from the Vienna Woods" (Strauss) (H.M.V. Record ED2).
 6.57: Tacet.
 7.0: News session, market reports and sports results.
 7.40: Lecturette—Mr. T. Townshend of Messrs. Thompson and Hills Ltd., "Fruit Preserving."
 8.0: Chimes of the G.P.O. clock.
 Special programme by the Philomel Ladies' Choir, and assisting artists.
 8.1: Overture—Orchestra, "Mireille" (Gounod).
 8.9: Chorus with orchestra, choir, "Ave Maria" (Vincent).
 8.13: Soprano solos—Miss Muriel Hitchings, (a) "Now Sleeps the Crimson Petal" (Quilter); (b) "Hark, Hark, the Lark" (Schubert).
 8.20: Cello solo—Pablo Casals, "Serenade" (Mendelssohn), (Columbia Record X317).
 8.28: Contralto solo—Mrs. W. H. Phillips, recitative and aria, (a) "Armida Dispietata"; (b) "Lascia Ch'io Pianga" ("Rinaldo") (Hondel).
 8.32: Recital—Mr. Sidney Tingey, a scene from "L'Aiglon" (A story relating the hardships of the French soldier at the time of the Emperor Napoleon).
 8.39: Instrumental—Orchestra, "Two Songs" (Rubinstein) (Cornet soloist, Mr. W. Sneddon).
 8.47: Baritone solo—Mr. Claude Moss, "Pagan" (Lohr).
 8.51: Vocal duet—Misses Veronica McKenzie and Agnes McDavitt, "Serenade" (Schubert).
 8.55: Instrumental—Orchestra, "Gipsy Songs" (Dvorak).
 9.3: Weather report.
 9.5: Soprano solo—Miss Veronica McKenzie, "Il Bacio" (Arditi).
 9.9: Contralto solos—Miss Agnes McDavitt, (a) "Shepherd's Song" (Elgar); (b) "The Peach Flower" (Bantock).
 9.16: Recital—Mr. Sidney Tingey, "Sergeant Buzzfuzz" ("The Pickwick Papers") (Dickens).
 9.23: Instrumental—Orchestra, "Songs of Italy" (Lohr).
 9.31: Vocal trio—Misses M. Hitchings, A. McDavitt and Mrs. W. H. Phillips, "In This Hour of Softened Splendour" (Pinsuti).
 9.35: Baritone solos—Mr. Claude Moss, (a) "When Song is Sweet" (San-Souci); (b) "Le Carillon Du Verre" (French Trdtl.).
 9.41: Cello solo—Arnold Foldes, "Kol Nidrei" (Bruch) (H.M.V. Record C1411).
 9.49: Contralto solo—Miss Zoe Millar, "Ships of Arcady" (Head).
 9.53: Chorus—Choir, "The Night Bells" (Vincent).
 9.57: Instrumental—Orchestra, "Waltz in D" (Moszkowski).
 10.5: Close down.

3YA CHRISTCHURCH (306 METRES)—MONDAY, JULY 22.

- 8.0 p.m.: Afternoon session—selected gramophone items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session, conducted by Scatterjoy.
 7.0: News session.
 7.15: Talk—Mr. E. J. Bell, Book Review.
 8.0: Chimes.
 Studio programme by Derry's Military Band, under the conductorship of Mr. J. M. Scott, and assisting artists.
 8.1: March—Band, "University of Pennsylvania" (Adler); dance—Band, "Bohemian Dance" (Engleman).
 8.11: Mezzo-contralto solo—Miss M. Lewis, "The Mission of a Rose" (Cowen).

Week-all Stations-to July 28

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

- 8.15: Male quartet—Parlophone Melody Company, "Convivial Songs" (Parlophone Record A2511).
 8.19: Instrumental—Christchurch Broadcasting Trio, (a) "Intermezzo" ("Cavalleria Rusticana" (Mascagni); (b) "Laguna Lullaby" (Hope); (c) "La Coquette" (Translatuer).
 8.29: Tenor solos—Mr. Peter Macdonald, (a) "Vale" (Kennedy Russell); (b) "Morning" (Speaks).
 8.35: Selection—Band, "The Arcadians" (Monckton).
 8.44: Popular song—Miss Betty Hilliard, "Tony from America" ("The Quaker Girl") (Monckton).
 8.49: Humour—Mr. Geo. Titchener, "My Motor Bike" (Rouse).
 8.53: Waltz—Band, "Velvet of the Rose" (Barnard).
 9.0: Weather report.
 9.5: Mezzo-contralto solos—Miss M. Lewis, (a) "If Winter Comes" (Tennent); (b) "After the Rain, the Sunshine" (Beris).
 9.11: Male quartet—Parlophone Melody Company, "Convivial Songs" (Parlophone Record A2511).
 9.15: Instrumental—Christchurch Broadcasting Trio, (a) "Cavatina" (Raff); (b) "Polonaise in A" (Chopin).
 9.25: Tenor solo—Mr. Peter Macdonald, "Thora" (Adams).
 9.29: Tone picture—Band, "In a Camp of the Ancient Britons" (Ketelby).
 9.37: Popular songs—Miss Betty Hilliard, (a) "Mary Ann" (Silver); (b) "Cherie! I Love You" (Goodman).
 9.44: Humour—Mr. Geo. Titchener, (a) "The Agitator" (MS); (b) "The Postman" (MS).
 9.51: Anvil chorus—Band, "Il Trovatore—Anvil Chorus" (Verdi).
 March—Band, "Peace Centennial" (Boisvert).
 10.2: Close down.

4YA DUNEDIN (463 METRES)—MONDAY, JULY 22.

- 3.0 p.m.: Town Hall chimes.
 3.1: Selected gramophone items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Town Hall chimes.
 6.1: Children's session, conducted by Uncle Allan.
 7.0: News session.
 8.0: Town Hall chimes.
 8.1: Presentation of the opera "Carmen" (Bizet) Act 1, First Instalment (Columbia Records 9527-31).
 8.51: Vocal quartet—The Majors, "A Spring Song" (Pinsuti).
 8.55: Violin solo—Mr. F. Parsons, "Hymn to the Sun" (Rimsky-Korsakov).
 9.0: Weather report.
 9.3: Recitals—Miss Tui Northey, (a) "In an Italian Garden" (Anon); (b) "The Birth of the Opal" (Wilcox).
 9.8: Soprano solos—Miss Freda Elmes, (a) "Gentle Shepherd" (Pergolesi); (b) "Love Triumphant" (Brahms).
 9.15: Instrumental—4YA Broadcasting Trio, "Samson and Delilah" selection (Saint-Saens).
 9.20: Baritone solos—Mr. L. M. Cachemaille, (a) "Son of Mine" (Wallace); (b) "She is Far from the Land" (Lambert).
 9.27: Pianoforte solos—Mrs. E. Drake, (a) "Peter Piper" (Livens); (b) "Sing a Song of Sixpence" (Livens).
 9.32: Contralto solos—Miss Dorothy Skinner, (a) "Break, Break, Break" (Carey); (b) "Vorrei" (Tosti).
 9.39: Recital—Miss Tui Northey, "Land of the Might Have Been" (Anon).
 9.46: Tenor solos—Mr. J. Montague, (a) "I Heard You Singing" (Coates); (b) "I Hear a Thrush at Eve" (Cadman).
 9.53: Cello solo—Mr. P. J. Palmer, "Siciliana" ("Cavalleria Rusticana") (Mascagni).
 9.57: Vocal quartet—The Major Quartet, "Who Will O'er the Downs so Free?"
 10.1: Close down.

Tuesday, July 23

1YA, AUCKLAND (333 METRES)—TUESDAY, JULY 23.

- 3 p.m.: Afternoon session—selected studio items.
 4.0: Literary selection by the Announcer.
 4.3: Studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session, conducted by Uncle George.
 7.0: News session.
 7.15: Talk—Mr. G. Campbell, "Motoring."
 7.30: Market reports.
 7.40: Talk—Miss Orichton Imrie, of London and South Africa, a Trip Around the Leading Factories of the Empire."

- 8.0: Chimes.
 8.1: Relay of overture by Majestic Theatre Orchestra, under the direction of Mr. J. Whiteford Waugh.
 8.11: Vocal quartette—The Olympians, "Rigoletto—Quartet" (Verdi).
 8.15: Tenor solo—Mr. L. Harvey, "There is a Flower" ("Maritana") (Wallace).
 8.19: Instrumental—Studio Trio, "La Boheme" Selection (Puccini).
 8.28: Soprano solo—Miss D. Youd, "Lola's Song" ("Cavalleria Rusticana") (Mascagni).
 8.32: Cello solo—Miss M. Wright, "Sonata in G" (Samarini).
 8.37: Baritone solo—Mr. H. Barry Coney, "O Tu Palermo" (Vespri Siciliani) (Verdi).
 8.41: Contralto solo—Miss M. Williamson, "The Lady of the Lea" (Smart).
 8.45: Relay of orchestral entr'acte from the Majestic Theatre.
 8.55: Vocal duet—Miss D. Youd and Mr. L. Harvey, "When We Are Married" ("The Belle of New York") (Kerker).
 8.59: Weather report.
 9.1: Baritone solo—Mr. H. Barry Coney, "The Mikado's Song" ("The Mikado") (Sullivan).
 9.5: Contralto solo—Miss M. Williamson, "Willow Song" (Sullivan).
 9.9: Instrumental—Studio Trio, "The Cabaret Girl" (Kern).
 9.17: Tenor solo—Mr. L. Harvey, "Then You'll Remember Me" ("The Bohemian Girl") (Balfe).
 9.21: Presentation of the opera "Carmen" (Balfe), Act 1—First Instalment (Columbia Records 9527/31):
 (Synopsis: The daring, dark-eyed gypsy girl has left her kinsfolk, and is working at a cigarette factory in Seville. Troopers are resting in the Square. The cigarette girls come out. There is much chaff and flashing of eyes. Only Don Jose takes no heed. This is enough for Carmen. Singing the "Habanera," she tries her wiles, and finally flings him a red cassia flower from her bosom. At this, the Spanish officer flares up.
 The factory bell calls back its work girls. A peasant girl, Micaela, arrives with news for Jose from his home and parents. The interview is suddenly interrupted by a great commotion. Carmen, it appears, has quarrelled with another girl in the factory, and stabbed her. Jose is called upon to act, and Carmen is arrested by the soldiers. But the Spanish sergeant stands little chance against Carmen when she sings the "Seguidilla" to him. He unties her bonds, and lets her escape. For this, he, in turn, is arrested, and goes to prison.)
 10.0: Close down.

Steinite The New All-Electric Radio and Combination RADIO Gramophone has arrived!

Push-Pull amplification and wonderful toned Electro Super-Dynamic Speakers, built into beautiful walnut console cabinets. They give incomparable reproductions, and have abundance of reserve power.

Prices:

£52/5/- and £100

Easy Terms if desired.

Wellington Agents:

G. G. MacQuarrie, Ltd.

120 Willis St., Wellington

Hear Our Demonstrations at the Winter Show!

2YA, WELLINGTON (720 KILOCYCLES).—TUESDAY, JULY 23.

- 3 p.m.: Chimes of the G.P.O. clock.
 3.1: Selected gramophone items.
 4.30 and 4.50: Sports results to hand.
 4.55: Close down.
 5.0: Children's session, conducted by Uncle Jim.
 6.0: Dinner session:
 Orchestral—Weber's Orchestra, "Potpourri of Waltzes" (Robrecht) (H.M.V. Record C1544).
 Soprano solo—Evelyn Scotney, "Blue Danube" Waltz (Strauss) (H.M.V. Record D1403).
 6.13: Tacet.
 6.15: Orchestral—San Francisco Symphony Orchestra, (a) "Serenade" (Moszkowski); (b) "Aubade" (Auber); (c) "Liebeslied" (Kreisler) (H.M.V. Record ED6).
 Violin solo—Isolde Menges, "Salut D'Amour" (Elgar) (H.M.V. Record D1313).
 6.27: Tacet.
 6.30: Orchestral—Philadelphia Symphony Orchestra, "Invitation to the Waltz" (Weber) (H.M.V. Record D1285).
 Bass-baritone solo, Peter Dawson, "Travellers All, of Every Station" (Balfe) (H.M.V. Record C1442).
 6.42: Tacet.
 6.45: Waltz—International Concert Orchestra, "Estudiantina" (Waldteufel) (Zonophone Record EF6).
 Novelty duet—Dalhart and Robison, "The Little Green Valley" (H.M.V. Record EA382).
 Saxophone solo—Rudy Wiedoeft, "Rubenola" (Wiedoeft) (Zonophone Record EE119).
 6.56: Tacet.
 7.0: News session, market reports, and sports results.
 7.40: Lecturette—Representative Agricultural Department, "For the Man on the Land."
 8.0: Chimes of the G.P.O. clock.
 8.1: Overture—Orchestra, "Entry of the Boyards" (Halvorsen).
 8.9: Tenor solo—Mr. E. W. Robbins, "A Feast of Lanterns" (Bantock).
 8.13: Humorous sketch—The Two Billed Owls, "2 A.S.S." (MS).
 8.20: Jazz piano solos and vocal solos—Messrs. Claude Hoare and Edward Silver, "Latest Jazz Piano and Popular Song Numbers."
 8.27: Suite—Orchestra, "Suite Romaneque" (Besley).
 8.35: Soubrette—Mrs. M. R. Lightbody, "I Couldn't, Could I?" (Roehel).
 8.39: Solo and chorus—Zonophone Light Opera Company, Gems from "The Pirates of Penzance" (Sullivan) (Zonophone Record A332).
 8.43: Tenor solos—Mr. E. W. Robbins, (a) "The Hidden Treasure" (York Bowen); (b) "Until" (Sanderson) (by request).
 8.50: Instrumental—Orchestra, repeat number.
 8.58: Weather report.
 9.2: Humour and vocal—The Two Billed Owls, (a) "Sweeping T' Chimbley" (MS); (b) "Jack Shepherd" (Blanc).
 9.9: Jazz piano and vocal—Messrs. Claude Hoare and Edward Silver, "Latest Jazz Piano and Popular Song Numbers."
 9.16: Solo and chorus—Zonophone Light Opera Company, Gems from "The Pirates of Penzance" (Sullivan) (Zonophone A332).
 9.20: Soubrette—Mrs. M. R. Lightbody, "The Lilac Tree" (Garlan).
 9.24: Instrumental—Orchestra, (a) "Licho" (Drigo); (b) "Pas de Bohe miens" (Drigo).
 9.30: "His Master's Voice" dance programme:
 Bass-baritone solo, Peter Dawson, "Captain Harry Morgan" (Bantock) (H.M.V. Record B2884).
 Foxtrot with vocal refrain—Arcadians Dance Orchestra, "Fascinating Eyes" (Snyder) (Zonophone 5249).
 Foxtrot—Jack Pettis and His Pets, "A Bag of Blues" (Goering) (Zonophone EE138).
 Waltz—Arcadians Dance Orchestra, "Ah, Sweet Mystery of Life" (Herbert) (Zonophone 5249).
 9.42: Baritone solo—Noel Coward, "Try to Learn to Love" (Coward) (H.M.V. B2720).
 Foxtrot—Ambrose and his Orchestra, "Try to Learn to Love" (Coward) (H.M.V. B5487).
 Foxtrot—Pack Pettis and His Pets, "Freshman Hop" (Goering) (Zonophone EE138).
 9.51: Humour—Leonard Henry, "The Tale of the Talkies" (Henry) (H.M.V. B2916).
 Foxtrot—Arcadians Dance Orchestra, "Our Canary" (Butler) (Zonophone 5251).
 Foxtrot—Ambrose and His Orchestra, "Dance, Little Lady" (Coward) (H.M.V. B5487).
 Foxtrot—Arcadians Dance Orchestra, "Dreaming of To-morrow" (Pole) (Zonophone 5251).
 10.3: Baritone solo—Noel Coward, "Dance, Little Lady" (Coward) (H.M.V. B2720).
 Foxtrot with vocal refrain—Geo Olsen and his Music, "Old Man Sunshine" (Dixon) (H.M.V. EA422).
 Foxtrot with vocal refrain—Pari Central Orchestra, "Then Came the Dawn" (Dubin) (Zonophone EE144).
 Waltz—The Troubadours, "Diane" (Rapee) (H.M.V. EA269).
 10.15: Wurlitzer organ solos—Leslie James, (a) "Just Imagine!" (de Sylva); (b) "Lily of Laguna" (Stuart) (H.M.V. Record B2902).
 Foxtrot—Arcadians Dance Orchestra, "The Man I Love" (Gershwin) (Zonophone 5182).

- Foxtrot with vocal refrain—"Sentimental Baby" (Palmer) (Zonophone EE144).
 Foxtrot—Arcadians Dance Orchestra, "A Room With a View" (Coward) (Zonophone 5167).
 10.30: Humour—Leonard Henry, "General Post" (Henry) (H.M.V. B2916).
 Community Lancers—Bert Firman's Dance Orchestra, Figures 1, 2, 3, 4, and 5 (Zonophone 5117/8).
 10.42: Baritone solo—Maurice Elwin, "Don't Keep Me in the Dark, Bright Eyes" (Wendling) (Zonophone 5243).
 Foxtrot—Nat Shilkret's Orchestra, "Nagasaki" (Dixon) (H.M.V. EA412).
 Foxtrot with vocal chorus—Geo. Olsen's Music, "Doin' the Raccoon" (Klages) (H.M.V. EA422).
 10.51: Baritone solo—Maurice Elwin, "The First Kiss" (Dubin) (Zonophone 5243).
 Foxtrot with vocal refrain—Statler Pennsylvanians, "It Goes Like This" (Caesar) (H.M.V. EA446).
 Waltz—Nat Shilkret's Orchestra, "Till We Meet Again" (Egan) (H.M.V. EA412).
 11.0: Close down.

3YA, CHRISTCHURCH (306 METRES).—TUESDAY, JULY 23.

SILENT DAY.

4YA, DUNEDIN (463 METRES).—TUESDAY, JULY 23.

- 3 p.m.: Town Hall chimes.
 3.1: Relay of instrumental music from the Ritz.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session, conducted by Big Brother Bill.
 7.0: News session.
 7.30: Lecturette—"Greece and the Modern World" (under the auspices of the Workers' Educational Association).
 8.0: Town Hall chimes.
 Studio concert by the St. Kilda Band, under the conductorship of Mr. James Dixon, and assisting artists.
 8.1: March—Band, "Constellation" (Clark).
 8.7: Soprano solos—Miss Valda McCurdy, (a) "Three Fishers" (Hullah); (b) "Yesterday and To-day" (Spross).
 8.14: Selection—Light Opera Company, "Bohemian Girl" (Balfe) (H.M.V. Record EB9).
 8.22: Recitals—Miss Beryl Cooper, (a) "If" (Kipling); (b) "The Fool" (anon.).
 8.34: Waltz—Band, "Reflections" (Bordogni).
 8.40: Tenor solos—Mr. H. Drew, (a) "The Yeoman of England" (German); (b) "To a Miniature" (Brahe).
 8.47: Whistling solo—Sybil Sanderson, "Honeymoon Waltz" (Arden and Sherwood) (Columbia Record 3901).
 8.50: Selection—Band, "Lucia di Lammermoor" (Donizetti).
 9.2: Weather report.
 9.4: Xylophone solo—W. Bennett, "Ge Whizz!" (Brooke) (Columbia Record 02575).
 9.8: Cornet solo with band accompaniment—"Moonbeam" (Smith).
 9.15: Soprano solo—Miss Valda McCurdy, "Waltz Song" ("Merrie England") (German).
 9.19: Chorus—"Sea Songs" (H.M.V. Record EB25).
 9.23: Morceau—Band, "Turkish Patrol" (Michaelis).
 9.31: Recital—Miss Beryl Cooper, "Lochnivar" (Scott).
 9.38: Intermezzo—Band, "Love Belis" (Dorel).
 9.42: Tenor solo—Mr. H. Drew, "El Lucevan le Helle" (Puccini).
 9.49: Chorus—Light Opera Company, "Hit the Deck" Vocal Gems (Youmans) (H.M.V. Record C1433).
 9.56: March—Band, "Fearless and Free" (Hawkins).
 10.0: Close down.

Wednesday, July 24**1YA, AUCKLAND (333 METRES).—WEDNESDAY, JULY 24.**

- 12.30 p.m.: Relay of community singing from the Town Hall.
 1.30: Close down.
 3.0: Afternoon session—Selected studio items.
 4.0: Literary selection by the Announcer.
 4.8: Studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session conducted by Uncle Tom.
 7.0: News session.
 7.40: Talk—Madame Mabel Milne, "Health Foods and Diet."
 8.0: Chimes.
 8.1: Special programme presented by members of the Jubilee Institute for the Blind:
 Selection—Band, "Washington Greys" (Graffula).
 Pianoforte duet—Connie Whitford and Rena Bedogni, (a) "Pony Race," (b) "Little Patriot" March (Krogan).
 Recitals—Ruth Eder, (a) "Elizabeth's Christmas Presents," (b) "In the Fashion."

- Part-song—School Choir, (a) "Gipsy Song" (Morrison), (b) "The Bells" (Morrison).
 Pianoforte duet—Misses B. MacKenzie and M. Bray, "Qui Vive?" (Ganz).
 Recital—Rena Bedogni, "The King's Breakfast" (Milne).
 Pianoforte solo—Miss L. Martin, "The Two Larks" (Leschetitzky).
 Part-songs—School Choir, (a) "See Our Oars" (Stevenson), (b) "Dawn" (Goate).
 Recital—Raymond Browne, "Mulga Bill's Bicycle."
 Pianoforte solos—Frank Caple, (a) "Portia," (b) "Oriental March" ("The Merchant of Venice") (Ross).
 Vocal duet—B. MacKenzie and Miss Eunice Hawkins, "My Boat is Waiting" (Smart).
 Pianoforte duet—Frank Caple and Robert Martin, "Capricante" (Paul Wache).
 Brass quartet—Band, "Oh, Harmony."
 Vocal solo—Joseph Papesch, "The Wolf" (Shield).
 Pianoforte solo—Stuart Gordon, "Prelude" (Addison Porter).
 Recital—Rob Martin, "John Common Varnishes the Parlour Suite."
 Part-song—School Choir, "A Merry Heart" (Denza).
 Selection—Band, "Here's a Rainbow Round My Shoulder" (Jolson).
 10.0: Close down.

2YA, WELLINGTON (420 METRES)—WEDNESDAY, JULY 24.

SILENT DAY.

3YA, CHRISTCHURCH (306 METRES)—WEDNESDAY, JULY 24.

- 2.45: Relay from Lancaster Park, Canterbury Jubilee Rugby Match—North v. South Sub-Unions.
 6.0: Children's session conducted by "Mother Hubbard" and Uncle Frank.
 7.0: News session.
 7.30: Addington Stock Market reports.
 8.0: Chimes.
 8.1: Special presentation of the opera "Carmen" (Bizet)—Second instalment (Columbia Records 9531-34) (Introductory remarks by Mr. W. H. Dixon, Professor of Singing).
 8.41: Instrumental—Christchurch Broadcasting Trio, "Elegia and Finale" (Arensky).
 8.53: Recital—Miss Lily Hughes, "The Lesson of the Watermill" (MS.).
 8.57: Soprano solo—Mrs. Mary Rogers, "The Splendour of the Morn" (Sanderson).
 9.1: Weather report.
 9.6: Contralto solos—Miss Vera Martin, (a) "Elegie" (Massenet), (b) "Lie There, My Love" (McCunn).
 9.12: Cello solo—Mr. Harold Beck, "On Wings of Song" (Mendelssohn).
 9.16: Baritone solos—Mr. Bernard Rennell, (a) "Obstination" (Fontenaille), (b) "The Rebel" (Wallace).
 9.23: Instrumental—Christchurch Broadcasting Trio, (a) "Abenilled" (Schumann); (b) "Melodies Mignonnes" (Sinding), (c) "Allegretto" (Brahms).
 9.31: Soprano solos—Mrs. Mary Rogers, (a) "The Swallows" (Cowen), (b) "The Fleeting Hour" (Dorothy Lee).
 9.38: Recital—Miss Lily Hughes, "How the Great Guest Came" (MS.).
 9.44: Contralto solos—Miss Vera Martin, (a) "I Wonder if Love is a Dream" (Forster), (b) "I Am Longing for the Spring" (Morris).
 9.51: Cello solo—Mr. Harold Beck, "Nocturne" (Tschalkowsky).
 9.55: Baritone solos—Mr. Bernard Rennell, (a) "Bois Epais" (Sombre Woods) (Lully), (b) "From Oberon in Fairyland" (Slater).
 10.1: Close down.

4YA, DUNEDIN (463 METRES)—WEDNESDAY, JULY 24.

- 3 p.m.: Town Hall chimes.
 3.1: Selected gramophone items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session conducted by Aunt Anita.
 7.0: News session.
 8.0: Town Hall chimes.
 8.1: Relay from the Empire Theatre—Mr. Leslie Harvey at the Christie Organ.
 8.15: Scottish songs—Mr. Buster Brown, (a) "The Bounding Bounder" (Lauder), (b) "I've Loved Her Ever Since She was a Baby" (Lauder).
 8.22: Sketch—Miss Anita Winkel and Major F. H. Lampen, "Waiting for a Bus" (Hitchens).
 8.37: Suite—Paul Whiteman's Orchestra, "Suite of Serenades" (Herbert: (1) Spanish, (2) Chinese, (3) Cuban, (4) Oriental (Herbert) (H.M.V. Record EB26).
 8.45: Tenor solos—Mr. George Crawford, (a) "Jock o' Hazeldean" (Paterson), (b) "Mary of Argyle" (Nelson).
 8.52: Relay of orchestral overture from the Empire Theatre.
 8.59: Weather report.
 9.1: Scottish song—Mr. Buster Brown, "I Belong to Glasgow" (Fyffe).
 9.5: Sketch—Miss Anita Winkel and Major F. H. Lampen, "Phyllida Flouts Me" (Ward Locke).
 9.15: Orchestral—New Light Symphony Orchestra, "Barcarolle" ("Tales of Hoffman"—Offenbach) (H.M.V. Record B2377).

- 9.19: Tenor solo—Mr. Geo. Crawford, "An Eriskay Love Lilt" (Kennedy-Fraser).
 9.23: Relay of novelty entr'acte from the Ritz.
 9.33: "His Master's Voice" Dance Programme:
 Foxtrot with vocal refrain—Aaronson's Commanders, "My Scandinavian Gal" (Tobias) (H.M.V. EA460).
 Foxtrot with vocal refrain—Shilkret's Orchestra, "My Tonia" (de Sylva) (H.M.V. EA478).
 Foxtrot with vocal refrain—Hamp's Kentucky Serenaders, "What D'ya Say?" (Brown) (H.M.V. EA460).
 9.43: Tenor solo—Franklyn Baur, "Marie" (Berlin) (Zonophone EE135).
 Waltz with vocal refrain—The Troubadours, "Live and Love" (Klages) (H.M.V. EA478).
 Wurlitzer organ solo—Jesse Crawford, "Me and the Man in the Moon" (Leslie) (H.M.V. EA491).
 Foxtrot with vocal refrain—Shilkret's Orchestra, "I Still Keep Dreaming of You" (Davis) (H.M.V. EA461).
 9.56: Bass and chorus—Paul Robeson, "Plantation Songs" (H.M.V. C1585).
 Hawaiian—Kolomoek's Honoluluans, "Aloha-oe" (Liliuokalani) (Zonophone EF23).
 Foxtrot with vocal refrain—Shilkret's Orchestra, "Cross Roads" (Klages) (H.M.V. EA461).
 Hawaiian—Kolomoek's Honoluluans, "Three o'Clock in the Morning" (Robledo) (Zonophone EF23).
 Orchestral—London Orchestra, "On With the Show" (Nicholls) (Zonophone 5187).
 Wurlitzer organ solo—Reginald Foort, "Worryin'" (Fairman) (H.M.V. EA491).
 10.19: Tenor solos—Walter Glynne, (a) "Jeunesse" (Barry), (b) "I Love the Moon" (Rubens) (H.M.V. B2761).
 Foxtrot—Rhythm Band, "There Are Eyes" (Keyes) (H.M.V. EA463).
 Foxtrot with vocal refrain—Rhythmic Eight, "Saskatchewan" (Gilbert) (Zonophone EE126).
 Foxtrot with vocal refrain—New Mayfair Orchestra, "Why is the Bacon so Tough?" (Prentice) (H.M.V. EA469).
 10.35: Male quartet—Masters Lough and Messrs. Dixon and Hastwell, "Drink to Me Only with Thine Eyes" (arr. Ball) (H.M.V. Record B2770).
 Saxophone duet—Rudy Wiedoeft and Arnold Briihart, "The Swallow" (Zonophone EE129).
 Foxtrot with vocal refrain—Aaronson's Commanders, "I'll Get By as Long as I Have You" (Turk) (H.M.V. EA466).
 Waltz with vocal refrain—The Troubadours, "Dolores" (Grossman) (H.M.V. EA477).
 10.48: Accordion with banjo—P. Fosini, "Silver Moon" Waltz (Frosini) (Zonophone EE129).
 Foxtrot with vocal refrain—McEnelly's Orchestra, "Sleep, Baby, Sleep" (Tucker) (H.M.V. EA466).
 Waltz with vocal refrain—The Troubadours, "Love Dreams" (Harris) (H.M.V. EA475).
 Foxtrot with vocal refrain—Geo. Olson's Music, "Sonny Boy" (H.M.V. EA441).
 11.0: Close down.

Reduced Rail Fares**FOR SCHOOL VACATION
HOLIDAYS**

Already the young folk are eagerly counting the days before VACATION... their prospects for a real health and brain recruiting holiday are brightened by a general issue of Railway Holiday Excursion Tickets from 22nd to 31st August—available for return until 28th September.

The Concession Fares are for everyone—from and to all Stations.

Thursday, July 25

1YA AUCKLAND (333 METRES)—THURSDAY, JULY 25.

- 3.0 p.m.: Programme presented by Messrs. Lewis Eady Ltd. (All piano accompaniments and solos will be played on the Williams Playola).
- 4.0: Talk—Miss Edith Sutherland, "Home Handicrafts."
- 4.15: Selected studio items.
- 4.30: Close down.
- 6.0: Children's session, conducted by Peter Pan.
- 7.0: News session.
- 7.40: Talk—Mr. N. M. Richmond B.A., "The Modern Age—As H. G. Wells Sees It."
- 8.0: Chimes.
- 8.1: Presentation of Novelty Programme—"What Did You Do in the Great War, Daddy?"
- 9.30: "Brunswick" Dance Programme:
Foxtrots with vocal chorus—Bob Haring's Orchestra, (a) "Some Sweet Day" (Shikret); (b) "Weary River" (Clarke-Silvers) (Brunswick Record 4273).
Foxtrots with vocal chorus—The Clevelanders: (a) "I'm Thirsty for Kisses—Hungry for Love" (Davis); (b) "A Little Town Called Home, Sweet Home" (Donaldson) (Brunswick Record 4252).
- 9.43: Wurlitzer organ solos—Eddie Dunstedter, (a) "Parade of the Wooden Soldiers" (Jessel); (b) "Ah! Sweet Mystery of Life" (Young), (Brunswick Record 4293).
Waltz with vocal chorus—The Thematics Orchestra, "Giovanna" (Kountz) (Brunswick Record 4297).
Foxtrot with vocal chorus—Bob Haring's Orchestra, "A Night in May" (Simon) (Brunswick Record 4310).
Waltz with vocal chorus and whistling, The Eight Radio Stars, "The Dream Girl of P.L.K.A." (Shields), (Brunswick 4310).
- 10.0: Male trio—Earl Burnett's Biltmore Trio, "Avalon Town" (Brunswick Record 4263).
Foxtrots with vocal chorus—The Captivators: (a) "I Used to Love Her in the Moonlight" (Lewis); (b) "Step by Step, Mile by Mile" (Silver) (Brunswick 4308).
Waltz with vocal chorus—The Thematics Orchestra, "Lady Divine" (Kountz) (Brunswick Record 4297).
- 10.13: Solo and chorus—Vernon Rickard with Hatch's Melody Makers, "One Golden Hour With You" (Pollack) (Brunswick Record 4262).
Foxtrot with vocal chorus—Fred Hamm and His Collegians, "True Blue" (Garland) (Brunswick Record 4294).
Foxtrots with vocal chorus—Bob Haring's Orchestra, (a) "Down Among the Sugar Cane" (Tobias); (b) "Because I Know You're Mine" (Derickson), (Brunswick Record 4283).
Waltz with vocal chorus—Colonial Club Orchestra, "Why Don't You Love Me?" (Mason) (Brunswick Record 4294).
- 10.30: Male chorus—Famous Forty Elks Chorus, "Sweet and Low" (Tennyson-Barnby) (Brunswick Record 3973).
Soprano solo—Elizabeth Rethberg, "By a Lonely Forest Pathway" (Chapman) (Brunswick Record 15146).
Foxtrots with vocal chorus—Bob Haring's Orchestra, (a) "Deep Night" (Vallee), (b) "Wedding Bells" (Kuhai) (Brunswick Record 4246).
- 10.42: Organ with trumpet and drum—Lew White, "Sweethearts on Parade" (Newman) (Brunswick Record 4263).
Organ with guitar and vibraphone—Lew White, "My Tonia" (de Sylva) (Brunswick Record 4263).
Vocal duet with whistling and orchestra—Frank Luther and Carson Robison, (a) "Old Kentucky Cabin" (Robison); (b) "Blue Lagoon" (Robison) (Brunswick Record 4222).
Waltz with vocal chorus—Hotel Roosevelt Orchestra, "Coquette" (Berlin) (Brunswick Record 4284).
Foxtrot with vocal chorus—Hotel Roosevelt Orchestra, "Till We Meet" (Davis) (Brunswick Record 4284).
- 11.0: Close down.

2YA, WELLINGTON (720 KILOCYCLES)—THURSDAY, JULY 25.

- 12, noon: Chimes of the G.P.O. clock.
- 12.1: Selected gramophone items.
- 4.30 and 4.50: Sports results to hand.
- 4.55: Close down.
- 5 p.m.: Children's session, conducted by Uncle George.
- 6.0: Dinner session:
Overture—H.M. Coldstream Guards, "1812" (Tschalkowsky) (H.M.V. Record C1369).
Chorus—Light Opera Company, "Vagabond King" Vocal Gems (Friml) (H.M.V. Record C1346).
- 6.12: Tacet.
- 6.15: Waltz—Marek Weber's Orchestra, "Wine, Women, and Song" (Strauss) (H.M.V. Record C1407).
Tenor solo—Browning Mummery, "Had You But Known" (Denza) (H.M.V. Record B2756).
March—Royal Opera Orchestra, "Marche Militaire" (Schubert) (H.M.V. Record C1279).
- 6.26: Tacet.
- 6.30: Cello solo—Pablo Casals, "O Star of Eve" (Wagner) (H.M.V. Record DB1012).
Male voices—The Revellers, "Mummy is Gone" (de Sylva) (H.M.V. Record EA384).

Wurlitzer organ solo—Leslie James, "O Sole Mio" (Di Capua) (H.M.V. Record B2792).

- 6.44: Tacet.
- 6.45: Wurlitzer organ solo—Leslie James, "Simple Aven" (Thoms) (H.M.V. Record B2792).
Bassbaritone solo, Peter Dawson, "The Old Superb" (Stanford) (H.M.V. Record C1479).
Waltz—International Concert Orchestra, "The Skaters" (Waldteufel) (Zonophone Record EF6).
- 6.55: Tacet.
- 7.0: News session, market reports, and sports results.
- 7.40: Lecturette—Miss M. S. Christmas, Canine Nurse—"Showing and Treatment of Dogs."
- 8.0: Chimes of the G.P.O. clock.
Special programme to commemorate the opening of the Wellington Radio Exhibition.
- 8.1: Relay from the Wellington Town Hall—the opening ceremony of the Wellington Radio Exhibition. (The Exhibition will be opened by the Postmaster-General, the Hon. J. B. Donald.)
- 8.15: Overture—Wellington Municipal Tramways' Band, "L'Amour de Village" (Bonillon).
- 8.21: Soprano solo—Miss Nora Gray, "Carmena" (Lane Wilson).
- 8.25: Part-song, Wellington Welsh Society's Choir, "I Was Tossed by the Winds" (Parry).
- 8.29: Waltz—Wellington Municipal Tramways' Band, "Donau Wellen" (Ivanovici).
- 8.35: Selected studio items:
Orchestral—Jack Hylton's Orchestra, "The Selfish Giant" (Coates) (H.M.V. Record C1253).
Vocal duet with violin and guitar—Dalhart and Robison, "Oh, Suzanna" (Foster) (H.M.V. Record EA309).
Violin solos—Tosca Seidel, (a) "Hungarian Dance, No. 1" (Brahms); (b) "Slavonic Dance, No. 2, in E Minor" (Dvorak-Kreisler) (Columbia Record 09504).
Continuation of relay from the Radio Exhibition.
- 8.54: American sketch—Wellington Municipal Tramways Band, "An Ole Kentucky" (Douglas).
- 9.3: Weather report.
- 9.6: Baritone solo—Mr. Ernest Short, "Money O" (Head).
- 9.10: Light song at piano—Mr. E. A. Sargent, "The Fine Old English Gentleman" (Clare).
- 9.15: Trombone solo with band accompaniment, Bandsman Tallantyne, "Jig Saw" (Sutton).
- 9.30: Waltz—Wellington Municipal Tramways' Band, "Luna" (Linck).
- 9.25: Selected studio items:
Wurlitzer organ solos—Milton Charles, (a) "Back in Your Own Backyard" (Jolson); (b) "Are You Happy?" (Ager) (Columbia Record 01184).
Orchestral—National Symphony Orchestra, (a) "La Traviata—Prelude" (Verdi); (b) "Sylvia Ballet—Cortege de Bacchus" (Delibes) (H.M.V. Record EB24).
Hawaiian—(a) Hawaiian guitars, "Medley Waltz" (Hopkins); (b) Athenian Mandolin Quartet, "Aloha Land" (Ferreira) (H.M.V. Record EA24).
- 9.45: Continuation of relay from the Radio Exhibition;
Selection—Wellington Municipal Tramways Band, "Faust" No. 1 (Gounod).
- 9.54: Contralto solo—Miss Hilda Chudley, "Swing Low, Sweet Chariot" (Burleigh).
- 9.58: Part songs—Wellington Welsh Society's Choir (a) "All Through The night" (trdtl.); (b) "Dymuniad Plentyn" (Price).
- 10.6: Humour—Mr. E. A. Sargent, "Under the Circumstances" (Spurr).
- 10.10: Fantasia—Wellington Municipal Tramways' Band, "In Canton Town" (Bailey).
- 10.15: Tenor solo—Mr. G. Austin Blackie, "One Little Hour" (Sharp).
- 10.20: Chorus—Wellington Welsh Society's Choir, (a) "Men of Harlech" (trdtl.); (b) "Let the Hills Resound" (Richards).
- 10.28: March—Band, "The Soldier's Return" (Rimmer).
- 10.32: Close down.

3YA, CHRISTCHURCH (306 METRES)—THURSDAY, JULY 25.

- 3 p.m.: Afternoon session—selected gramophone items.
- 4.25: Sports results to hand.
- 4.30: Close down.
- 6.0: Children's session, conducted by Uncle John.
- 7.0: News session.
- 7.30: Talk—under the auspices of the Canterbury Progress League.
- 8.0: Chimes.
- 8.1: Overture—Rebroadcast of 2YA, Wellington.
- 8.9: Baritone solo—Mr. Jas Filer, "The Harp that Once Through Tara's Halls" (trdtl.).
Soprano solo—Madame Gower-Burns, "The Last Rose of Summer" ("Martha") (Flotow).
- 8.18: Pianoforte solos—Miss Dorothy Davies, (a) "Intermezzo in B Flat Minor" (Brahms); (b) "Capriccio in B Minor" (Brahms).
- 8.23: Vocal quartet—Grand Opera Quartet, "Eileen Aroon" (arrgd Walford).
- 8.27: Organ solo—Arthur Meale, "March on a Theme by Handel" (Handel) (H.M.V. Record C1277).

FIRST PRIZE
£2,000
2nd - £500
3rd - £250

4 of £100
 4 of £50 4 of £25
 20 of £10 70 of £5
 (All Prizes in Alluvial Gold)

105 PRIZES
TOTAL £4000

"OUT OF THE BLUE MAYBE FOR YOU"

OBJECTS.—For the purpose of raising funds for the purchase of an Aerodrome, Plant and Machines for the Auckland Aero Club.

Secretary: L. W. SWAN. Treasurer: W. J. POTTER
 P.O. BOX 1505, AUCKLAND

Tickets 2/6
Book of 9
for £1

**TAKE A "FLY" AT
FORTUNE**

By Permission of the Minister of Internal Affairs.

AERO CLUB ART UNION

CLOSING DATE
OCT. 21ST
DRAWING DATE
NOV. 4TH

SEND THIS COUPON NOW!

To Your Nearest Agent Listed Below.

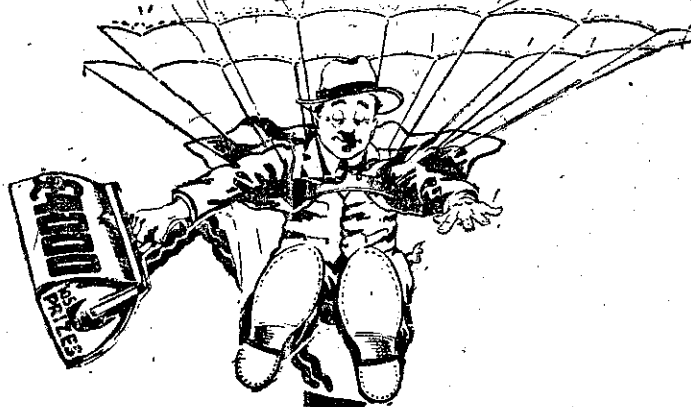
Please send me.....books/tickets, for which I enclose
 remittance of £.....

Name

Address

Please send stamped, addressed, envelope for reply.

D.X.



AUCKLAND: W. J. Potter, P.O. Box 1505, Auckland.
 GISBORNE: Max Fry, P.O. Box 136, Gisborne.
 NAPIER: F. G. Gray, P.O. Box 113, Napier.
 WELLINGTON: N. L. Stevens, P.O. Box 1460, Wellington.
 NEW PLYMOUTH: Gilmour & Whittle, Ltd., Box 127, New Plymouth.
 CHRISTCHURCH: H. McCormick, 146 Manchester St., Christchurch.
 NELSON: A. H. Robinson, P.O. Box 135, Nelson.
 GREYMOUTH: M. J. Fogarty, P.O. Box 141, Greymouth.
 DUNEDIN: H. O'Kane, 152 High Street, Dunedin.
 INVERCARGILL: J. F. Dundas & Co., Box 236, Invercargill.

- 8.31: Contralto solo—Miss Dorothy Spiller, "The Fairy Tales of Ireland" (Coates).
 8.35: Choral—Don Cossacks Choir, "Tri Piesni" (Three Folk Songs) (arrgd. Dobrowen) (Columbia Record 02712).
 8.39: Instrumental—Christchurch Broadcasting Trio, (a) "Rondo" (Pleyel); (b) "Scherzo" (Brahms).
 8.49: Tenor solo—Mr. Ernest Rogers, "Macushla" (Macmarrrough).
 8.53: Vocal quartet—Grand Opera Quartet, "The Meeting of the Waters" (Foster).
 8.58: Weather report.
 9.3: Orchestral—Berlin State Opera Orchestra, "Don Juan" (Mozart) (Parlophone Record C10508).
 9.11: Baritone solo—Mr. James Filer, "The Minstrel Boy" (trdtl.).
 9.15: Soprano solo—Madame Gower-Burns, "Irish Cradle Song" (Alfred Hill (first time sung in Christchurch)).
 9.19: Pianoforte solo—Miss Dorothy Davies, "Etude en Forme de Valse" (Saint-Saens).
 9.27: Contralto solo—Miss Dorothy Spiller, "The Green Ribbon" (Schubert).
 9.31: Vocal quartet—Grand Opera Quartet, "Silent O'Moyle" (trdtl.).
 9.35: Orchestral—Royal Opera Orchestra, "Shepherd Fennel's Dance" (Gardner) (H.M.V. Record C1469).
 9.39: Instrumental—Christchurch Broadcasting Trio, (a) "Conzonetta" ("Concerto Romantique") (Godard); (b) "Gavotte" (Gluck); (c) "Waltz" ("Serenade") (Tschalkowsky).
 9.49: Tenor solo—Mr. Ernest Rogers, "Bileen Mavourneen" ("The Lily of Killarney") (Benedict).
 9.53: Vocal quartet—Grand Opera Quartet, "The Unseen Comrade" (Salmon).
 9.56: Orchestral—Royal Opera Orchestra, "The Sleeping Beauty" (Tschalkowsky) (H.M.V. Record C1469).
 10.0: Close down.

4YA, DUNEDIN (463 METRES)—THURSDAY, JULY 25.

SILENT DAY.

Friday, July 26

1YA, AUCKLAND (333 METRES)—FRIDAY, JULY 26.

3 p.m.: Afternoon session—selected studio items.

- 4.0: Literary selection by the Announcer.
 4.8: Studio items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session, conducted by Nod and Aunt Jean.
 7.0: Talk—Mr. F. Sutherland, "Rugby Football."
 7.15: News and market reports.
 7.40: Talk—Mr. F. Williams, "The Down and Outs."
 8.0: Chimes.
 8.1: Relay of concert from the Lewis Eady Hall.
 8.30: Baritone solo—Mr. John Bree, "On the Road to Mandalay" (Speaks).
 8.34: Instrumental—Studio Trio, "Peer Gynt Suite" (Grieg): 1 Morning, 2 Death of Ase, 3 Anitra's Dance.
 8.43: Contralto solo—Miss Madge Clague, "The Blackbird's Song" (Scott).
 8.47: Organ and vocal—Mr. Arthur E. Wilson and Miss D. Logan: 1 Hymn study on "O, Worship the King" (arrgd. Wilson). (2) "Gavotte in" (Gluck-Brahms). (3) Soprano solo, "Tis in Vain That I Seek" (Massenet). 4 Cantique d'Amour" (Sheppard).
 9.7: Weather report.
 9.9: Talk—Mr. A. B. Chappell, M.A., Topical Talk.
 9.24: Pianoforte solo—Mr. Eric Waters, "Rigaudon" (Raff).
 9.28: Baritone solos—Mr. J. Bree, (a) "Eleanore" (Taylor); (b) "Drink to Me Only With Thine Eyes" (Quilter).
 9.35: Organ and vocal—Mr. A. E. Wilson and Miss D. Logan, (a) "Four Indian Love Lyrics" (Woodforde-Finden): (1) "Temple Bells"; (2) "Less Than the Dust"; (3) "Kashmiri Song"; (4) "Till I Wake"; (b) Mezzo-soprano solo, selected.
 9.55: Instrumental—Studio Trio, "Four Bavarian Waltzes" (Frank).
 10.3: Contralto solos—Miss M. Clague, (a) "The Land of the Sky Blue Water" (Cadman); (b) "The Moon Drops Low" (Cadman).
 10.10: Close down.

2YA, WELLINGTON (720 KILOCYCLES)—FRIDAY, JULY 26.

- 12 noon: Chimes of the G.P.O. clock.
 12.1: Selected studio items.
 3.40: Relay from Messrs. Kirkcaldie and Stains' Tearooms of music by the Trio.
 4.0: Selected studio items.
 4.30 and 4.50: Sports results to hand.
 4.55: Close down.
 5.0: Children's session, conducted by Big Brother Jack.
 6.0: Dinner session:
 Orchestral—Royal Opera Orchestra, "Carmen Ballet" Nos. 1 and 2 (Bizet) (H.M.V. Record C1424).
 Chorus—Light Opera Company, Gems from "Princess Flaria" (Smith) (H.M.V. Record EB22).
 6.13: Tacet.
 6.15: Violin solo—Fritz Kreisler, "From the Land of the Sky Blue Water" (Cadman) (H.M.V. Record DA745).

Chorus—Light Opera Company, Gems from "The Blue Mazurka" (Lehar) (H.M.V. Record EB11).

Waltz—International Concert Orchestra, "Gipsy Love" (Lehar) (Zonophone Record EF17).

6.25: Tacet.

6.30: Orchestral—Victor Salon Orchestra, "Indian Love Call" (Friml) (H.M.V. Record EA186).

Vocal duet—Winnie Melville and Derek Oldham, "Sympathy" (Strauss) (H.M.V. Record C1502).

Waltz—International Concert Orchestra, "Sweetheart" (Strauss) (Zonophone Record EF17).

6.40: Tacet.

6.45: Orchestral—New Light Symphony Orchestra, "The Dancing Doll" (Poldini) (H.M.V. Record B2629).

Bass-baritone solo, Peter Dawson, "The Kerry Dance" (Molloy) (H.M.V. Record C1442).

Waltz—International Concert Orchestra, "Sari Waltz" (Kalman) (Zonophone Record EF18).

6.55: Tacet.

7.0: News session, market reports, and sports results.

7.40: Lecture—Mr. R. R. Money, late Royal Air Force, "Air Communications."

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

8.1: Relay from the Town Hall of Radio Exhibition Concert: Overture—Orchestra, "The Bohemian Girl" (Balfe).

8.9: Soprano solo—Miss P. Liddell, "The Eri King" (Schubert).

8.14: Part songs—Wellington Harmonic Society (a) "The Bells of St. Michael's Tower" (Stewart); (b) "An Eriskey Love Lilt" (Robertson). (Conductor, Mr. H. Temple White.)

8.22: Selection—Orchestra, "Midsummer Night's Dream" (Mendelssohn).

8.30: Selected studio items: Cello solos—Caspar Cassado (a) Menuett" (Haydn); (b) "Chanson Villa geoise" (Popper) (Columbia Record 03595).

Russian folk songs, Balalaika Orchestra, (a) "Shining Moon"; (b) "Volga Boat Song" (H.M.V. Record EA48).

Chorus—London Hippodrome Chorus, "Hit the Deck" Medley (Youmans) (Columbia Record 02621).

Continuation of Radio from Radio Exhibition:

8.50: Instrumental—Orchestra, "Master Melodies from the Opera" (arrgd. Roberts).

8.58: Weather report.

9.0: Part-songs, Wellington Harmonic Society, (a) "Negro Dirge" (Robertson); (b) "Bridal Chorus" ("The Rose Maiden") (Cowan).

9.11: Contralto solo—Mrs. W. J. Coventry, "Homage" (Del Riego).

9.15: Humour—Mr. W. J. McKeon, "My Financial Career" (Leacock).

9.22: Instrumental—Orchestra, repeat number.

9.30: Selected studio items:

Wurlitzer organ solos—Reginald Foort, "Nutteracker Suite—Miniature Overture, and Waltz of the Flowers" (Tschalkowsky) (H.M.V. C1886).

Marches—American Legion Band, (a) "The Conqueror" (Teike); (b) "Iowa Corn Song" (Beeston) (Zonophone Record 2909).

Mandolin band—Circulo Mandolinistico, (a) "Serenade—Les Millions d'Arlequin" (Drigo); (b) "Carmen—Intermezzo" (Bizet) (Columbia Record 0989).

9.50: Continuation of relay from Radio Exhibition:

Instrumental—Orchestra, (a) "Talisman" Valse (Drigo); (b) "Praeludium" (Jarnefeldt).

9.53: Tenor solo—Mr. E. W. Robbins, "The Sea Gipsy" (Head).

10.2: Humour—Mr. W. J. McKeon, "War Anecdotes" (anon.).

10.9: Instrumental—Dance Orchestra, "Dance of the Tumblers" ("The Snow Maiden") (Rimsky-Korsakov).

10.14: Bass solo—Mr. E. McLellan, "The Midnight Review" (Glinka).

10.18: Part songs—Wellington Harmonic Society, (a) "My Bonnie Lass She Smileth" (German); (b) "The Viking's Song" (Coleridge-Taylor).

10.26: Instrumental—Orchestra, "Der Frieschutz" Fantasie (Weber).

10.31: Close down.

3YA, CHRISTCHURCH (306 METRES)—FRIDAY, JULY 26.

3 p.m.: Afternoon session—selected gramophone items.

4.25: Sports results to hand.

4.30: Close down.

6.0: Children's session, conducted by "Storyman."

7.0: News session.

8.0: Chimes.

8.1: Overture—Rebroadcast of 2YA, Wellington.

8.9: Vocal quartet—Valencia Quartet, "Will o' the Wisp" (Cherry).

8.13: Soprano solo—Mrs. Lucy O'Brien, "Boat Song" (Ware).

8.16: Violin solos—Miss Irene Morris, (a) "Meditation" (Massenet); (b) "Tempo di Minuetto" (Pugnani-Kreisler).

8.24: Tenor solo—Mr. W. Bradshaw, "Madelina" (James).

8.28: Saxophone solo—Mr. Les Marston, "Rubenola" (Wiedoeft).

8.32: Contralto solo—Miss Mary Taylor, "Annie Laurie" (Lehmann).

8.36: Instrumental—Christchurch Broadcasting Trio, (a) "Barcarolle" (Offenbach); (b) "Slavonic Dance No. 2" (Dvorak).

8.40: Baritone solo—Mr. E. J. Johnson, "The Carfew" (Gould).

8.50: Vocal quartet—Valencia Quartet, "When Evening's Twilight" (Hatton).

8.53: Dance music—Bailey-Marston Dance Orchestra, (a) "Sweethearts on Parade" (Lombardo); (b) "A Precious Little Thing Called Love" (Coots).

- 8.0: Weather report.
 9.5: Tenor solo—Mr. W. Bradshaw, "I'll Sing Thee Songs of Araby" (Clay).
 9.9: Humorous Scottish song—Mr. Jock Lockhart, "When I Get Back Again" (Lauder).
 9.13: Dance music—Bailey-Marston Dance Orchestra, (a) "Ten Little Miles from Home" (Schoebel); (b) "One That I Love, Loves Me" (Turk).
 9.20: Vocal quartet—Valencia Quartet, "The Parting Kiss" (Pinsuti).
 9.24: Scottish song and story—Mr. Jock Lockhart, song and story, including "Thussie" (Weston Lee).
 9.30: Dance music—Bailey-Marston Dance Orchestra, (a) "Flame of Love" Waltz (Nicholls); (b) "Sweet Music" (Wendling).
 9.38: Soprano solo—Mrs. Lucy O'Brien, "I Pitch My Lonely Caravan" (Coates).
 9.42: Contralto and baritone duet—Valetta Dun, "The Voyagers" (Sander-son).
 9.46: Dance music—Bailey-Marston Dance Orchestra, (a) "You're Wonderful" (Clay); (b) "I'm Sorry, Sally" (Lionito).
 9.54: Contralto solo—Miss Mary Taylor, "The Rosary" (Nevin).
 Baritone solo—Mr. E. J. Johnson, "Thine Only" (Bohm).
 10.0: Instrumental solo and dance music—Bailey-Marston Dance Orchestra, (a) solo, selected; (b) "Anything Wrong in That?" (Cary).
 Dance music by the Bailey-Marston Dance Orchestra.
 11.0: Close down.

4YA, DUNEDIN (463 METRES)—FRIDAY, JULY 26.

- 3 p.m.: Town Hall chimes.
 8.1: Selected gramophone items.
 4.25: Sports results to hand.
 4.30: Close down.
 6.0: Children's session, conducted by Aunt Sheila and Big Brother Bill.
 7.0: News session.
 7.30: Lecturette—Mr. H. Greenwood, Book Review.
 8.0: Town Hall chimes.
 8.1: Overture—Mengelberg's Concertgebouw Orchestra, "Anacreon Over-ture" (Cherubini) (Columbia Records 04054/5).
 8.12: Contralto solos—Miss Irene Horniblow, (a) "Maiden's Lament" (Arne); (b) "When Flora Smiles" (Ford).
 8.19: Instrumental—4YA Broadcasting Trio, (a) "Slavonic Dance No. 3" (Dvorak); (b) "Andante" (Beethoven).
 8.27: Soprano solos—Miss Eva Scott, (a) "Scenes that are Brightest" (Wal-lace); (b) "Thou'rt Like a Lovely Flower" (Schumann).
 8.34: Violin solo—Mr. Frank Parsons, "Legende" (Wienlawski).
 8.39: Recitals—Mr. C. Russell Smith, (a) "The King's Picture" (Besterick); (b) "The Old Schoolmaster" (Anon).
 8.46: Organ solos—Reginald Goss-Custard, (a) "The Question"; (b) "The Answer" (Wolstenholme) (H.M.V. Record E415).
 8.52: Baritone solos—Mr. Les Stubbs, (a) "Muleteer of Malaga" (Trottere); (b) "Trees" (Rasbach).
 8.59: Weather report.
 9.1: Pianoforte solo—Mrs. Ernest Drake, "Asphadel" (Cyril Scott).
 9.6: Bass solos—Mr. Fred Kershaw, (a) "The Bandalero" (Stuart); (b) "A Prayer to Our Lady" (Ford).
 9.13: Instrumental—4YA Broadcasting Trio, (a) "Marche Miniature Vien-noise" (Kreisler); (b) "Farewell to Cucullain" (arrgd. Kreisler).
 9.20: Contralto solo—Miss Irene Horniblow, "Lullaby" (Byrd).
 9.24: Baritone solo—Mr. Les Stubbs, "West Country Lad" (German).
 9.28: Cello solo—Mr. P. J. Palmer, "Sonata in E Minor" (Marcello).
 9.33: Recital—Mr. C. Russell Smith, "Hullo" (Anon).
 9.39: Male choir—Russian State Choir, "Storm on the Volga" (Pastchenko).
 9.48: Soprano solo—Miss Eva Scott, "The Spinning Wheel" (Thomson).
 9.52: Bass solo—Mr. Fred Kershaw, "Will the Red Sun Never Set" (Wood-forde-Pinden).
 9.56: Orchestral—International Concert Orchestra, "La Spagnola" (Di Chiara) (Zonophone Record EF15).
 10.0: Close down.

Saturday, July 27

1YA, AUCKLAND (333 METRES)—SATURDAY, JULY 27.

- 2.45 p.m.: Relay description of Rugby football match from Eden Park
 4.30: Close down.
 6.0: Children's session, conducted by Cinderella.
 7.0: News and sports results.
 7.30: Market reports.
 8.0: Chimes.
 8.1: Overture—Orchestra, "Polonaise Milifaire" (Chopin).
 8.11: Vocal duet—Basham-Briggs Duo, "True Till Death" (Adams).
 8.15: Saxophone solo—Rudy Wiedoeft, "Valse Mazanetta" (Wiedoeft) (Col-umbia Record 01176).
 8.19: Baritone solo—Mr. Arthur Briggs, "Maire, My Girl" (Aitken).
 8.23: Humour—Hebrew Two, "Happy Abe and Dismal Ike".
 8.31: Instrumental—Orchestra, (a) "La Paloma" (Yradier); (b) "Swing Song" (Barns).
 9.41: Contralto solos—Mrs. Daisy Basham, (a) "Sunshine and Rain" (Blum-enthal); (b) "I've Been Roaming" (Horn).
 9.48: Novelty—Bohemian Duo, (a) "Old Pal" (Kearne); (b) "A Precious Little Thing Called Love" (Milton).

- 8.56: Xylophone solo—Sam Herman, "Al Fresco" (Zonophone Record 2253).
 9.0: Weather report.
 9.2: Vocal duet—Basham-Briggs Duo, "I Was Dreaming" (Junker).
 9.6: Instrumental—Orchestra, "Waiata Poi" (Hill).
 9.10: Baritone solos—Mr. A. Briggs (a) "Margharita" (Lohr); (b) "My Old Dutch" (Chevalier).
 9.17: Recital—Mr. T. Harris, Selected.
 9.25: Waltz—Rio Marimba Orchestra, "My Isle of Golden Dreams" (Blau-fuss) (Columbia Record 02685).
 9.29: Contralto solo—Mrs. D. Basham, "We'd Better Bide a Wee" (Claribel).
 9.33: Cello solo with orchestral accompaniment—Miss Mollie Wright, "Slum-ber Song" (Squire).
 Cornet solo with orchestral accompaniment—Mr. W. Shepley, "Alice, Where Art Thou?" (Ascher).
 9.39: Novelty—Bohemian Duo, (a) "Sally of my Dreams" (Kernall); (b) "All by Yourself in the Moonlight" (Wallis).
 9.47: Instrumental—Orchestra, "Faust" ballet music (Gounod).
 9.57: Vocal duet—Basham-Briggs Duo, "Croon, Croon, Underneath the Moon" (Clutsam).
 10.1: "Brunswick" Dance Programme:
 Foxtrot with vocal chorus—Ray Miller's Orchestra, "He, She and Me" (Newman) (Brunswick Record 4258).
 Novelty foxtrot—Joe Rines' Orchestra, "Fashionette" (Glegau).

100% Construction

Workmanship and Material

Columbia *Layerbilt*
 Batteries are made
 of flat cells pressed
 tightly together.
 Every bit of space
 is used.



100% Reception

is assured. They last longer and are
 by far the most economical and sat-
 isfactory "B" batteries ever made.

Always insist upon Columbia, the
 world's finest radio battery.

Obtainable from all first class
 dealers.



RADIO BATTERIES

GREATEST CLARITY, VOLUME & DISTANCE

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

- 10.13: Baritone solo—Richard Bonelli, "Luna D'Estate" (Summer Moon) (Tosti-Mazzola) (Brunswick 15198).
 Foxtrot tango with vocal chorus—Colonial Club Orchestra, "Mi Amado" (My Lover) (Lewis) (Brunswick Record 4241).
 Foxtrot with vocal chorus—The Clevelanders, "What a Girl! What a Night!" (Sanders) (Brunswick 4205).
 Foxtrot—Ray Miller's Orchestra, "That's a Plenty" (Brunswick Record 4224).
 10.25: Baritone solo—Richard Bonelli, "Visione Veneziana" (Vision of Venice) (Brogi-Orvieto) (Brunswick 15198).
 Foxtrot with vocal chorus—The Six Jumping Jacks, "Olaf" (Gilbert) (Brunswick 4219).
 Foxtrot with vocal chorus—Colonial Club Orchestra, "Yo Te Amo" means "I Love You" (Bryan) (Brunswick Record 4241).
 Waltz with vocal chorus—Ray Miller's Orchestra, "The Waltz I Can't Forget" (Kahn) (Brunswick Record 4258).
 10.37: Vocal duet—Lester McFarland and Robt. Gardner, "Birmingham Jail" (Trdtl.) (Brunswick Record 293).
 Foxtrot with vocal chorus—Colonial Club Orchestra, "Monna Vanna" (Sweetheart Sublime) (Brunswick Record 4086).
 Vocal duet—Frank Luther and Carson Robison, "My Tennessee Mountain Home" (Davis) (Brunswick Record 297).
 Foxtrot with vocal chorus—The Six Jumping Jacks "The Monte Carlo Song" (Endor) (Brunswick Record 4219).
 10.50: Vocal duet—Lester McFarland and Robt. Gardner, "Go and Leave Me If You Want To" (Trdtl.) (Brunswick Record 293).
 Foxtrot with vocal chorus—Ray Miller's Orchestra, (a) "Let's Sit and Talk About You" (Fields); (b) "In a Great Big Way" (Fields) (Brunswick Record 4223).
 11.0: Close down.

2YA, WELLINGTON (720 KILOCYCLES)—SATURDAY, JULY 27.

- 12 noon: Chimes of the G.P.O. clock.
 12.1: Selected studio items.
 2.45: Relay description of football match from Athletic Park.
 5.0: Children's session, conducted by Uncle Toby and Aunt Gwen.
 6.0: Dinner session:
 Overture—New Light Symphony Orchestra, "Merry Wives of Windsor" (Nicolai) (H.M.V. Record C1260).
 Male quartet—The Revellers, "Oh, Lucindy" (Hollingsworth) (H.M.V. Record EA430).
 6.12: Tacet.
 6.15: Orchestral—Salon Orchestra, "Glow Worm Idyll" (Lincke); (b) "Nola" (Arndt) (H.M.V. Record B2169).
 Chorus—Mixed Chorus, "Sea Songs" (H.M.V. Record EB25).
 6.25: Tacet.
 6.30: Violin solo—Fritz Kreisler, "Aloha-Oe" (Liloukalani) (H.M.V. Record DA745).
 Hawaiian—Ferrer and Paaluhl, "Hawaiian Waltz Medley" (Trdtl.) (H.M.V. Record B2369).
 Dance orchestra, (a) Waring's Orchestra, "Ah! Sweet Mystery of Life" (Herbert); (b) Mayfair Orchestra, "This Year of Grace" (Coward) (H.M.V. Record EB37).
 6.41: Tacet.
 6.45: Foxtrots—All Star Orchestra, (a) "There's a Rainbow 'Round My Shoulder" (Olson); (b) "She Didn't Say Yes, She Didn't Say No" (Strong) (H.M.V. Record EA436).
 Male quartet—The Rounders, "Chlo-E" (Kahn) (H.M.V. Record EA402).
 6.55: Tacet.
 7.0: News session, market reports and sports results.
 8.0: Chimes of the G.P.O. clock.
 8.1: Relay from the Town Hall of Radio Exhibition Concert:
 Overture—Orchestra, "Slavonic Rhapsody" (Friedmann).
 8.9: Vocal quartet—Melodie Four, "Cornfields" medley (Arrgd. Holloway).
 8.13: Comic song and whistling solo—Mrs. Winifred Birch-Johnston, (a) "I Didn't 'Arf Larf" (Johnston); (b) "Girl of my Dreams" (Clapp).
 8.21: Tenor solo—Mr. Sam Duncan, "Passing By" (Purcell).
 8.25: Musical comedy selection—Orchestra, "Sunny" (Kern).
 8.33: Selected studio items:
 Tangos—International Novelty Orchestra, (a) "El Choclo" (Villoldo); (b) "Y Como La Va" (Valverde) (H.M.V. Record EA364).
 Hawaiian—Marimba Orchestra, (a) "When It's Love Time in Hawaii" (Heagney); (b) "Down Hawaii Way" (Zonophone Record 3852).
 Novelty—Savoy Orpheans, "Round the World" medley, (Arrgd. Somers) (H.M.V. Record 1223).
 8.53: Continuation of relay from Radio Exhibition:
 Novelty—Orchestra, "In a Bird Store" (Lake).
 8.59: Weather report.
 9.1: Vocal quartet—Melodie Mour, "Mosquitoes" (Bliss).
 9.5: Banjo—Mrs. H. G. Reeves, "Medley Plantation Songs" (arrgd. Reeves).
 9.11: Baritone solos—Mr. James Connell, (a) "Like Stars Above" (Squire); (b) "The Gay Highway" (Drummond).
 9.18: Humour—Mr. Len Ashton, (a) "Nelly Bly" (Original) (By request); (b) "Like the Big Pots Do" (Dandley).
 9.26: Flute and Clarinet duet with orchestral accompaniment—Messrs. Brown and Langtry, "Butterfly" (Bendix).

- 9.31: Selected studio items:
 Banjo duet—Fillis and Bright, (a) "Uncanny Banjo"; (b) "Banjoviality" (Fillis) (Columbia Record 0990).
 Waltz—International Novelty Orchestra, "Cuckoo" (Jonasson), (Zonophone Record EE67).
 Chorus—Columbia Vocal Gem Chorus—"No, No, Nanette" (Youman) (Columbia Record 9072).
 9.51: Continuation of relay from Radio Exhibition:
 Selection—Orchestra, "Martial Moments" (Arrgd. Winter).
 9.59: Vocal quartet—Melodie Four, "Drifting and Dreaming" (Arrgd. Melodie Four).
 10.3: Bass solo—Mr. W. W. Marshall, "Stonecracker John" (Coates).
 10.7: Banjo—Mrs. H. G. Reeves, "National Federation March" (Lincoln): "Popular Chorus".
 10.12: Tenor solo—Mr. Frank Bryant, "The Joy Bird" (Barnes).
 10.17: Humour—Mr. Len Ashton, "Our Village Concert" (Spurr) (By request).
 10.24: Instrumental—Orchestra, Dance Novelties.
 10.31: Dance programme.
 10.45: Sporting review.
 11.0: Close down.

3YA, CHRISTCHURCH (306 METRES)—SATURDAY, JULY 27.

- 2.45 p.m.: Relay description of football match from Lancaster Park.
 4.45 (approx.): Close down.
 6.0: Children's session, conducted by Aunt Pat and Peterkin.
 7.0: News session.
 8.0: Chimes.
 8.1: Rebroadcast of 2YA, Wellington (vaudeville programme).
 10.0: "Brunswick" dance programme:
 Novelty foxtrot—Jesse Stafford's Orchestra, "Kewpie" (Rose) (Brunswick 4249).
 Foxtrot with vocal chorus—Jesse Stafford's Orchestra, "A Precious Little Thing Called Love" (Davis) (Brunswick 4249).
 Waltz with vocal chorus—Hal Kemp's Orchestra, "One Kiss" (Romberg) (Brunswick 4216).
 Waltz (pianoforte solo) (9 Rosita Renard, "Blue Danube" (Strauss) (Brunswick 4240).
 10.16: Vocal duet—Francis Luther and Jack Parker, "Carolina Moon" (Davis) (Brunswick 4202).
 Foxtrot with vocal chorus—Brunswick Orchestra, "Lover, Come Back to Me" (Romberg) (Brunswick 4216).
 Foxtrot with vocal chorus—Gerunovich's Roof Garden Orchestra, "Telling You" (Rose) (Brunswick 4190).
 Foxtrot with vocal chorus—Joe Rine's Orchestra, "Sweetheart of All My Dreams" (Fitch) (Brunswick 4199).
 10.28: Soprano with string quartet and harp accompaniment—Marie Tiffany, "Little Grey Home in the West" (Wilmot) (Brunswick 15197).
 Foxtrot with vocal chorus—Gerunovich's Roof Garden Orchestra, "I Found You Out When I Found You In" (Ponce) (Brunswick 4190).
 Novelty foxtrot—Joe Rine's Orchestra, "Fashionette" (Glogau) (Brunswick 4199).
 Vocal duet with novelty accompaniment—Frank Luther and Carson Robison, "Wednesday Night Waltz" (Williams) (Brunswick 297).
 10.37: Vocal duet—Francis Luther and Carson Robison, "You Can't Take My Memories from Me" (Davis) (Brunswick 4202).
 Foxtrot with vocal chorus—Ray Miller's Orchestra, "No One in the World But You" (Robison) (Brunswick 4194).
 Foxtrot—Brunswick Orchestra, "Dardanella" (Fisher) (Brunswick 4218).
 Waltz with vocal chorus—Regent Club Orchestra, "Poor Punchinello" (Lewis) (Brunswick 4206).
 10.50: Soprano solo—Marie Tiffany, "Pale Moon" (Indian Love Song) (Logan) (Brunswick 15197).
 Foxtrot with vocal chorus—Brunswick Orchestra, "Redskin" (Zamecnik) (Brunswick 4218).
 Waltz with vocal chorus—Regent Club Orchestra, "Loneliness" (Polack) (Brunswick 4206).
 11.0: Close down.

4YA, DUNEDIN (463 METRES)—SATURDAY, JULY 27.

- 2.45 p.m.: Relay description of Rugby football match from Carisbrook Ground.
 4.45: Close down.
 6.0: Town Hall chimes.
 6.1: Children's session, conducted by Uncle George.
 7.0: News session.
 8.0: Town Hall chimes.
 8.1: Relay of 3YA, Christchurch. (Rebroadcast of 2YA, Wellington—vaudeville programme).
 10.0: "Brunswick" dance programme:
 Waltz with vocal chorus—Regent Club Orchestra, "Marie" (Berlin) (Brunswick 4257).
 Foxtrot with vocal chorus—Hotel Roosevelt Orchestra, "I Kiss Your Hand, Madame" (Lewis) (Brunswick 4315).
 Waltz with vocal chorus—Regent Club Orchestra, "Where is the Song of Songs for Me?" (Berlin) (Brunswick 4257).

- Foxtrot with vocal chorus—Hotel Roosevelt Orchestra, "I've Got a Feeling" (Rose) (Brunswick 4315).
- 10.13: Baritone solo—John Charles Thomas, "Rolling Down to Rio" (Kipling-German) (Brunswick 15200).
- Foxtrot with vocal chorus—Gerunovich's Roof Garden Orchestra, "Stairway of Dreams" (Stone) (Brunswick 4277).
- Foxtrot with vocal trio—Gerunovich's Roof Garden Orchestra, "That's The Good Old Sunny South" (Ager) (Brunswick 4277).
- Foxtrot with vocal chorus—Hotel Roosevelt Orchestra, "I'll Tell the World" (Turk) (Brunswick 4253).
- 10.29: Vocal solo—Bob Nolan, "Rose of Mandalay" (Magine) (Brunswick 4248).
- Foxtrot with vocal trio—Los Angeles Biltmore Hotel Orchestra, "Do You Ever Think of Me?" (Burtnett) (Brunswick 4217).
- Foxtrot with vocal chorus—Los Angeles Biltmore Hotel Orchestra, "Plodding Along" (Caminando) (Brunswick 4217).
- Foxtrots with vocal chorus—Colonial Club Orchestra, (a) "Naughty Eyes" (Fork-Locke); (b) "Leave Me With a Beautiful Melody" (Spier-Coslow) (Brunswick 4256).
- 10.43: Vocal solo—Bob Nolan, "Caressing You" (Faziolo-Klages) (Brunswick 4248).
- Foxtrots with vocal chorus—Hotel Roosevelt Orchestra, (a) "Mean to Me" (Turk); (b) "My Castle in Spain is a Shack in the Lane" (Caesar-Friend) (Brunswick 4274).
- Foxtrots with vocal chorus—The Clevelanders, (a) "Shout Hallelujah, 'Cause I'm Home!" (Dixon); (b) "There's a Place in the Sun for You" (Green, Fain) (Brunswick 4255).
- 11.0: Close down.

Sunday, July 28

1YA AUCKLAND (333 METRES)—SUNDAY, JULY 28.

- 3.0 p.m.: Afternoon session—Selected Studio items.
- 4.0: Literary selection by the Announcer.
- 4.30: Close down.
- 6.0: Children's session, conducted by Uncle Leo.
- 6.55: Relay from Beresford Street Congregational Church:
Preacher: Rev. Lionel B. Fletcher.
Choirmaster: Mr. William Gemmell.
- 8: Relay from Whangarei of concert by the Whangarei Band.
Close down.

2YA, WELLINGTON (720 KILOCYCLES)—SUNDAY, JULY 28.

- 3.0 p.m.: Afternoon session—Selected studio items.
- 4.30: Close down.
- 6.0: Children's Sunday service, conducted by Uncle George.
- 7.0: Relay of service from Taranaki Street Methodist Church:
Preacher: Rev. T. R. Richards.
Organist and Choirmaster: Mr. H. Temple White.
- 8.15 (approx.): Relay from His Majesty's Theatre of recital by the Wellington Municipal Tramways Band.
Close down.

3YA, CHRISTCHURCH (306 METRES)—SUNDAY, JULY 28.

- 3.0 p.m.: Afternoon session—Selected gramophone items.
- 4.30: Close down.
- 5.30: Children's song service.
- 6.15: Hymn chimes from studio.
- 6.30: Relay of service from St. Andrew's Presbyterian Church:
Preacher: Rev. N. L. D. Webster.
Musical Director: Mr. J. Maclean.
Organist: Mr. Robt. Lake.
- 7.45: Studio concert.
Choral—Grand Irmier Choir, "Silent Night" (Gruber), (Parlophone Record A5008).
- 7.49: Instrumental—Christchurch Broadcasting Trio, (a) "Allegro"; (b) "Scherzando"; (c) "Andante Con Moto"; (d) "Moderato and Finale" (Gade).
- 8.5: Choral—Grand Irmier Choir, (a) "Ora Pro Nobis" (Schubert-Irmier); (b) "Netherland Hymn" (Kremser), (Parlophone Record A5001).
- 8.15 (approx.): Relay from Timaru of concert by the Timaru Municipal Band.
Close down.

4YA, DUNEDIN (463 METRES)—SUNDAY, JULY 28.

- 3.0 p.m.: Town Hall chimes.
- 3.1: Selected gramophone items.
- 4.30: Close down.
- 5.30: Children's song service, conducted by Big Brother Bill.
- 6.30: Relay of service from Salvation Army Citadel:
Preacher: Captain Chandler.
- 8.5: Relay from His Majesty's Theatre of concert by the Municipal Tramways' Band, under the conductorship of Mr. C. Morgan.
- 9.15: Close down.

The Voice of Your Radio Set



You will appreciate this good Loud Speaker when you test it in comparison with the ordinary type. That is what we want you to do, HEAR RCA Speaker 103—then HEAR another kind reproduce the same programme.

Amalgamated Wireless
(Australasia) Ltd.

G.P.O. BOX 830

::

WELLINGTON.

VISIT
our stand
at the
**RADIO
EXHIBITION**
TOWN HALL,
WELLINGTON,
JULY 25, 26, 27.

Laboratory Jottings

J. A. SMYTH, Ltd., Victoria Street, Wellington, have in hand units for the linen diaphragm speaker described in our column last week. These are the original units that were used with the speaker. They have one made up, and the writer was able to hear this performing. It proved to be an excellent speaker, reproducing the bass with unusual fidelity, while the top notes were very clear. A wide range of frequencies are covered in this manner, and the speaker being very simple to construct, should appeal widely to amateur constructors.

Electrolytic Condensers.

THE greatest number of electrodynamic speakers at present on the market and operated from a six-volt source require approximately $\frac{1}{2}$ ampere of current. If this is drawn directly from an accumulator, a fairly heavy drain is placed upon it and constant recharging is necessary. Most battery operated sets have as an accessory a trickle charger supplying about $\frac{1}{4}$ ampere. This is an admirable source of current for the dynamic speaker, and when not in use charging the battery, the charger can be applied to the field winding of the speaker.

In most cases a strong hum will be noticeable, but this can be very easily eliminated by connecting an electrolytic condenser between the two terminals of the charger which are connected to the field windings. Johns, Limited, Auckland, have sent us one of these for test, and we are able to say definitely that it will cut out dynamic hum. For some considerable time now we have been working a speaker under these conditions with perfect results.

Ferranti Speakers.

WE have received from A. D. Riley, Ltd., one of their latest Ferranti speakers, and have been able to test this under all conditions. The speaker is of English make and of the small curled exponential type. It is finished in a dark brown crystalline and is provided with a large unit with an adjustable screen. The tone is quite good for this type of speaker, and the range of frequencies covered causes it to compare favourably with our standard horn speaker. It is very sensitive and will stand ample volume for the average household.

Tristan and Chelmsford

TRISTAN DA CUNHA, known as the world's loneliest island, is now enabled to listen to 5SW (London). In January last the "African World" presented the inhabitants of the island with a shortwave set subscribed for by its readers. This was taken out by the Rev. A. G. Partridge in January last when he left to take up the duties of chaplain of this isolated parish. A letter from Mr. A. A. Bradley, wireless office of the steamer Duchess of Atholl states:—

"We did everything possible to initiate the Rev. Partridge into the mysteries of shortwave reception. At Montevideo I unpacked the receiver and fitted it in the wireless room. Between Montevideo and Tristan reception of 5SW was constant each night—often at good loudspeaker strength and always at good phone strength. We were fortunate enough at Tristan to find a 50ft. mast erected by the Quest, and by adding a small spar to the chimney of the padre's house we were soon able to rig an excellent aerial.

"After connecting up the set many shortwave morse stations were heard at a strength equal to that experienced on the ship. I have not the slightest doubt that the islanders listened to 5SW as soon as he started up that evening.

"Any future shipments sent to Tristan please address to the 'padre' and not 'To the inhabitants of Tristan de Cunha.' This is on account of their method of distributing stores. We pointed out your form of address, otherwise it would have meant so many ounces of sal-ammoniac, so many jars, so many porous pots to each family.

"The space available is very small. The 'Vicarage' living room, two bedrooms and kitchen, could be contained in a decent-sized living-room of an ordinary house."

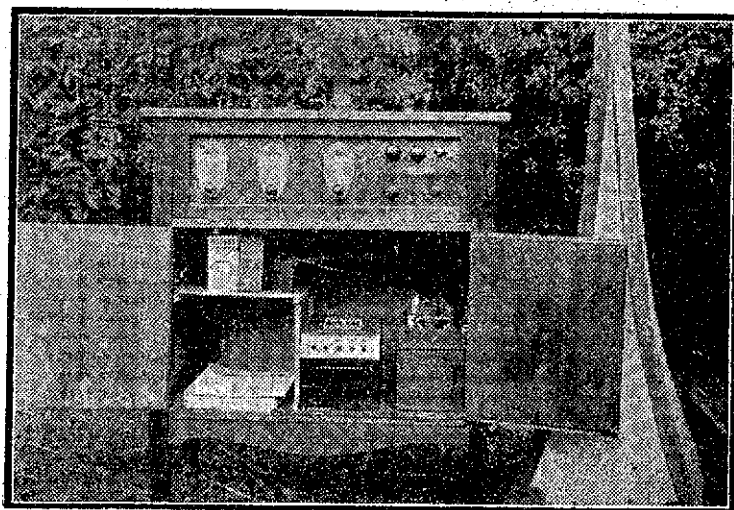
Parallel Feed Browning Drake

"An Excellent Receiver"

I HAVE constructed the 2RF Parallel Feed shielded Browning-Drake, and wish to say that it is an excellent receiver, thanks to the staff of the Radio Listeners' Guide for supplying such a fine circuit. I did not adhere strictly to the specifications as laid out in the Guide, but any alterations I made were

an A615 detector, PM6 first audio, and two PM256's in push-pull in last stage and also an output transformer.

I have given the set a good test for a month now, and the results are excellent in every way. It is very selective and exceedingly sensitive; I can tune in the main Sydney stations, all day with enough volume to be heard all over the house; in fact, last Saturday I and several friends were listening to the All Black match in Sydney on the inside antenna at 5 o'clock (this was direct, and not the rebroadcast). The tone is one of the main features of this receiver, especially with a moving coil or large exponential horn speaker.



The complete outfit made by "Parallel."

only on account of having certain parts on hand, which I used instead of having to purchase more. I used the original size copper shield boxes which were 11in x 7in x 6in, and also the 3in. diameter coils and a .0005 and two .00025 tuning condensers. I also used Imfd. condensers in place of the two .5 condensers in the plate leads of RF stages.

The only other alteration I made was by earthing the 15th turn of secondary coils and neutralising off of the bottom of same which I found simplified neutralising considerably. I am using two 201A valves in RF stages,

There is only one trouble I encounter, and that is the volume, which is tremendous even in the daytime, but I will endeavour to seek a remedy for that by writing to the Question and Answer corner.

I can strongly advise anyone considering building a valve set to tackle the shielded 2RF Parallel Feed BD and get some thrills. I also wish to congratulate the staff of the "Radio Record" for publishing such a fine book as the New Zealand Radio Listeners' Guide, which, in my opinion, is worth several times as much as the small sum charged for it.—Parallel (Nelson).

Music for Wedding

3YA Greets Isolated Karamea

THE service which the Broadcasting Company has rendered in connection with the earthquake took a new form one evening last week, when a marriage was being celebrated at Karamea. 3YA received a request for special wedding music, synchronising with the bride entering the church, and again leaving after the ceremony. The request was duly complied with.

Karamea, as is well-known, suffered severely from the earthquake, and such damage was done to road and telegraphic lines of communication that it has been isolated, except for sea and radio connection. As well as broadcasting the music, 3YA sent appropriate greetings to the happy couple.

Have you procured your copy of "N.Z. Radio Listener's Guide"?

Dealers and booksellers 2/6; Post Free 2/9—P.O. Box 1032, Wellington. Available everywhere.

Linen Diaphragm Speakers

Units—

45/-

Also Complete Speakers

J. A. SMYTH & CO.

71 VICTORIA STREET, WELLINGTON.

Your Chance!

THOUSANDS OF I.C.S. MEN SUCCEED EVERY YEAR.

Make your folk proud of you, too!

THE I.C.S. ILLUSTRATION METHOD MAKES HOME STUDY SIMPLE AND PRACTICAL.

International Correspondence Schools

1831 Wakefield St., WELLINGTON, NEW ZEALAND, LIMITED

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

—Architect, —General Bookkeeper, —Mech. Draughtsman, —Station Bookkeeper, —Concrete Contractor, —Salesman (any branch), —Building Contractor, —Sales Letter Writer, —Carpenter, —Advertiser (any branch), —Plan Drawer, —Artist (any branch), —Shire Engineer, —Journist (any branch), —Shire Overseer, —Special Examinations, —Motor Engineer, —Matriculation, —Motor Mechanic, —Intermed. A.C., —Electrical Engineer, —Hertford House, —Elec. Mech. Exam., —Public Service, —Mechanical Engin'g, —General Education, —Mine Electrician, —Language (C' phone), —Telephone Mech., —Language (C' phone), —Aeroplane Engineer, —Special Women's Dept., —Textile Expert, —Dressmaking, —Plumber, —Millinery, —Mathematician, —Shorthand Typing, —Accountant (Inst. Ex.), —Bus. Correspondence (There are over 4,000,000 I.C.S. Students, over 19,000 of these being in New Zealand).

ENQUIRIES COST NOTHING—POST NOW

Name.....

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

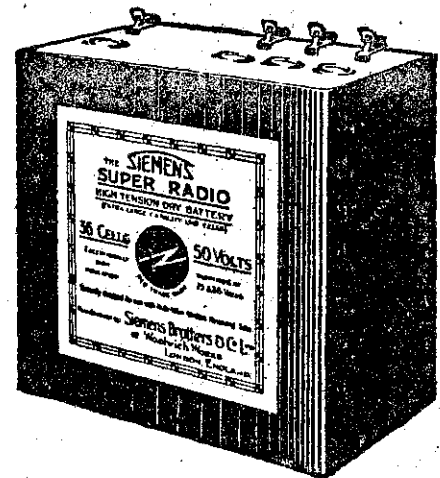
Address..... R.R.



YOU cannot judge the tonal qualities of a Receiving Set from its external appearance. It may be built into a sound and solid mahogany case, yet still speak with a thin, cracked voice. Tone quality depends on perfection of parts—particularly batteries.

If you are not satisfied that your set is giving you the purity of tone you would like, get a Siemen's Super Radio Battery as the first step towards improvement.

Siemen's Super Radio Batteries are British made in every detail, have a long life, and, as one satisfied user writes, "They are good until they are done." They don't die a lingering death and crackle while they're doing it.



SIEMENS

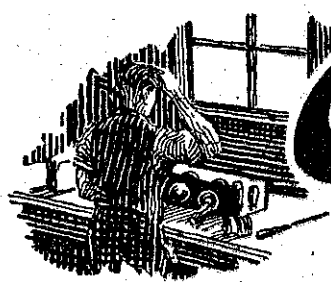
SUPER RADIO BATTERIES

Sole New Zealand Distributors:

CORY-WRIGHT & SALMON
ENGINEERS.

P.O. Box 1230, Wellington.

P.O. Box 1650, Auckland.



Questions and Answers



Full-wave Crystal Set.

CAN this circuit be used without the primaries? I am having trouble with the second crystal.

A.: No, the secondary would be short-circuited. See answers to correspondents last week.

Various Points.

"S.E.H." (Christchurch) writes asking:—

1. Which is the best method of marking a panel?

A.: There are principally two methods which might be employed to advantage: pasting a piece of paper over the face of the panel and marking it out from that and scoring out on the back and rubbing with chalk to bring the marks up clearly. If lettering is to be done, it should be placed in the hands of a manufacturing firm who have the equipment necessary for this work.

2. Can a "B" battery trickle charger be used as an eliminator?

A.: It is most unlikely that such an eliminator would be of the full-wave type, and consequently would not be able to deliver a very substantial current. By the time this was filtered the voltage would be too low to be of service. However, if a small set is to be fed the addition of a choke in the positive lead and 4 mfd. condensers on either side connecting with the negative, would allow sufficient current to pass to work the set. If a filter sys-

tem is not employed the hum would be too great.

3. Can an extra R.F. stage be added to a three-valve reflex set as a separate unit?

A.: It would be far better to rebuild using the parts for a four-valve set. The R.F. booster described by a correspondent would probably be effective in this case, but not so effective as a rebuilt set.

4. What is adaptor harness, and could it be used on this circuit?

A.: An adaptor harness comprises a transformer and a series of adaptors connected so that on plugging these into the valve-holders A.C. valves can be fitted without any alteration to the wiring. Although this harness has been found to work successfully on a neutrodyne and on a regenerative set, it cannot be said authoritatively that it would work on a reflex though we can see no reason why it should not.

5. I have heard it said that a battery charger can be employed as an eliminator merely by floating a B battery across its terminals and connecting these to the set. The B battery need not be new. Is this feasible?

A.: Cases where an A battery can be fitted up in this manner are quite common, though we have never heard of a B battery being used in this manner. It has been suggested that the A battery accumulator shunted across the terminals to the chargers acts as a condenser, but the precise explanation is

not available. In the case of the B troubles caused through a high resistance battery would no doubt disturb the smooth operation of the set. If the charger could be borrowed, the experiment would be well worth while.

The Value of Inductances.

"F.N.S." (Wellington) wishes to use a .000125 condenser where his specifications are for a .0003 variable condenser. He asks the following questions:—

1. With a 2½ inch coil former, how many turns should be placed on the aerial coil to tune from 15 to 30 metres, and secondly, from 30 to 80 metres? How many would the secondary require?

A.: To tune from 15 to 30 metres three turns on the aerial coil and four on the secondary coil. A .000125 condenser will not tune between 30 and 80 metres. Two coils will be necessary.

2. How many turns will be necessary for the tuned anode stage?—Four on the secondary and five on the tickler if close wound.

3. What size of former do you recommend?—Three inches.

4. I have on hand a reaction condenser, .0002, and a quantity of 20 gauge D.S.C. and 20 gauge enamelled wire. What other sizes of wire would be more efficient?—These will be O.K.

5. Will I have to make any other changes in the circuit to change the condenser values?—No, other than changes in the coils.

6. For the high-frequency choke, and 30 gauge enamelled wire on a 5-inch former, how many turns are required?—175.

7. Will the "Radio Record" choke do for the detector stage?—Yes.

8. I have a 625 screen grid valve. Will this be as good as any other?

A.: In this circuit it will be better probably than the vertical type of S.G. valve.

Browning-Drake Problems.

CAN I use a 22½-volt battery for the detector stage only and run the eliminator for the two stages of audio in my four-valve transformer coupled Browning-Drake?

A.: Yes, if it will oscillate, always use the lowest voltage possible.

2. I get good results, but since under baseboard wiring has been put in I have been unable to put more than 4 "A" voltage on the filaments of the audio valves, when tuning low wavelengths.

A.: Reverse the primary connections of one of the transformers. If this does not stop the trouble, introduce a little damping by means of a low value grid leak in series with the grid of the last valve.

3. I used to put a .0001 condenser in the aerial to balance the dials, but when I do so now the set howls, when-

ever the tickler is up or down, and I can cut it off only with the R.F. rheostat turned down two-thirds.

A.: The set appears to be not neutralised. Try re-neutralising, or, if this will not stop the trouble, use a higher impedance valve in the radio stage.—Hammer Chewer (Bluff).

A Wave Meter.

CAN you tell me how I can make a wave meter?—"A.J.M." (Wellington). I do not know the wavelengths of my coils.

A.: The description of a wave-meter would be beyond the scope of "Questions and Answers." It has been fully described in Handy's Handbook, the Journal of the United States amateur transmitters. It can be obtained from several booksellers, but probably an amateur transmitter would be able to lend you one. Its construction is anything but simple. The easiest way to calibrate coils approximately is to make a graph for each, plotting the wavelength against the dial reading, and a curve will thus be obtained which will show quite clearly the limit of the coil in particular.

Accumulator Runs Down.

"DEAD Battery" (Eketahuna) complains that when his set is turned on every night for more than 2½ hours the battery runs down, and the trickle charger has to be on for 24 hours to make up the deficiency.

A.: Either in the battery itself or in the set there is a short circuit. Charge the battery as full as possible and leave it stand, to note whether it is discharging. If this is the case, the battery should be taken to a service station for repair. It is possible that some of the plates have become dislodged or that a sediment has formed.

Why spend your money out of New Zealand?

SPARWORTH'S

Specialty Designed Loud-speaker and Pick-Up Combination Cabinet, with our special finish in waterproof lasting polish.

We have proved to Hawke's Bay Radio Experts that our combinations, designs and finish BEAT the imported article.

Let us prove to all New Zealand it is true—Sure!

Send the dimensions of what you want and we will quote you in any shade, beautifully grained.

SPARWORTH'S RADIO CABINETS
NAPIER, HAWKE'S BAY.

We supply Photographic Designs, or send your own sketch.

The Trade specially referred for.

Have you Received a Copy of our New Free Illustrated Price List ?

If not, send your name and address TO-DAY! All the Latest and Best at LOWEST COST.

SUPERADIO LIMITED

147 Queen Street • Auckland

ed at the bottom. In this case, the correspondent may be able to effect a remedy himself. The battery should be emptied of all liquid and washed out with distilled water. Pure rain water collected in an earthenware vessel is a good substitute. Once the battery is quite clean inside sulphuric acid and water, the density of which is 1.25, should be added. (This can be readily obtained from a chemist.) The liquid should just cover the plates.

If the battery is found to hold its charge, then it is evident that there is a short circuit within the set. To conclusively prove this, withdraw the valves, remove the "A" battery, and connect "A" plus to a "B" plus of about 22½ volts. Connect "A" minus to one terminal of the speaker or a pair of 'phones, and the other to the "B" minus of the battery. A distinct click should be heard, and this will indicate that there is a short circuit. The set should then be overhauled by the owner if he is competent to do this, or by a radio dealer. Great care must be exercised that the "B" battery is not connected to the "A" battery terminals while the valves are in. If no click is heard, and a dummy valve is available, try inserting it in each of the sockets moving it about and listening for a click. This will point to an error in the sockets. If a battery eliminator is used, substitute a low tapping for the "B" battery.

Valve Consumption.

"PUZZLED" (Nelson) writes: (1) Will you explain why it is necessary to use six dry "A" batteries in series parallel with valves, using a total filament current of more than .2 amperes?

A.: When filament consumption exceeds 2 or .25 a heavy drain is placed upon the dry cells. These are adapted Leclanche cells, and not built to stand a heavy drain. When this is placed upon them they rapidly polarize, the internal resistance rises, and the E.M.F. drops—in other words, they soon become useless. If, on the other hand, they are used but slowly, polarisation does not take place readily and greater service is extracted from the cell. By using six cells, in series parallel instead of three in series, the E.M.F. remains the same, but the resistance of the battery is halved, and current is taken out of each cell at just half the rate it would be taken out of each of the three cells used in series.

This means that the "A" battery will last probably three times as long as the "A" battery, comprising three cells only.

2. Does one get as good results from a .06 valve as from a .1?

A.: It all depends on what is meant by "as good results." The performance of both valves is very much alike, and opinion is divided as to quality, etc. The statement is sometimes made that the .06 valves are harsh, but there is no theoretical justification for this, and our observations have shown us that except in a very few cases, .06 valves are by no means harsh—and these exceptions are very dubious.

4. As a .06 valve uses much more "B" battery current than a .1 valve, is there much difference in the annual running cost?

A.: If two sets of batteries are used with the "A" battery readily rechargeable, there is little difference in the running cost.

5. Is there a standard size copper wire used for connecting dry "A" batteries?

A.: No, but use the thickest copper wire obtainable.

6. My receiver is a factory-built four-valve regenerative. I am using English valves with a consumption of .1 ampere each. Either these or lower filament consumption valves were advised by the maker last year for use with dry "A" batteries which I am obliged to use. Which would be the more economical?

A.: It is difficult to say. Probably the .1 valves, unless liberal grid bias were applied to each valve of the set, will be the most economical.

7. When I have to change my valves what type shall I replace by?

A.: The wisest plan is to use the same make of valves now employed.

Set Will Not Oscillate.

EVERYTHING is in order in my set, writes "C.D. McG." (Wellington), but the set will not oscillate.

A.: Try a few more turns on the tickler, and if the set will not oscillate under these conditions try reversing the connections to the detector valve. If another valve is handy, it should be tried, for the one now used as detector may have lost its emission.

Parallel Feed Browning-Drake.

"J.S.C." (Nelson) asks concerning this receiver:—

1. What difference, if any, would it make by fitting a 1 mfd. condenser in the plate leads instead of the .5 condensers as specified?—None.

2. Which is the most efficient method of controlling volume without spoiling tone?

A.: Place a high value variable condenser between the aerial and the earth. This resistance should be at least 10,000 ohms.

3. Would it be of any advantage to replace 201A valves in the R.F. stages with valves of higher impedance? If so, with what impedance?

A.: Providing the set will neutralise without difficulty, the 201A type of valve gives the best results in the radio frequency stages of the Browning-Drake.

4. Would it be advisable to replace the detector which has a resistance of about 9000 ohms by one of higher impedance?

A.: The tendency now is to manufacture special detectors with impedances of slightly under 10,000 ohms, e.g., PM4D and A415.

Unusual Troubles.

"J.P.B." has experienced an unusual trouble, in that he has to turn his rheostat in different positions on different occasions to get the best results. He notices that when he has a wavetrap the rheostat when turned to a certain point will allow of signals from the local station being received.

A.: If a battery eliminator is used this may be accounted for in surge in the main current, otherwise it is rather difficult to explain, providing everything in the set, including the valve, is in perfect order. The fact that the local station is received when the set is brought to a certain degree of sensitivity indicates that the wavetrap is inefficient, or if this is beyond doubt, that the receiver is situated in such a position that it is impossible to get past the local station when the set is fully sensitive.

2. Sometimes I go to the set and I can hardly touch it without a growl and a howl. Another night I can handle it without any trouble.

A.: It appears from this that the set is not properly neutralised, and that the signals being received have an unstabling effect and cause the variations noticed.

3. Some nights the wavetrap will cut out the local station, but on odd occasions, irrespective of the wavetrap, it will come in all over the dial.

A.: It appears that the wavetrap is inefficient under certain conditions. One would suspect that this is a matter of chance rather than being the result of the conditions existing from night to night. Examine the wavetrap carefully and see that it is not possible for a short circuit to take place. The condenser vanes, for example, may have worked a little loose and be touching one another.

Uncontrollable Oscillation.

MY trouble is fierce oscillation of the detector, writes "A.J.C." (Te Aroha). I have reduced the "B" battery and tried reversing the tickler connections; also, unless the set is right up to the oscillation point there is no volume and consequently poor tone. The R.F. stages seem to be wrong. There is now howling from this no matter how the neutralising condenser is altered. When it is turned low it sets the detector howling. The audio filaments on being turned high cause a howl also. I thought of reducing the number of turns on the tickler, but being a factory-made set I thought this would be correct.

A.: The major trouble appears to be in the layout, and results from interaction between the rails or grid and plate wires. Next week we shall publish a few hints on layout. The best results could accrue only when the primary had been increased by two or three turns.

KING IN RADIO

"King" all Electric Six and Seven-Valve Neutrodyne Receivers.

Just switch on to the home electric supply and this wonderful Electric Set, full of power and beauty of performance, will bring to every listener a new conception of what radio service and satisfaction mean.

Model H £41/7/6

Model J £47/5/6

Demonstration at any time.

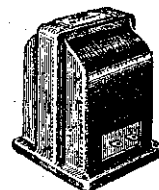
CALL AND INSPECT.

F.J.W. FEAR & CO. THE RADIO PEOPLE

63 WILLIS STREET, WELLINGTON.

'Phone 41-446.

PEP PUNCH TRANSFORMER



Will put Pep into your Reception.

Realising the demand for a Transformer of quality at a moderate price Emmco now introduce the Pep Punch, a Transformer which gives wonderful results, volume and smoothness. Made up in a one-piece Hand Drawn Metal Case. 3 Ratios 5-1, 3½-1 and 2-1.

PRICE 10/6

A FULLY GUARANTEED EMMCO PRODUCT.

MADE BY ELECTRICITY METER MANUFACTURING CO., LTD.

Distributors for New Zealand:

JOHNS, LTD., Chancery Street, AUCKLAND.

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

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

The "Beginner" Three-Valve Set

A Small, Powerful Receiver

Simple and Compact.

THE "Beginner's Three" contains one stage of radio-frequency amplification, a regenerative detector and one stage of audio-frequency amplification. The first thing to do when building any receiver is to collect all the necessary parts. The apparatus used in the original set is appended:—

List of Parts.

One Coil former, 2in. in diameter, 6½ in. (L1, L2).

Two variable condensers, .0005-mf. (C1, C2).

Three UX valve sockets, baseboard type.

One audio-frequency transformer, 6:1 ratio (T1).

One "Phasatrol" (PH).

One variable rheostat, 0-500,000-ohm (R3).

Two vernier dials.

One radio-frequency choke (L3).

One by-pass condenser, 0.5-mf. (C4).

Fixed resistance (if necessary).

One .002-mf. fixed condenser (C3).

One filament switch, GSW.

One Bakelite panel, 7 x 10.

Four terminals.

One roll of connecting wire.

Baseboard, 10 x 8½ x ½ in.

Screws, angles, washers, several strips of bakelite for coil, mounting for binding posts.

The coils may be constructed on the general lines described by "Megohm" in Volume II., No. 51. The secondary

of each coil contains 86 turns of No. 28 S.S.C. or S.C.C. wire. The turns should be space-wound, unless D.C.C. by placing a piece of thread beside the wire. The primary of each coil contains 15 turns and the tickler on the detector coil 20 turns.

Some constructors may have on hand smaller condensers, such as .00035 mfd., and in this case the outlay for the set will be reduced by using them. In this case the secondaries should be arranged so that 115 turns are left for each of these coils. For further details regarding the use of other wire see Listener's Guide, "Table of Relative Inductances."

Mounting the Coils.

AFTER the coils have been arranged, the next point is to mount them. The strips for mounting the coils are cut from bakelite, hard-rubber or fibre

gests itself to the reader may be used. In the original set, two old binding-posts of the metal type used several years ago (those with a screw in the top and a hole in the side for the wire to pass through) were drilled out so that the wood-screw would pass through.

The detector coupling coil (the one with the three windings) is mounted by a small angle-piece which is screwed to the coil strip and is secured to the baseboard with a small wood-screw. A 6-32 machine-screw and nut are used to fasten the coil strip to the angle, which is one of the small brass brackets found in the local 5-an-10-cent store.

Other Assembly.

AFTER the coils have been prepared, the next point is to drill the panel for the tuning condensers, oscillation-control resistor R3, and the filament switch. The templates supplied with the condensers will provide the most convenient way of laying out the holes for these instruments. The resistor

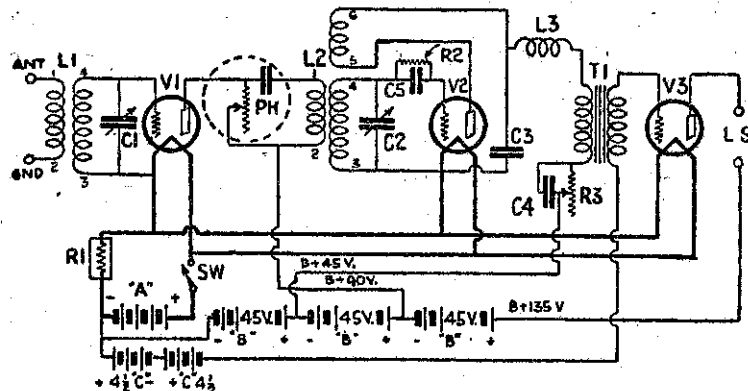


Fig. 1.—The "Beginner's Three" is shown here with all the connections to the batteries, for the convenience of the beginner.

panels. They are each 3½ inches long, ½-inch wide and ½-inch thick. That for the aerial coupler (the one with two coils) has a hole drilled in each end to hold the mounting screws. The other is drilled at one end only. While the strips for the coils are being made, it may be well to make the binding-post strip also. This strip is also cut from ½-inch panel material, and is 3½ inches long by ½-inch wide; in this, however, six holes are drilled. The two at the ends are for the mounting screws; four others are then evenly spaced over the remaining space, for the aerial, ground and two 'phone binding posts.

After the strips have been prepared, they should be cemented to the coils. Collodion (or liquid court plaster, as it is sometimes called) is a very convenient material for this purpose. When the cement has dried, the coils are ready for mounting on the baseboard. It may be well to explain how this is done, even though we are not quite ready for assembling all the parts. The antenna coil is secured to the wooden base by two long wood-screws, passed through the holes in the coil mounting strips, and through a suitable washer which raises the coil above the base. The washer may be made from a piece of metal tubing; or any other suitable method which suggests itself to the reader may be used. In the original set, two old binding-posts of the metal type used several years ago (those with a screw in the top and a hole in the side for the wire to pass through) were drilled out so that the wood-screw would pass through.

The detector coupling coil (the one with the three windings) is mounted by a small angle-piece which is screwed to the coil strip and is secured to the baseboard with a small wood-screw. A 6-32 machine-screw and nut are used to fasten the coil strip to the angle, which is one of the small brass brackets found in the local 5-an-10-cent store.

The "Phasatrol" stabilises the radio-frequency amplifier, and the resistor R3 is used to control the detector as mentioned before. The latter resistor is shunted by an 0.5-mf. by-pass condenser which serves to carry the audio-frequency currents in the primary circuit of the transformer, so that they will not have to pass through the high resistance. In order to make the set as low in cost as possible, a cable has been improvised from the hook-up wire. This reduces the cost of the cable and still permits the convenience of the

SOMETHING NEW and BETTER

is found in the

Peerless Dynamic Speakers

NEW

Voice Coil of Special Design. Input Transformer with Special Secondary.

BETTER

Quality and Volume is obtainable through suspension of Voice Call.

PEERLESS

Also offer Magnetic Cone Speakers from £5/5/-.

New Zealand Representatives:—

THOS. BALLINGER & CO., LTD.

58-62 VICTORIA STREET

::

WELLINGTON.

Write for Free PEERLESS Booklet.

cable leads; though a manufactured cable, the cost of which is low, will enhance the convenience of connecting and disconnecting the battery.

The set is wired with the convenient insulated wire. Point-to-point wiring is used, so that the leads will be as short as possible, and also to keep them from running parallel. The wires which connect to the batteries are arranged with an excess length of several feet, and are brought together at the back of the baseboard. These wires are used as a cable, and they may be braided together if desired. A staple, driven into the base, will serve to keep the wires of the cable together.

Choice of Valves.

THE valves used in the set are chosen to give the best and most stable results. The standard 201A-type is used as the radio-frequency amplifier; this stage serves the triple purpose of increasing the volume, the sensitivity and the selectivity of the receiver, while preventing the oscillation in the detector stage from causing interference in neighbouring sets.

The second valve is of the special-detector, high-amplification type, since this valve is far more sensitive than the 201A type, when properly used. It will be noted that the grid return of the detector is connected to the negative side of the filament, contrary to the usual procedure with hard valves. Since this might cause confusion in the minds of some of our readers, it is well to mention that this is done solely because of the special type of soft valve used in this socket (300A). If the regular 201A valve is used in this socket, the grid return should be connected to the positive side of the valve filament. In any case it is well worth changing over to obtain the best results.

The valve in the audio-frequency stage is a 112A semi-power type. This was chosen because of the better quality resulting from its use. This is especially true if a second audio stage is to be employed and, since we are building the set with the thought in mind that a power amplifier and "B" power unit may be built later to give good loudspeaker volume, we have incorporated the 112A in the original set.

In the above it will be noticed we have specified types. Any good dealer will be able to advise the constructor the valve corresponding to the type he requires, in the make he fancies.

Testing and Operation.

AFTER the set has been completed, the next point is to test the wiring to be sure that no mistakes have been made. This is done by connecting a "C" battery and a pair of headphones in series and applying this test unit across the various cable connections in turn. With the valve out of the sockets, no click should be heard between any of the wires; either in the filament line or the wires to the plate supply. If no clicks are heard, the batteries are connected as shown in the

schematic diagram (fig. 1), and the valves then inserted in the sockets. The headphones should be connected to the terminals marked "L.S."; and the aerial and ground connected to the other two terminals on the binding-post strip. The set is then ready for operation, and the filament switch may be closed.

ing the "-" (negative) side of the "A" battery to ground. If this is found to effect an improvement, the wire may be incorporated directly in the receiver itself; it is then important to have the ground connected to the correct terminal. The additional wire is merely connected between the negative filament "F—" terminal, of the first or

sistor should be turned back until the whistle stops, and the dials should be turned again. If a soft whistle is heard, the "Phasatrol" is turned too far, and its screw should be turned to the left until the whistle stops. When the "Phasatrol" is adjusted and the resistor is turned to the correct position, no whistles will be heard (except those caused by other sets in the neighbourhood, which unfortunately, may be heard in any set). When the set is first placed in operation, it is advisable to turn the screw of the "Phasatrol" all the way to the right; so that trouble will not be encountered in picking up signals until the receiver is adjusted properly.

If an amplifier or B power unit is to be built later, it is more economical to buy very small B and C batteries, so that the cost of the set can be kept low. The filaments of the valves are lit by a storage battery of the usual type, and a good one should be obtained. If it is desired to operate the set entirely from the electric-light lines, an A power unit may be purchased instead of the battery.

A Few Pointers.

EVERY receiver, however simple, has a number of points at which trouble may be encountered; and those not familiar with "trouble-shooting" might find them difficult to locate, if the set does not work right at first. The first thing to suspect is the valves; take them to the dealer from whom they were purchased and have them tested. If these are all in satisfactory condition, look over the aerial. This is a very critical point; especially if the aerial was erected some time before the set is built. The insulators should be checked, and the lead-in should be looked over very carefully. A poor contact in the wire, or poor insulation at the point where the lead-in enters the building, often causes a good set to operate poorly.

If the testing of the valves and the inspection of the aerial and ground are satisfactory, the batteries should be tested with a voltmeter. Again test all the wires and connections with the C battery and phones mentioned above, to be sure that they are all tight. In this test, with the phone and battery, a coil should give a loud click through the winding and none between windings (this is between primary and secondary). An audio transformer gives a weak click in both the primary and secondary, but in most cases the click from the secondary is weaker than that from the primary. It may be better to use a B battery for testing the audio transformer, so that the click will be louder. If no click can be heard, the transformer is defective. In testing condensers, the click is very weak and no continuous noises are heard. In some cases, as in the variable condensers, it is necessary to disconnect the part from the set; because the coils or other apparatus are shunted across the condenser and it will appear to be short-circuited.

(Concluded on page 36.)

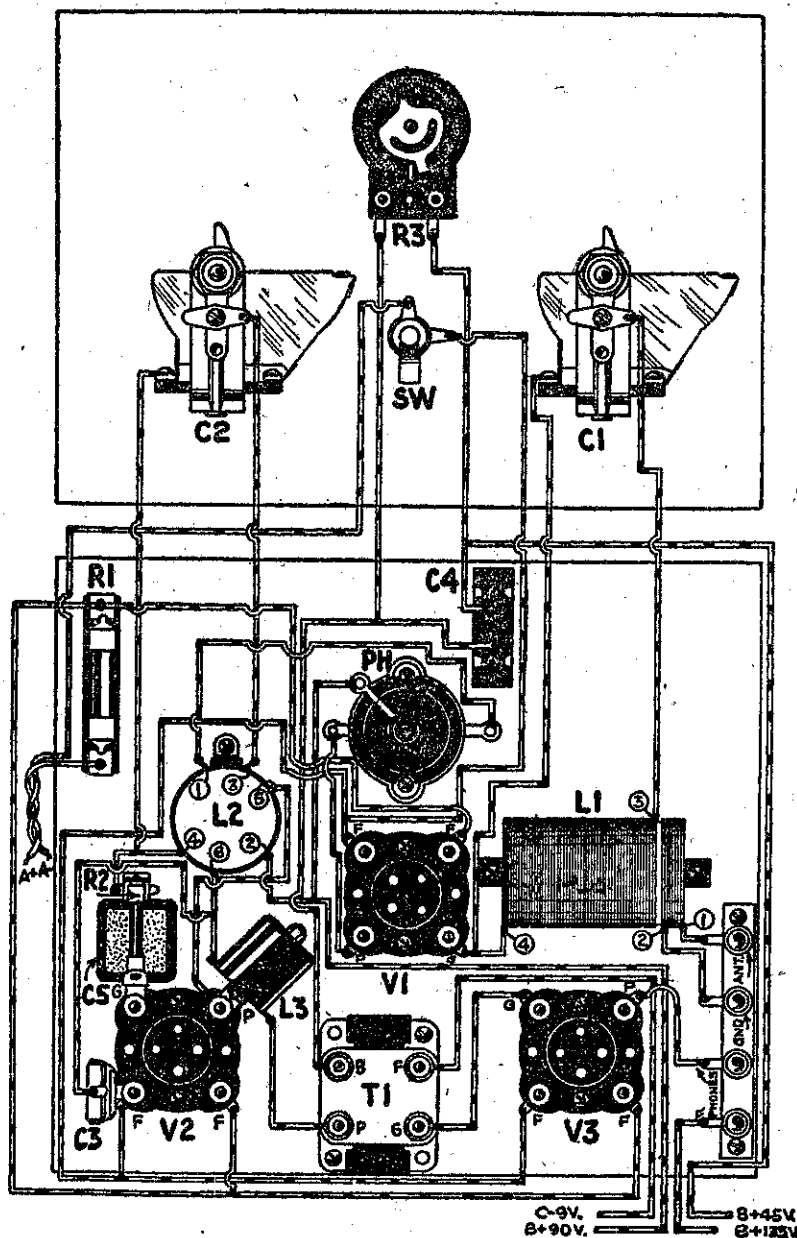


Fig. 2.—The wiring and parts layout of the "Beginner's Three" is shown here very plainly; the wires are here indicated at right angles, for the sake of clearness, but in actual work they are run more directly between terminals. The numbers of the coil terminals should be observed closely when making connections.

It is not important which side of the primary coil is connected to the aerial and which to the ground. In some cases, however, the operation of the receiver may be improved by connect-

ing the "Ground" binding post, and the

It will be found that the set will whistle when the resistor knob of R3, on the panel, is turned too far to the right. While tuning the set, the re-

YOU CAN'T BUY A BETTER VALVE THAN

Mullard
THE MASTER VALVE

COMRIE SMITH, & WARDLE LTD.

Phone 23-323. 77 KENT TERRACE WELLINGTON.

MOTOR REPAIR SPECIALISTS.

All Makes of Radio Batteries, and Motor Accessories Stocked.

Whippet Service Station.

Authorised Chevrolet Station.

THRESHOLD howl, the bugbear of the shortwave enthusiast, is not due to only one particular circumstance, but can arise from a large number of different factors.

The battery may be tested either by placing the tester directly across the battery or by testing the voltages on each valve. Place the positive of the voltmeter on the B terminal of the transformer adjacent to the valve to be tested, and the negative on B minus. The reading should be approximately that required by the valve, slightly higher, if anything, to allow for the drop across the trans-

Dynamic Cone Speakers Explained

Lecture by Mr. L. H. Wright to Radio Society



lecture:—

BEFORE the Wellington Amateur Radio Society on Tuesday last Mr. L. H. Wright, of the technical staff of the "Radio Record," delivered an address on the operation of dynamic cone speakers. The following is a resume of that

and a high one is determined purely by the rapidity of the alternate compression and rarefaction resulting from this vibration. It is well known that a high note is produced by rapid vibrations and a low note by slower vibrations. It is not every vibration that affects the auditory system, but providing these vibrations are within certain limits, varying with different people, the sensation of sound is produced.

Roughly, the useful limits of audibility are between 30 and 7000 vibrations per second. For the sake of demonstration the middle C on piano has a frequency of 256. Octaves above and below are double or half this number as the case may be.

No doubt the frequency tests from 2YA will be remembered by many.

Having a rough idea of what sound is, it is as well to study one or two of its sources. In the case of a stringed instrument set the surrounding air in motion. In a wind instrument the shape is such that by blowing into it, the air is set in rapid vibration. In the case of a loudspeaker the object is to be able to reproduce all frequencies in the audible scale with no undue prominence.

Kinds of Speakers.

THIS brings us to a study of the different kinds of speakers. The merit of the speaker can be judged by the extent of the variation in the intensity of sound at different points of the frequency scale. Thus a good speaker will have an even response curve, and a poor one will suppress some frequencies or make some frequencies predominate.

A horn type of speaker has the greatest response at the high frequencies. A cone (magnetic) type or reed driven has a high response at a middle frequency depending upon the construction and design of the speaker.

The M.C. speaker has a frequency response that can be adjusted by a process of varying the number of turns on the coil, alterations in the shape and size of baffle, and the introduction of filters for suppressing any frequency.

THE principle of operation was first demonstrated in 1898 by Sir Oliver Lodge. It is not a new idea, but simply the revision of an undeveloped theory. Briefly, it can be said that when a wire, carrying alternating or fluctuating current is suspended in a powerful magnetic field, the wire tends to move in sympathy with the variations of current. In the case of a moving coil speaker, it is the speech or music variations of current that are passed through the wire, which is in the form of a coil. Fastened to this coil of wire is the cone or diaphragm of the speaker. Thus variations of current set the coil and cone in motion. The movement depends upon the nature of the variations of current, and this movement or vibration sets the surrounding air in vibration-producing sound waves.

Mr. Wright went on to say that the explanation could be made more comprehensive if the speaker was divided into sections suitable for individual discussion. To provide a powerful magnetic field several methods are available: (1) Permanent magnets; (2) electro magnet operated from 6 V. storage battery; (3) electro magnet operated from 100-200 DC supply; (4) 6-volt winding (rectifier for use from AC main).

To obtain the degree of magnetism required, permanent magnets have one or two drawbacks, namely, they can be magnetised only after assembling.

The use of an electro magnet with a 6-volt storage battery is, perhaps, the most common method, as the supply can be drawn from the storage battery operating the receiver, or from a battery charger. In the case of an AC operated amplifier employing smooth-

ing chokes the winding of a high-resistance coil can be utilised in the place of one of the chokes. For this method M.C. speaker field coil are wound to operate on 100-200 V. direct current supplies.

One or two commercial firms supply some form of dry rectifier, and mount the whole as one unit. These can be plugged direct into the lighting socket.

The methods enumerated are the usual ones for the production of a suitable magnetic density, and the matter was explained very fully by the aid of blackboard diagrams. Mr. Wright went on to describe in detail the section comprising the cone and coil. The angle of the cone plays a great part in the reproduction. Although much

Exhibition visitors will be able to see and hear the Amplifier described on pages 36 and 37. It will be on view at the "Radio Record" stall.

stronger, a cone made with a more acute angle at the apex gives undesirable focusing, especially of the high notes. A shallow cone being mechanically weaker, tends to give undesirable resonance peaks.

This was explained by studying the movement of a cone at different frequencies. At low frequencies the cone moves as a whole, but a point is reached, depending upon the angle and material of which the cone is made, when the cone does not vibrate as a whole, but splits up into segments. At the point on the frequency scale where this change occurs a pronounced resonance is noticeable, and manufacturers try to get this undesirable point as high in the frequency range as possible.

Centring devices for the suspension and maintenance of the coil in the small air gap were discussed and examples were provided by the two speakers at the meeting.

The last section comprised different forms of baffles, and the modifications of these to regulate the low register. A large baffle is necessary to fully develop and reproduce low notes, and a M.C. speaker without a baffle is little, if any, better than the cheaper reed-driven cones on the market.

At the conclusion of the lecture several members discussed with the speaker different points relating to the subject. One speaker, referring to the operation of a six-volt accumulator model being operated from a battery charger pointed out that he had by the use of an electrolytic condenser so hunted across the terminals of the charger, all trace of hum had been eliminated from his speaker.

In response to a question as to the functioning of dynamic speakers, Mr. Wright stated that the best could be obtained from a M.C. speaker only when used with a power amplifier. However, excellent results could be obtained with less expensive equipment. One speaker stated in this respect that his results with a M.C. speaker used with a crystal and push-pull amplifier, convinced him nothing could be finer.

Finally, Mr. Wright was accorded a very hearty vote of thanks for his able and interesting lecture.

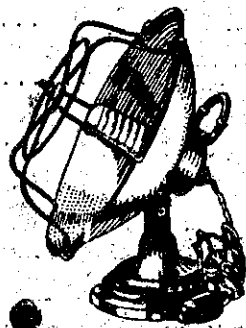
Good-bye to ashes
and flying sparks.

Creda
BRITAIN'S BEST

The Creda Electric Fire has for ever settled the question of safety, just as surely as it has introduced the clean fireplace.

Its beautiful warm heat has no penalties, you can sit by a Creda for hours enjoying the comfort it brings, and when you switch off the power the fireplace is just as clean and as beautiful as ever—no afterwork.

Ask to see the whole Creda range of models. There are over thirty. If not obtainable from you dealer write to us for illustrated folder.



Tolley & Son, Ltd.

HEAD OFFICE: WELLINGTON.

And at Auckland, Christchurch and
Dunedin.

Short Wave Notes

(Concluded from page 40.)

tinect; the call, which was only given once while I was listening could not be caught, except that it was preceded by the figure "2." The announcer was an American. I held this station till 10.30 p.m., when signals were down to R1. If any reader heard this station and was able to get the call, a letter would be appreciated.

While listening to KDKA on Saturday afternoon an announcement was made that later on they were going to connect up with KFI at San Francisco for their listeners to hear Messrs. Mendell and Reinart, who, in the bi-plane Angelino, had broken the world's record endurance flight at Culver City, California, by remaining in the air 246 hours 43 minutes and 32 seconds, or 10½ days. They landed on Friday at 12 minutes past 6 p.m.

When all was ready KDKA switched over to KFI, San Francisco, where the speaker was heard as clearly as from Pittsburgh, after travelling over the vast continent by landline. The proceedings opened with a band playing "Stars and Stripes for Ever." Several speakers were heard giving particulars of the flight. Later Mr. Mendell, one of the aviators, said that he "was awfully glad to break the record and bring it to Los Angeles." He spoke well of the motor, which had not given any trouble during their long flight. He thanked the senders of telegrams and letters, which were delivered by the refuelling ship; these, he said, were very inspiring.

Mr. Reinart commenced by saying: "I'm not much of a speaker or anything like that—." He gave credit to the ground crew and the refuelling crew, and all who had assisted in the flight. He concluded by saying that he was tired and glad to be down.

New 1929 Edition.

Drake's
Radio
CYCLOPEDIA

A big, complete, authoritative and up-to-date book, just off the press. 870 pages, 985 illustrations.

1700 subjects arranged alphabetically, gives the scientific theory and practical application in clear language for Service and Repair Men, Dealers, Salesmen, Experimenters, Owners, Designers. A fine book, bound in Art Buckram. Price 35/-.

JAMES JOHNSTON, LTD.,
Publishers, Dunedin.

Please send me the latest edition of Drake's Radio Cyclopaedia, for five days' free inspection. If I keep it I shall send 35/- in full payment.

Name
Address

R7

A Triangle

International Testing

AN international radio telephony test of considerable interest took place last Saturday evening, when VK2ME (Amalgamated Wireless, Australasia, Ltd., Sydney), the well-known experimental station, worked CJA, Montreal, Canada, and Bridgewater, England, states Mr. R. Leslie Jones (Lyall Bay).

Considerable humour was attached to the experimental test. The name Bridgewater was given as Drinkwater, evidently by mistake.

Listening to 2ME (Sydney), this is what was heard:—

"Hullo, Canada; Hullo, Brazil; just a moment, Montreal, we're wanted on the telephone, just stand by for a moment."

"Hullo, Montreal, I hear you calling London; you want to drink more water with it."

Speaking to one of the operators at 2ME studio a little later, the announcer (a familiar voice to listeners) said, "This is a little bit of international stuff."

"This is going to be interesting, Jack."

"We are working Duplex telephony with CJA, Canada."

"Hullo, yes, certainly, right you are; I will stand by; that is so. Hullo; Hullo; VK2ME, Sydney; Hullo, Canada; Hullo, Drinkwater."

"Hullo, Drinkwater, drink whisky if you like; drink beer."

"Hullo, I haven't got Drinkwater yet; Hullo, Montreal; we are not receiving Drinkwater yet; Hullo; Sydney here."

"We cannot receive Drinkwater direct; we are not receiving Drinkwater direct. If you will rebroadcast him, we can talk between each other."

"The announcer at 2ME whistled; 'That's a very dry whistle,' said he, 'I'll have to drink water.'"

"Hullo, this is Sydney, Australia, calling you."

"Hullo! This is Sydney speaking to Drinkwater now. Hullo, Drinkwater. Oh! Thank you very much. I am very pleased to speak to you. This is the first time. How are you receiving me now; are you receiving me direct?"

"Via Canada, I see. We are not receiving you direct either; Canada is acting as our relay station."

"Phone rang at 2ME (Sydney). 'Just a moment. Hullo! Yes, he's gone. Well I think he's just gone round to 2FC.'"

"Hullo, Bridgewater; Hullo, Bridgewater." (Evidently Bridgewater must have given the name Bridgewater clearly to Sydney at this juncture.)

"We can follow you very well now; we are receiving you very well now; here's Sydney again."

"What is the weather like in London now? Oh! We have had a very fine day here; like spring. The nights are cold, but the days are fine."

"We hope to be testing with you direct shortly. I hope we will be able to test direct with you shortly."

"What is the best period for reception of this station in England?"

"I see. Oh yes; I think about 8 G.M.T. would be very good. We have tested very successfully with Nauen,

Use of an Hydrometer

THE electrolyte in accumulator cells consists of a mixture of sulphuric acid and water in certain proportions. When a battery is in use, the amount of electrolyte in the cells diminishes; but this is merely because water has evaporated, and not because any of the acid has been lost.

Therefore, in order to make up for this evaporation, it is only necessary to add pure distilled water. Never add acid unless you have actually spilt some. The distilled water can be purchased from any garage or battery-charging station. Be sure that you get pure water, and never attempt to fill your battery cells with water obtained from the tap.

The water may be added to the battery with the aid of an ordinary hydrometer, an instrument which may be

Germany, at 8 G.M.T. Did you hear any of our tests?"

The final announcement from 2ME: "This is VK2ME, Sydney, Australia, experimental station of Amalgamated Wireless, Australasia, Ltd., 47 York Street, Sydney. You have been listening to VK2ME working CJA (Canada) and Bridgewater (England). Canada relayed Bridgewater to us and relayed our signals back to Bridgewater. VK2ME is now signing off. Good morning, good afternoon, and good night."

purchased from most radio shops. This instrument is made for the purpose of testing accumulators, to show how nearly they are fully charged.

You will find that the hydrometer usually consists of a syringe-like arrangement arranged with a float inside the tubular part. On squeezing the rubber bulb, placing the rubber tube in the hole provided in the top of a cell or a storage battery, and releasing the bulb, it will be found that a quantity of the electrolyte will be drawn up into the cylinder. The float will start to rise and, when it is completely off the bottom of the cylinder, it will be found that one of the graduations on the scale of the float will be at the top level of the liquid. This scale division denotes the condition of the battery.

By occasionally checking the condition of your battery with the hydrometer, going over every cell at each test, you can determine exactly when it is necessary to change it.

—Visit the—

RADIO EXHIBITION

JULY 25, 26, 27, 1929.

Admission:

ADULTS 1/-; CHILDREN 6d.

Open from 12 noon to 11 p.m.

RADIO LISTENERS'
GUIDE.

1929-30 Edition of the Guide has been well received and repeat orders are coming in rapidly.

The "Guide" is of more than passing interest—it is AN AUTHENTIC REFERENCE WORK that can be called upon to answer all those questions that trouble the amateur wireless enthusiast.

Secure Your Copy Now!

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

(Postal Coupon for Country Readers.)

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

'RADIO RECORD,'

P.O. Box 1032, WELLINGTON.

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

Signed.....

(Write address clearly).....

Topical Events.

THE French military authorities have equipped an army motor lorry with short-wave wireless transmitting and receiving apparatus for experiments to be carried out in the Sahara Desert. A small radio station is to be installed at Timbuctoo, the base headquarters of the expedition.

SO advanced is the work on the Koenigsusterhausen station that its preliminary tests may be expected at any time.

ACCORDING to Press reports, a powerful wireless transmitter will shortly be installed in the Vatican, enabling the Pope to address the faithful in all parts of the world. It is understood that short waves will be employed.

Abyssinian Wireless Ambitions.

TENDERS for a 20-25 kilowatt short-wave station, capable of maintaining permanent communication with Europe, were recently called for by the Abyssinian Government.

In addition to this central wireless station, says "The Times," tenders were asked for the supply and erection of five stations for use in the interior of Abyssinia capable of transmitting and receiving up to a distance of 500 miles. It is understood that the tenders are now closed, but the adjudication has not been announced.

At present Abyssinia has no public wireless station, but use is made of the station belonging to the Italian Legation at Addis Ababa, which broadcasts news messages.

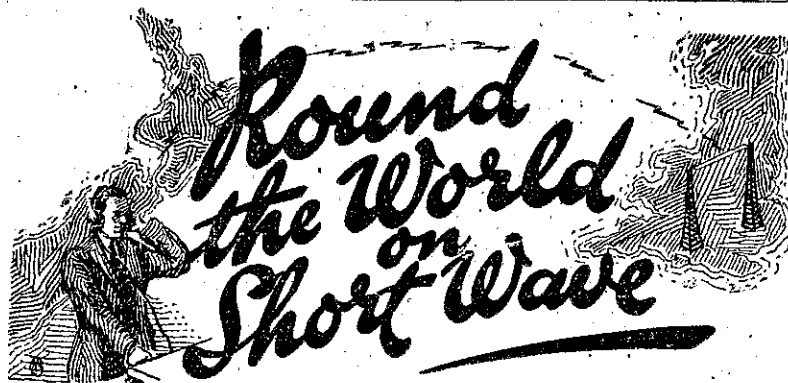
German Short-wave Station DOA.

FROM further information to hand since last week's notes, it appears that the old call of AFK has not been abandoned, but that the call sign DOA is also used. For the purposes of tests, news bulletins supplied by Wolff's Telegraph Agency are slowly read out, and during intervals—but not regularly—gramophone records are played.

The Log.

RECEPTION during the week on the whole has been poor, but several items of interest heard.

Sunday, July 7.—W2XAD was the best American station heard, being R9 from 1.30 till 3.30 p.m. Speech and music was clearly readable from the time they opened at about 9.30 a.m., about R3 at first, slowly gaining in



THIS page is conducted in the interests of shortwave enthusiasts. A weekly log comprising notes of reception and interesting topical events is contributed by Mr. F. W. Sellens, Northland, Wellington, but all listeners are invited to send in paragraphs of general interest.

volume in the earlier stages, but more rapidly later. The last hour was devoted to dance music from the Hotel Ten Eyck.

In closing, it was announced that WGY would reopen at 5.50 a.m. E.D.S.T., to attempt to rebroadcast the thanksgiving service from Westminster Abbey. This, apparently, did not apply to their short-wave stations 2XAD and 2XAF, as when the service was being transmitted neither of these stations was audible. KDKA were also received at good strength, but for some reason howlers will spoil reception from this station. The usual fortnightly special programme for the Byrd Expedition was given, lasting till 4.30 p.m. W8XAL (WLW) was R4 at their best with dance music.

From 9.30 p.m. the air was full of rebroadcasts of 5SW, who, of course, were transmitting the thanksgiving service at Westminster Abbey. I found 5SW impossible, a very faint carrier only being audible.

KDKA, as promised early in the day when talking to Commander Byrd, was rebroadcasting the English station. Reception, though good volume—R9—was very rough, speech not being readable except an odd word or two.

The next station heard was 2ME, who was much better. This proved to be a rebroadcast of the Canadian short-wave station at Drummondville owned by the Canadian Marconi Company. This station, CJA, transmits on

a frequency of 12,093 kilocycles, or 24.81 metres. Reception direct from CJA was quite good. At the close of the special transmission, a duplex telephony test was carried out between 2ME, Sydney, and CJA, Canada.

Monday, July 8.

I DID not hear any telephony short-wave stations.

Tuesday, July 9.

AT 5.40 a.m., 5SW was quite good at R7. The "Dramatic Critic," who was 100 per cent. readable, was talking between morse interference. Volume increased with a short musical session that followed.

A stranger was heard on about 31.6 metres, just concluding a talk when tuned at 5.50 a.m. He went off the air then, but was heard again later with music at R8. No call was heard. On about 36 metres a voice was faintly heard through a strong H.F. hum; this made it impossible to read had the talk been English, which was not certain.

On about 15.5 metres "Hullo, Buenos Ayres," was called repeatedly. "Java" was also heard, but I do not know if it was Java calling or a part of the conversation. A woman was heard later, then a conversation between a man and woman.

2ME was tuned in at 6.30 p.m., when records were being played. Strength R9, with a slight fade, with blasting at times. He called PCL, Holland, repeatedly, then a Dutchman called Kootwijk, but heard him say that they were too weak for him. PCL was transmitting on 38.88 metres at this time, and were not audible to me. Sydney asked them to come down to 18.4 metres, but apparently reception was not any better on the lower wavelength, as they could not establish communication with Holland, although PCL appeared to be able to understand what was said in Australia.

Wednesday, July 10.

A STRONG, unsteady hum spoilt reception from 5SW, which was otherwise good strength (R8). On about 24.2 metres music and talk at R5-6 was blotted out by strong morse station soon after tuning in at 6 a.m. 2ME on 31.25 metres transmitting the All Blacks v. New South Wales was not as strong as usual, but reception was quite good.

W6XN (KGO) was well received at R8 from 6.30 p.m. till 7.30 p.m. The "Spotlight Review" has just completed

a programme. The Trocadaran's entertainment with dance music till the station signed off at 7.30 p.m.

The stranger on about 24.2 metres was heard again just after 7.30 p.m. at strength R5. An American was announcing, the call could not understand, it was only given once while I was listening. A lady sang several times.

Thursday, July 11.

AT 6 a.m. 5SW was very weak and rough, but some improvement in tone and strength was noted later. KGO was R2 at 6 a.m., but soon faded out.

Friday, July 12.

UNSTEADY rushing noises spoilt PCJ; strength steady at R7-8 all through from 5.30 a.m. till 7.30 a.m. 5SW at 6 a.m. was R7, with a very strong ripple. The volume went off later, but increased to R8 by 7.30 a.m., still spoilt by ripple.

The station on about 24.2 metres was heard again at 9.30 p.m. at R6. The first item announced after tuning him was "Sunrise to Sunset," this, with many others, were heard quite distinctly. (Concluded on page 39.)

FOR SALE OR EXCHANGE

The rate for small advertisements under this heading is 2/- cash for 20 words, and twopence for every other word thereafter.

SONORA, Model D, 6 valves, £25 cash. Particulars from J. H. Sinclair, Radio Dealer, Otane.

BARGAINS, Fada five-valve Neutrodyne, £8; Browning-Drake Screen Grid Four, £15; both new. Porter and Thornton, Somerstown, Te Aroha.

BROWNING-DRAKE Booster, £5. Variable condensers, 3/-; Osram S.G. valve, 15/-. Send for list. Porter and Thornton, Te Aroha.

PRIVATE SALE, 5-valve Eria Set, with wet B batteries, 120 volts, Willard. Large capacity, what offers? "Eria," Box 1032, Wellington.

£9/10/- LONG-DISTANCE SELECTIVE RADIO. One dial, equalizers, uses 6 or 7 tubes. Handsome walnut cabinet. Box 714, Christchurch.

HAVE you obtained your "Listener's Guide"? 2/6 from booksellers and radio dealers, or 2/9 post free from the publishers, Box 1032, Wellington.

FOR SALE, Complete Electrified Wireless Set: Radiola 25 super heterodyne, 6-valve with loudspeaker; Phillips B and C battery eliminator, Westinghouse battery charger; accumulator, "A." Apply District Public Trustee, Wellington.

STALLOY-TRANSFORMER. — Strips 36 x 1 inches 2/- doz. Other widths proportional. Also supplied cut, punched. Special quantity quotations. Johns Ltd., P.O. Box 471, Auckland.

VOLUME II. of "Radio Record" is now complete. File your numbers before they are lost. Filing Covers obtainable from Box 1032 for 1/6 post free.

YOU can save money by writing for our special radio mail-order price list. Electric Lamp House, 27 Manners Street, Wellington.

Printed and published for the New Zealand Radio Publishing Company at the registered office, Wakefield Street, Wellington, of the Wellington Publishing Company, by Archibald Sando, of 47 Freyberg Street, Lyall Bay, FRIDAY, JULY 19, 1929.

The Best comes to those who have waited, and here it is in—

MACK'S FAMOUS SHORT-WAVE "ADD-A-PHONE"

There is nothing in the World like it. Guaranteed to work on any Battery or Electrified Set, regardless of the make.

Will tune from the lowest known
Wave-length in Broadcast.

Will in no way interfere with your present set, and you have nothing to disconnect. Sold on our Money-back Guarantee if you are not satisfied. So write for full particulars.

MACK'S RADIO SERVICE

76 KENT TERRACE

WELLINGTON.

Telephone. 20-798.