

The Queensland Radio News

"Your Own Wireless Journal"

6^d



Vol. III.

Monday, 2nd MAY, 1927

No. 4

Registered at the General Post Office, Brisbane, for transmission by Post as a Newspaper.

NOTE THESE NEW PRICES

AMPLION A/sia Ltd. announce that the prices of RADIOLUX AMPLION have been substantially reduced.

New and improved methods of manufacture have lessened considerably the cost of production, thus enabling a reduction of the cost to the public.



Radiolux
AMPLION

The Prices are now as follows

SMALL TYPE			LARGE TYPE		
R.S. 2 Metal ...	£5	0 0	R.S. 1 Metal ...	£7	0 0
R.S. 2 Oak ...	£6	0 0	R.S. 1 Oak ...	£8	0 0
R.S. 2 Mahogany	£7	0 0	R.S. 1 Mahogany	£9	0 0
R.S. 3 Maple ...	£7	0 0	R.S. 5 Maple ...	£9	0 0
R.S. 4 Blackwood	£7	0 0	R.S. 6 Blackwood	£9	0 0

Advertisement of
AMPLION (Australasia) LTD.
Sydney and Melbourne

**Greater Selectivity!
Bigger Volume!
Purer Tone!**

With
the



SPLITDORF 5 VALVE RADIO SET

This five tube, inherently neutralised, Tuned Radio Frequency Receiver is designed to combined simplicity and ease of operation with economy in both first cost and maintenance. Special Splitdorf patented circuit ensures selectivity and gives remarkable volume and exceptional range with wonderful purity of tone. It has large tuning dials which make accurate tuning easy. Encased in attractive, hinged top cabinet, lacquer finished in two tone effect—dark walnut and light natural grain. A five terminal cable, permanently attached to rear, permits battery connections to be easily made. Let us show you this wonderful set.

PRICE—£47/10/- Complete

CROSLEY

3 Valve Radio Set

Your search for an exceptionally good set at the lowest price ends here. We positively guarantee the CROSLEY 3-Valve for local and interstate stations. It is highly selective, and has a rich, full tone. Complete with all accessories.

£13/10/-

On Sale by All Home Radio Service Ltd. Authorised Dealers (with the Red Sign on their windows).

Home Radio Service Limited

FIRST FLOOR, EWING HOUSE, ADELAIDE ST., BRISBANE.

Phones 6143.

Telegrams: "Homrad."

REMOVAL NOTICE

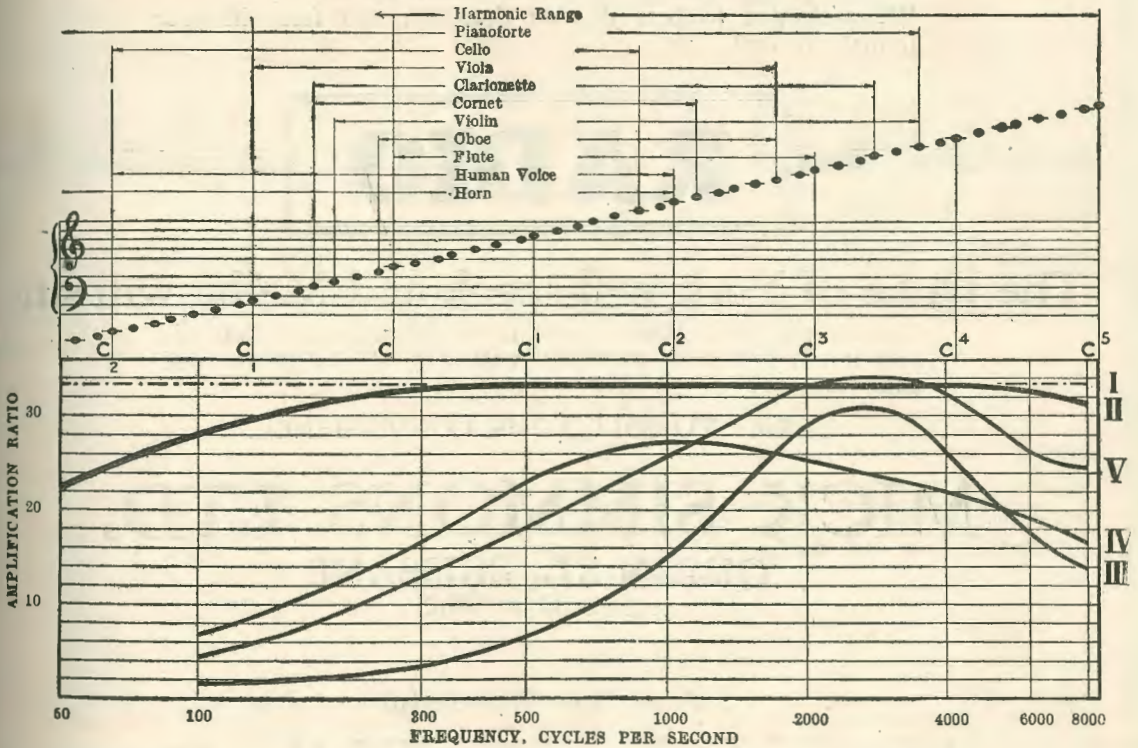
Owing to a rapidly increasing business it has been necessary for us to remove to more commodious premises on first floor, Ewing House, Adelaide Street, Brisbane (next Bryce Ltd.), in which new premises we shall be located as from April 25th.



FERRANTI

British-Made AUDIO FREQUENCY TRANSFORMER TYPE AF3.

Transformer Amplification Curves are of interest to every Radio user. The curves must be on the musical scale to give true value. Curves on a frequency scale of which equal lengths represent equal differences of frequency are misleading.



I. Perfection.

II. FERRANTI AF3. NEARLY PERFECT.

42/6.

No better Transformer is available at the price.

III, IV and V. Other well-known Transformers.

Obtainable at all Radio Dealers in Anstralia.

Dealers please communicate with:—A. BEAL PRITCHETT (Aust.) Ltd, SYDNEY & MELBOURNE.
C WEDMA LIMITED, ADELAIDE — EDGAR V. HUDSON, BRISBANE.

Powerful !

Magnetic !

A PERFECT RECEIVER

"The MAGNAVOX"

One Dial Control

Just Arrived—A Shipment of these Wonderful Sets

A Five-Valve Receiver of perfect construction, giving full speaker strength on the world's broadcasting stations at all times without interference. Expert opinion the best yet heard. We wish you to hear this set demonstration free—in your home if desired.

RADIO

The Duke of York will speak and Melba will sing

Yes, the event of a lifetime, and not to be missed. You will hear it all, and most perfectly, with any of our guaranteed sets.

TERMS TO SUIT YOUR CONVENIENCE.

MICK SIMMONS LTD.

QUEEN ST., BRISBANE
(opposite Town Hall)

Also Our Wonderful

SIMOLIAN SPEAKER 21/-

A Splendid Speaker for All Work

Have a chat with our expert, Mr. Finch. He will be pleased to advise you in all your requirements.

Fascinating !

Thrilling !

Notes from 4QG.

Some idea of the popularity of Station 4QG was gained recently by a party from the station which was on a motor tour in a country district in New South Wales. Visiting a small country hotel with the idea of securing breakfast, the party decided to attempt to replenish the oil in the car. An oil can was needed, and another motorist was asked if he could oblige. While the oil was being placed in the car the local motorist, observing the Queensland number, remarked that he knew Brisbane quite well, because he listened in to 4QG every night. The party from the station, without disclosing their identity, particularly remarked that they could not understand why the enthusiast should listen-in to 4QG when other stations were nearer. The motorist became serious and delivered quite a curtain lecture to the visitors, stating among other things that Brisbane people did not seem to realise the value of their own station. A smile crept across the faces of the party from 4QG, and seeing this the enthusiast paused and said: "Wait a moment, I think I am being joked with." Then, turning to one of the party, he said, "Talk to me for a moment." The 4QG man did so, and the enthusiast said: "Oh, yes, I know you, you are from 4QG." Mutual introductions followed, and so keen were the enthusiast and his party that the 4QG men found it difficult to leave the district.

The value of the week-end road information to motorists is realised by the proprietor of a certain hotel on the main northern line in New South Wales. This gentleman has installed a wireless set, and amongst other things he regularly receives the road information broadcast each Friday night from 4QG by the Royal Automobile Club of Queensland. He makes a note of the road conditions, and all motorists calling at his hotel en route north during the week-end are able to obtain from him full details regarding the state of the roads over which they expect to travel.

Throughout the whole of the Commonwealth exceptional interest is being taken in the arrangements which are being made to link up most of the "A" grade stations by land line with Canberra on May 9th, and so relay the proceedings in connection with the opening of the Commonwealth Parliament by His Royal Highness the Duke of York. Dame Nellie Melba will sing at the function. As Station 4QG will be participating in the arrangements, crystal set owners in Brisbane will have the pleasure of hearing the great singer quite clearly in their own homes.

DON'T BLAME STATIC!



Take Amps Advice

INSTALL

WILLARD
RADIO BATTERIES

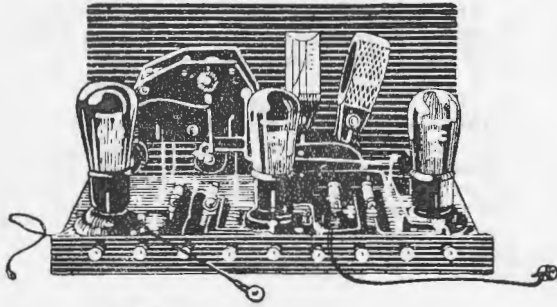
WHEN your Radio Reception is not as good as it might be and you encounter noises, *don't blame static*—it's probably your battery that's at fault. Install a **Willard Radio Battery** of the "A" or "B" type and you're assured of remarkably clear reception and big volume.

Besides, **Willards** need practically no attention throughout their long life. Complete your wireless equipment with **WILLARD Radio Batteries**.

MOTOR SUPPLIES
LIMITED

PERRY STREET (off BOUNDRY STREET)
BRISBANE

The R.C. Threesome!



3 valves
3 hours to make
£3-15 for parts

A Screwdriver is all you need!



NO longer need you postpone getting a 3-valve set "until your ship comes in." The Ediswan R.C. Threesome has arrived—another triumph for Ediswan. Its simplicity, its economy, its wonderful reproduction, would commend it—its low first cost makes its simply unbeatable. The circuit employs resistance-coupling; valves used are the Ediswan RC2 and PV2—famous for their economy and freedom from microphonics.

The quality of reproduction is amazing—beautiful, mellow not a trace of the throatiness evident in transformer coupled sets.

Instruction Book and Blue Print Free on Request.

Fill in the Coupon and post to our address, and blue print of the wiring diagram and a book of simple-to-follow instructions will be sent you **ABSOLUTELY FREE AND WITHOUT ANY OBLIGATION.**

If you can use a screwdriver you can make this set in one evening — and enjoy reception the same evening.

EDISWAN

The Ediswan Electric Co. Ltd.
 156 Creek Street, Brisbane

WILL IN THE COUPON NOW!
 To the Ediswan Swan Electric Co., Ltd. of the "R.C. Threesome" Instruction Book and Blue Print.
 Please send me, post free, a copy of the "R.C. Threesome" Instruction Book and Blue Print.
 Name.....
 Address.....



The Comprehensive License

IN this page in our last issue reference was made to the pact between the C.O.D. and Station 4QG for the broadcasting of fruit market reports. We stated that in our opinion the arrangement was unfair to the Fruit Grower in the light of other branches of agriculture being supplied with market reports gratis.

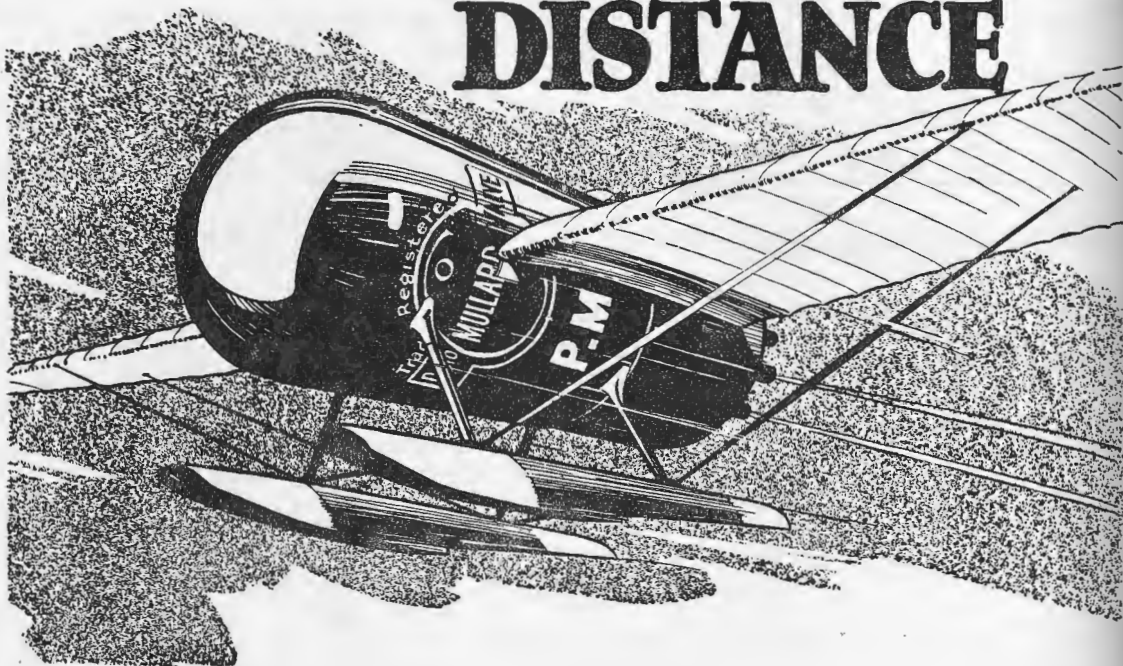
The management of 4QG has since informed us that our editorial, insofar as the existing market reports were concerned was in error. It was stated that in order to make good a loss of £1000 a year caused through the Department of Agriculture relinquishing their undertaking to broadcast market reports, the Station was compelled to seek subsidies from outside organisations and companies who would undertake to supply the daily reports.

Thus it will be seen that all agriculturists indirectly pay for any broadcast market information they receive. The Fruit Grower is no worse off than his neighbour, the Produce Farmer. The Pig Raiser, like the Poultry Farmer, pays, either through his organisation or through his agent, a small annual fee for the privilege of securing first-hand information concerning the sale of his products.

Most of the Australian A-Class Broadcasting Stations include market reports as part of their service rendered for license money received. It was upon this fact that we based our assumption that 4QG would be working on the same principle. We might have remembered, however, that while other A-Class Stations are earning handsome dividends for their shareholders, 4QG is struggling to clear itself of debt—really a public debt—within as few years as possible, and its aspirations for a healthy revenue may, as a young station, be excused.

It is to be hoped, however, that the time is not far distant when the license fee will be comprehensive—that is, it will cover every service rendered by the Broadcasting Stations. After all, the farmer should not be taxed for market reports in any greater measure than should the sporting man for race results, the motorist for road information, or the investor for stock exchange news.

POWER · ENDURANCE DISTANCE



For 2-volt accumulator

P.M.1 H.F. 0'1 amp. 13/6
 P.M.1 L.F. 0'1 amp. 13/6
 P.M.2 (Power) 0'15 amp. 13/6

For 4-volt accumulator or 3 dry cells

P.M.3 (General Purpose) 0'1 amp. 13/6
 P.M.4 (Power) 0'1 amp. 13/6

For 6-volt accumulator or 4 dry cells

P.M.5 (General Purpose) 0'1 amp. 13/6
 P.M. 5B (Res. Capacity) 0.1 amp. 13/6
 P.M.6 (Power) 0'1 amp. 13/6

Super Power Valves for last L.F. stage

P.M.254 (4 volts, 0.25 amp.) 15/-
 P.M.256 (6 volts, 0.25 amp.) 15/-

All Mullard Valves are manufactured at Mullard Works, London, England.

Advertisement of the MULLARD WIRELESS SERVICE CO. LTD., "MULLARD HOUSE," Denmark Street, London S.W. 2 England

ARKS 1. A

The airman's first care is his engine, his mastery of the air depends upon perfect control of power, and perfect construction which ensures a remarkable degree of endurance.

Your first care should be your valves, and the heart of a valve is the filament. It is the filament that holds the secret of perfect and economical radio reception.

For every valve holder in your set there is a Mullard P.M. Valve with the wonderful P.M. Filament. Unbreakable except by the very roughest handling. With a low current consumption giving long life to the valve and to the accumulator charge. With a generous emission surface, giving increased range and greater economy, the P.M. Filament improves every set.

Say P.M. and you say Perfect Music.

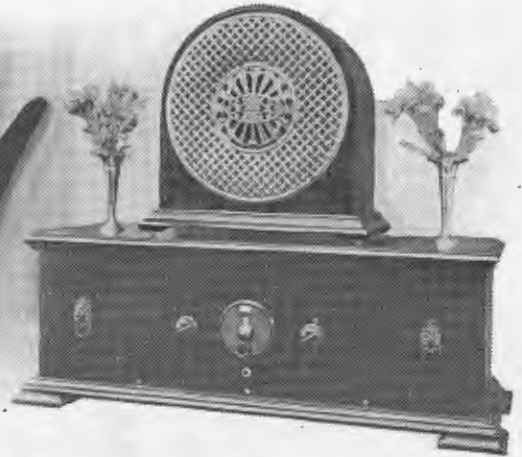
Obtainable from every Radio dealer in Australia.

Mullard

THE · MASTER · VALVE

THE QUEENSLAND
RADIO NEWS

Family Four



One Dial Control with Automatic Filament Switch

Here's a well-designed, capable and attractive-looking four valver that can be operated by grand-dad or the baby. One-dial tuning is simplicity itself, while the automatic jack-switch obviates risk of run-down batteries through failure to turn off the filament switch.

Simplicity of operation is a desirable feature in any broadcast receiver, though more particularly so in cases where the receiver is to be operated by different members of the family.

In the receiver about to be described here, the controls have been reduced to a minimum without in any way affecting the set's efficiency.

Constructional Details.

On inspecting the illustrations and diagrams it will be seen that the tuning is carried out by means of a dual condenser, one half of which is shunted by a small balancing condenser, which compensates for any variation in the coil values.

This small condenser needs very little attention once it has been set, but it may be used as a vernier control if desired.

The volume is controlled by means of a 400 ohm variable resistance which takes the form of a standard potentiometer; this variable resistance also acts as an oscillation suppressor, and has the advantage that it is possible to work the radio frequency amplifier at its maximum efficiency on any particular wavelength. The potentiometer, of course, has three terminals, but only two are used in this case (one end of the winding and the contact arm).

It is essential that the winding be connected to the grid side, as this considerably reduces hand capacity.

A small fixed condenser of .0001 mfd. capacity is shunted across the 400 ohm resistance in order to improve the quality of the receiver.

A single-circuit filament control jack is utilised to connect the speaker to the set, and at the same time automatically light up the valves, thus doing away with the battery switch. Once the valves have been switched on they are taken care of by automatic rheo-

stats, these resistors keeping a constant and correct voltage across the valve filaments at all times.

Particular attention has been paid to the audio frequency amplifiers, as it was realised that a family receiver should be capable of excellent reproduction of both music and speech.

An R.F. choke coil is inserted between the detector valve and first audio transformer to prevent the radio frequency currents from entering the low frequency amplifier; this choke improves the quality, and at the same time stabilises the receiver.

General Layout.

A list of the components actually used is given on page 9, but in the event of any of these not being available there is no reason why equivalent components should not be used, provided they are of reputable manufacture.

The panel should be drilled in accordance with the drilling diagram, the components mounted, and the whole screwed to the baseboard. It is advisable to adhere to the baseboard layout shown in the semi-pictorial diagram, as this allows adequate clearance between components, which in turn allows plenty of room for the wiring. This is essential for good results.

Wiring.

The wiring can be carried out with 16-g. round tinned copper or square section bus-bar, the former probably being the better for the beginner. Leads should be covered with spaghetti wherever there is a chance of them touching, as it is a very easy matter to burn out the valves should this happen. All joints should be carefully soldered, the solder being allowed to run right into the joint itself, thus making a sound electrical contact.

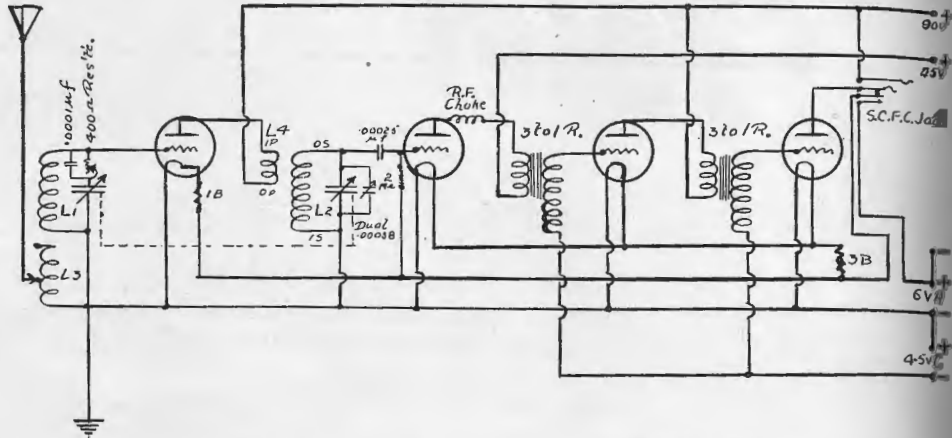
The wiring and constructional work of this set is quite straightforward, and no difficulty should be experienced if the diagrams are carefully followed.

Winding the Coils.

The coils are wound on two cardboard or bakelite formers 2½ in. diameter and 3½ in. long; both are wound in the same direction and with the same gauge wire, 20-g. D.C.C.

The following table gives the number of turns for each winding, the key letters corresponding to those shown in the schematic diagram below.

- L1, 62 turns of 20-g. D.C.C.
- L2, 65 turns of 20-g. D.C.C.
- L3, 20 turns of 20-g. D.C.C., tapped at the 10th turn.
- L4, 18 turns of 28-g. D.S.C.



It will be noticed that the aerial coil has less turns than the transformer secondary. This is quite correct, as it must be remembered that the aerial introduces a certain amount of damping which affects the tuning.

The primaries are wound on 2½ in. diameter formers, which are slipped inside the secondaries, the bot-

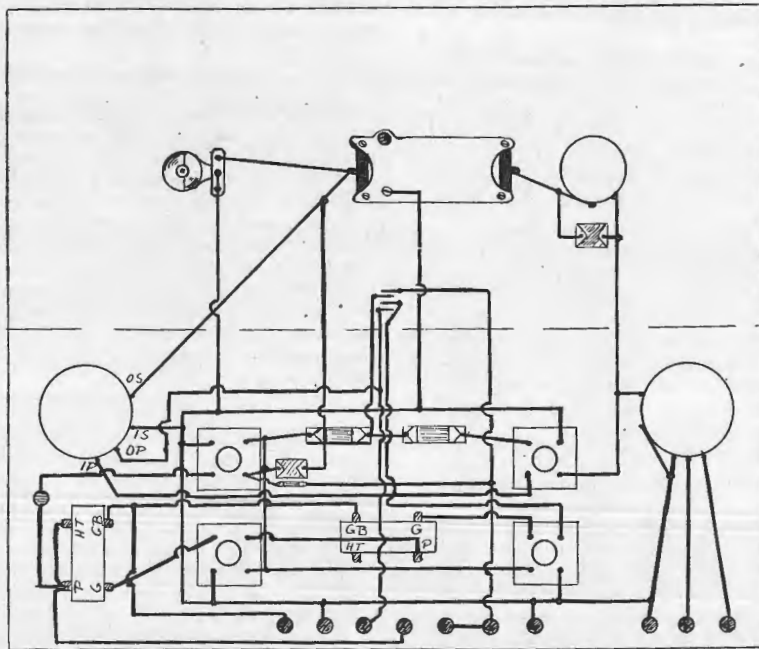
tom turn of the primary winding being placed opposite the lowest turn of the secondary.

Two aerial terminals are provided, in order that a long or short aerial may be used.

The radio frequency choke coil may be a 250-turn H.C. coil or 300 turns of 34 gauge D.S.L. wire rough jumble fashion on a small cotton reel. Of course these chokes may be purchased if the experimenter desires to do so, but the home-made variety will serve the purpose very well.

Testing the Receiver.

On completion of the wiring the valves should be inserted and the L.T. battery connected. Next place the speaker plug in the output jack and note if the valves all light up. The valves should be of the 5-



- C + + B + B - + A - E A1 A2

Semi-Pictorial Diagram.



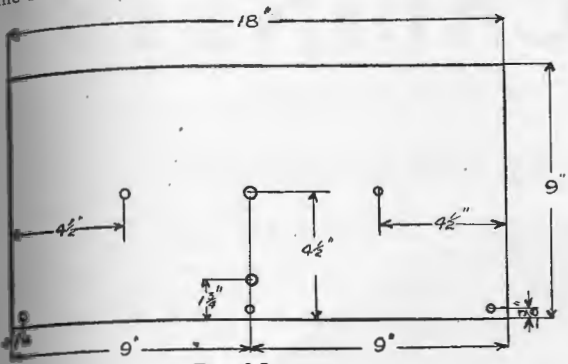
volt .25 type, such as Radiotron 201A, Osram DE5, or Phillips C509. Having arrived at this stage, proceed to connect the B.T. battery to the set, taking care that the leads

do not touch any part of the wiring. The amplifier terminal should be connected to the 90-volt terminal of the "B" battery, while the detector connects to the 45 volt tap.

When the resistance is cut out it will be found that the set oscillates freely; and carrier waves will be heard as the condenser is rotated.

As soon as a distant station has been located a little resistance should be inserted, and the small compensating condenser adjusted until maximum volume is obtained. The volume may now be regulated at will by means of the volume control.

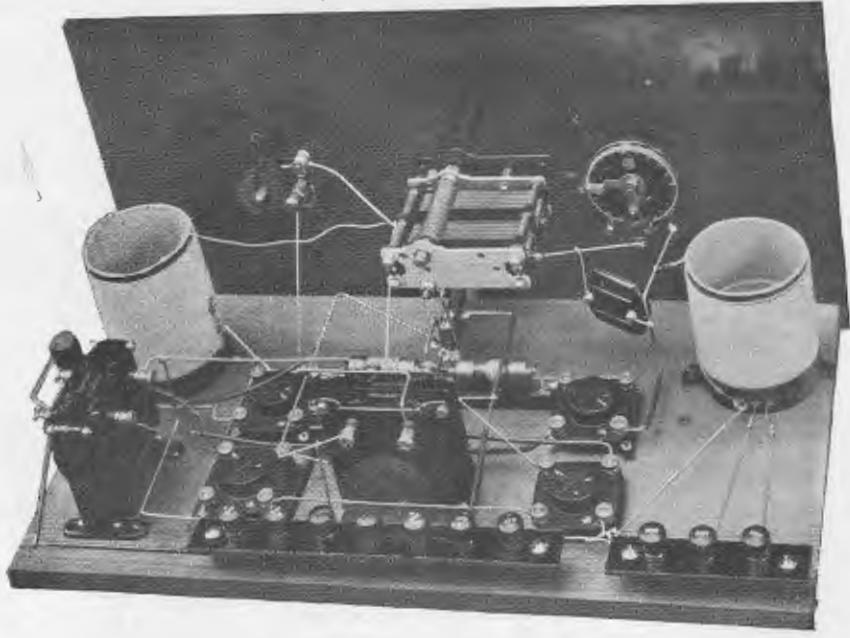
Southern stations were tuned in on this receiver at excellent speaker strength, on an average indoor aerial, it being only necessary to turn the main tuning condenser once the reaction and vernier controls had been set. The reproduction was excellent on both the horn and cone type of speaker.



Panel Layout.

LIST OF PARTS.

- 1 Bakelite panel 18in. x 9in. x 3-16in.
- 1 Baseboard 17 1/2in. x 9in. x 1/2in.
- 1 Pilot .00038 dual condenser.
- 1 Pilot 13-plate balancing condenser.
- 1 Pilot vernier dial.
- 1 Pilot S.C.F.C. jack.
- 2 Benjamin U.X. sockets.
- 2 Trachstate (1-1 B and 1-3 B).
- 2 Ferranti A.F. 4LF transformers.
- 1 R.F. choke.
- 1 Langamo .00025 fixed condenser.
- 1 Langamo .0001 fixed condenser.
- 1 Electrad 2 meg. leak.
- 1 H. & H. grid leak holder.
- 1 Waxley 400 ohm potentiometer.
- 1 Box engraved terminals.
- 1 Terminal strip, 3in. x 1in. x 1-8in.
- 1 Terminal strip, 8in. x 1in. x 1-8in.
- 4 Terminal strip supports.
- 2 2 1/2in. Formers.
- 1 2 1/2in. Former.
- 1 lb. #10-gauge D.C.C. wire.
- 1 oz. #18-gauge D.S.C. wire.
- 1 doz. lengths bus-bar wire.
- 1 Box assorted screws.
- 2 Lengths spaghetti.
- 2 Lengths R.C. solder.



Photographic view. showing arrangement of components.

DRILLS

SCREWS.

- REQUIRED.
- 13-32in twist drill
 - 15-32in twist drill
 - 1 1/2in twist drill
 - 13-8in twist drill
 - 17-16in twist drill
 - 3 3/4in x 6in N.P. raised heads.
 - 4 1 1/4in. x 10 N.P. raised heads.
 - 1 3/4in. x 6in. R.H. brass.
 - 8 3/4in. x 6in. R.H. brass.

Enlarged and Reorganised—
THE NEW

BROADCAST BULLETIN

Queensland's Radio Weekly.

All the Programmes
Splendid Articles

Same 2^D
Price

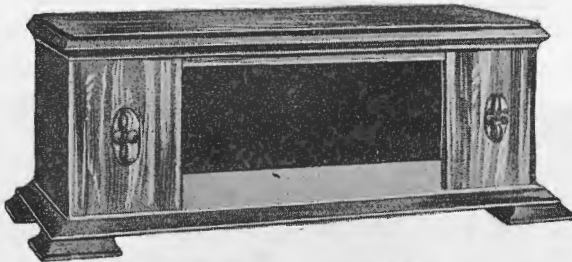
Watch for First Issue, May 14th

DEPENDABLE, GOOD LOOKING WIRELESS CABINETS

Those who build their own sets cannot do better than put their set in an

“EXHIBITION” WIRELESS CABINET

These are made from thoroughly seasoned timber, and by producing them in large quantities by the most modern methods, we are able to offer them at REMARKABLY LOW PRICES.



R.W. 100 3-Valve Cabinet

Illustration R.W. 100 is for a Three-Valve Set, the measurements being 15 inch x 7½ inch x ½ inch (Bakelite Panel Size.)

PRICE 45/.



R.W. 101 4-Valve Cabinet

This is a Four-Valve Model. Panel Size 10 inch x 9 inch x ½ inch.

PRICE 50/.

Period or Special Designs

We also make special designs in Cabinets in any size or style, designing them where necessary to harmonise with any furnishing scheme.

Estimates and Sketches Free on Application.

Complete Sets Supplied Where Desired.

Those living out of town may order with every confidence. Goods are carefully packed and place free on rail Brisbane. Immediate delivery guaranteed.

HENRY ROBERTS
BRUNSWICK
 HOME FURNISHERS

BRUNSWICK ST. - OPP. JACKSON'S BOND
 STORES - NEAR EXHIBITION - VALLEY - BRISBANE

Broadcasting the Royal Visit

How Station 4 Q.G. Effected Transmission

During the time their Royal Highnesses the Duke and Duchess of York were in Queensland Station 4QG took the opportunity to transmit every important function which was held.

The efforts of the station were very successful, and during the past few days 4QG has been deluged with letters of appreciation from all parts of the Commonwealth and from New Zealand.

Listeners in the latter country were especially enthusiastic regarding the transmission of the various functions and copies of N.Z. papers which have reached Brisbane show that the transmission of the functions was given great publicity in the Maori and papers.

Mr. George Range, of Thursday Island has written to 4QG, stating that all the functions came in very clear on his receiver, and the Duke's speech was heard at a distance of several hundred yards from his speaker. "My home," he said in his letter, "was the centre of attraction, not only for the white folk, but also for the coloured people."

From all parts of New South Wales and Victoria very glowing reports of reception have reached 4QG, and lastly, but by no means least, local listeners by the hundred have written to the station and have expressed their appreciation of the transmissions during the visit.

The station was particularly successful in being able to reproduce almost to perfection three speeches made at various times by His Royal Highness the Duke. One of these was during an afternoon function, and the other two were made at night and were, therefore, available to a much greater number of listeners.

Just how the broadcasting of all the Royal events was made possible, and just what tasks faced the station staff, makes some very interesting reading.

Arrangements Planned Well Ahead.

The arrangements for the broadcasting of the Royal visit were planned at 4QG many months before the Duke and Duchess actually arrived in Australia.

It was towards the end of last year that the Royal visit to the Commonwealth was first announced, and early in the New Year the appointment of Mr. L. Pike as State Director was announced.

One of Mr. Pike's first callers was the Director of 4QG, who said that he was anxious to secure facilities to broadcast every one of the historic functions in connection with the visit to Queensland of their Royal Highnesses. Mr. Pike readily agreed to co-operate with Station 4QG, and when the programme of functions was first outlined Mr. Pike consulted 4QG and made arrangements for the broadcasting of most of them.

At a later date the official programme was announced, and by the courtesy of the State Director (Royal Visit), 4QG was

H.R.H. the Duke of York.

supplied with sufficient information to enable programmes to be printed and circulated over the whole Commonwealth. As far north as Cooktown advance details were available to listeners, and in the daily and weekly papers of New South Wales, Victoria, South Australia, Tasmania, and New Zealand details of all 4QG's plans in connection with the broadcasting of the functions were published many days in advance.

Thus carefully laid plans, all schemed out, even weeks before the Renown arrived in Australian waters, made possible the successful broadcasting of the various events.

Engineering Work.

Some few days before the actual arrival of the Duke and Duchess the engineering staff at 4QG worked hours on end in order to complete the arrange-



ments which made possible the Royal visit broadcast.

Mr. F. W. Stevens, the Chief Engineer, and his very capable staff were behind the scenes the whole time, and it is quite safe to say that most of the credit for the broadcasting of the royal functions belongs to Mr. Stevens and the engineering staff at 4QG.

Their difficulties were enormous, this being due to the fact that most of the functions were held, not only at places where no line facilities existed, but at



Describing the proceedings at Beaudeser, 4QG's announcer at the microphone before the Royal dias. Their Royal Highnesses are seen in the background.

places where it was exceedingly difficult to instal lines and gear.

During the early part of April Mr. Stevens and his staff worked day and night and managed to complete all arrangements.

The Postmaster-General's Department should not, however, be overlooked. The officials of the telephone service proved themselves ready and willing, and allowed no obstacle whatever to prevent the installation of line facilities, even to points which at first sight, appeared almost impossible.

The Actual Visit.

On Wednesday, April 6th, their Royal Highnesses the Duke and Duchess of York arrived in Brisbane and were escorted to Albert Square, where a civic reception was accorded them. A stand had been erected just at the entrance to the new Town Hall, and it was necessary that broadcasting lines be provided right to the spot at which their Highnesses the Duke and Duchess were to be accommodated.

The Postmaster-General's Department secured a line in Hibernian Buildings, made a connection there, and gave 4QG an aerial wire right across Albert square to the stand. Across the wire the transmission was carried to the station, and was broadcast quite successfully.

That night the Returned Sailors and Soldiers' Imperial League of Australia accorded the Duke a welcome at the Wintergarden Theatre. Here again special lines had to be laid in order to broadcast the function. The microphone was placed near the footlights of the theatre and picked up the concert and the speeches. When the Duke spoke informally the microphone was moved towards the Royal box, and

the station therefore succeeded in reproducing his speech.

The vice regal ball was held on Thursday, April 7th, at the new wool stores at New Farm, and special lines had to be laid to this building to enable the function to be broadcast. The success of this function is known by all who listened to it.

On the afternoon of Friday, April 8th, a full description of the school children's carnival was given from the Exhibition Grounds, the lines usually employed for Speedway broadcasting being used in this case. At the conclusion of the carnival 4QG changed over to the Exhibition Hall, and the welcome accorded the Duchess by the National Council of Women was successfully relayed.

At night the grand State reception was relayed from Parliament House, and this proved to be the most difficult and yet the most successful proposition of all.

It was necessary to wire up Parliament House so as to enable three microphones to be used. One of these was in the Legislative Assembly Chamber, one was in the Legislative Council Chamber, and the other was on the balcony. Station 4QG provided a musical entertainment for the waiting guests, then the presentation of guests was described, and the events on the lawn were broadcast from the microphone on the balcony.

On Saturday, April 9th, the Duke's visit to Beau-



The aboriginals preparing for their war dance at Beaudeser on the occasion of the Duke's visit, April 9th, 1927.

desert Show was relayed. It was necessary in this case not only to secure (through the Postal Department) the services of the trunk lines, but also to have a special line nearly half a mile in length laid to the centre of the ring. The function was a complete success.

On Monday night, April 11th, the Mayoral reception at New Farm Park was broadcast. Lines were run from the kiosk to the main stand in the park, the various events, including singing by massed choruses, were successfully presented to the public.

The final function in connection with the Royal visit was the broadcasting of the function arranged by the returned soldiers and held in the Toowong Cemetery.

During the Royal visit the senior officers of the station worked between fourteen and sixteen hours

each day in order to give the public service. The whole staff was employed in connection with the Royal visit. Behind the scenes were the engineers, ever watchful and alert. At each function were the announcers watching every point of interest, and also the outside operators who were responsible for the handling of the portable transmitting gear.

The Announcers.

The announcers responsible for the broadcasting of the functions had a very busy time.

On the afternoon of the arrival of the Duke and Duchess Mr. C. V. Woodland described the civic reception and missed not a single item. His words were perfectly audible to all listeners.

Mr. Woodland and Mr. Harry Borradale were at the intergarden Theatre when the Diggers welcomed the Duke, and both had a very strenuous time.

At the vice-regal ball Mr. Woodland and Mr. Borradale again announced, and their task was a very difficult one.

Perhaps the hardest work of all was that carried out by Mr. Woodland at the State reception at Parliament House. He had three microphones to look after, and one of them was situated on the balcony. When the Duke spoke, Mr. Woodland, in an endeavour to produce his words perfectly, climbed over the balcony, hung on by one hand, and held the microphone aloft in the other. This brought the micro-

phone quite close to the Duke and so enabled his speech to be recorded quite clearly. Mr. Woodland was covered in dust and dirt by the time the Duke hand finished his speech.

Baudesert Show was also described by Mr. Woodland.

Mr. Woodland and Mr. Borradale described the garden party at New Farm in an excellent manner.

Following on the vice-regal ball numerous lady listeners reported that they would have liked to have heard something of the frocks worn. Accordingly 4QG engaged Miss Eileen McLennan to visit Parliament House on the night of the State reception, and she gave a description of the dresses worn by members of the fairer sex.

The Duke and Duchess were not slow to realise the work done by the station, and on the night of the garden party the Duchess stopped Mr. Woodland and remarked that he had had a strenuous time. The Duke then inquired if everything had been transmitted well, and on being advised that such was the case, remarked that he was very pleased indeed.

The whole of the functions were exceptionally well carried out. Station 4QG received every assistance from every person connected, and in connection with the City Council arrangements were ably assisted by the Mayor (Ald. W. A. Jolly) and the Town Clerk (Lieut.-Col. Annand).

Use the New Crystal with Valve Power!

2/3

With the "SUPER" Neutron in your set you will no longer have the difficulty of getting strong, clear results. You will be delighted with its extreme sensitiveness. Every Crystal is concert tested. **ON SALE EVERYWHERE.**

Look for the Red Wrapper!
Makers - NEUTRON LTD., London, England

SUPER NEUTRON

The World Famed Crystal

EVERY CRYSTAL IS GUARANTEED PROVIDING THE RED WRAPPER REMAINS UNBROKEN

SPECIALY SELECTED AND PACKED IN RED - DAMP PROOF CONTAINER FOR AUSTRALIAN CONDITIONS

22574 STEVENS

They Said "It Cannot be Done"—but

The NEW

UDISCO "5"

Has DONE It!

Small wonder that this Set has created a furore among radio critics. Here is a "five" that will accomplish what has hitherto been the task of seven and eight valve super-hets., viz., eliminating 4QG at close range and bringing all Australian stations without the aid of a wave-trap. The tuning is so delightfully simple. With

your fingers on the solitary tuning control you literally fly from one station to another quickly, surely, silently. The circuit is neutralised, obviating howls and distortion. There is no overlapping, no annoying adjustments. Each station has its set place on the dial, and it is ALWAYS THERE.

Supreme Selectivity with Increased Volume

Despite the fact that this is the most selective five on the Australian market, the volume from distant stations is infinitely greater. No longer

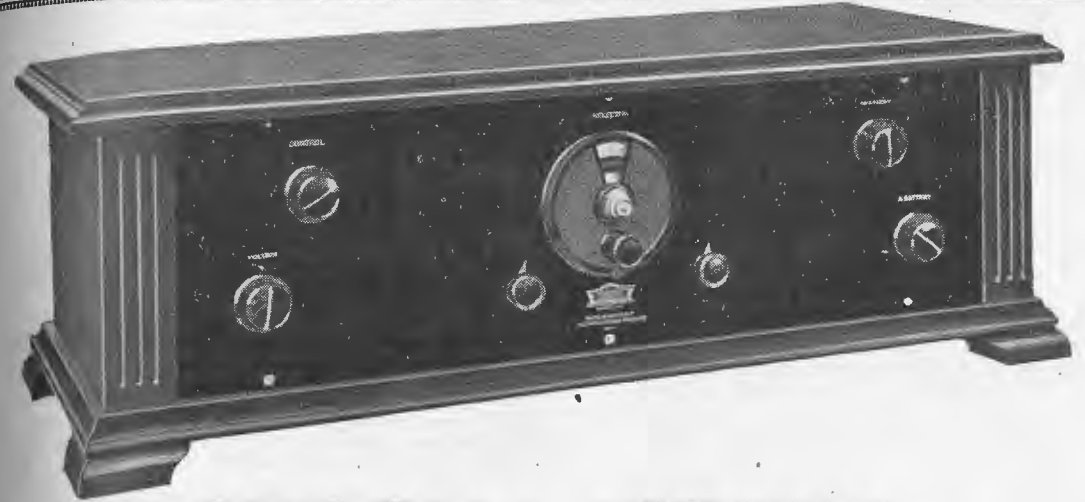
need you "tinker about" with an erratic wave trap. You may at all times go to your UDISCO FIVE and tune in the station you want at the strength you prefer it.

Seven Valve Performance at Five Valve Price

£47/10/-

Complete with all accessories, Accumulator, Heavy Duty Ray-o-Vac "B" Batteries and Baldwin Concert Speaker.

Set only without Accessories— **£33/0/0**



ONE-DIAL TUNING

All tuning is done with the main centre selector. "A" and "B" battery rheostats give positive control. The Set is so designed so as to yield all the advantages of regenerative and neutralised sets with none of their disadvantages. There is nothing to learn in the operation of

the UDISCO FIVE. The procedure is as follows:—Simply turn on the battery rheostats to yield the desired voltage; tune in your station with the selector dial, and adjust the volume with the volume control THAT'S ALL

All Australian Stations received at Full Speaker strength on short indoor aerial; Sydney and Melbourne on the Speaker without either Aerial or Earth!!

The above results are NOT freak receptions, but the regular nightly performance of a NEW UDISCO FIVE operating within half-a-mile of 4QG's aerial. And by loud speaker strength we mean volume that needs softening to make it comfortable to listen to.

MONEY-BACK Guarantee of Satisfaction

So great is the triumph of United Distributors' engineers, and so confident are we of this Receiver's remarkable ability, that we offer to refund in full the purchase price (less return

freight), and to take back any Udisco Five that does not perform up to the buyer's expectations. If you are thinking of buying a new Receiver, in fairness to yourself you must see and hear the NEW UDISCO FIVE.

ASK YOUR DEALER TO DEMONSTRATE

or write direct to the Manufacturers and Distributors:

UNITED DISTRIBUTORS Ltd.

343 Queen Street, Brisbane

And at Sydney, Melbourne, Adelaide, Perth, Launceston (Tas.) and Wellington (N.Z)

DEALERS

The coming Radio Season is going to be a UDISCO Season. Stock up on Udisco Lines—and particularly the UDISCO FIVE. This remarkable Receiver offers a unique money-making opportunity for you. GRASP IT!

Opening of Parliament at Canberra

Historic Ceremony to be Broadcast by Station 4QG.

DAME NELLIE MELBA TO SING

Of all the many notable broadcasts that have been transmitted by Australian Broadcasting Stations, none will eclipse the historical Canberra ceremony on Monday, May 9th. One might go further and say that it will be the most historical piece of broadcasting the world has yet heard, for a new city and a new Parliament of a nation have never been previously launched together by a King's son.

The Postmaster-General's Department has provided line facilities direct from Parliament House at Canberra to 4QG, 2FC, 3LO and 5CL. Across these thousands of miles of lines the speeches and music at the function will be carried to the broadcasting stations, from whence they will be broadcast. Thus the humble crystal set owner, as well as the multi-valve set operator, will be privileged to listen to this auspicious and notable function.

In one sense it is a pity that such an historical broadcast will have to take place at 10.45 a.m., when a greater portion of the listening public will be away from their receivers. Doubtless the radio stores will have loud speakers fitted either within or without their premises for the convenience of those who are able to visit them at that hour.

Although no definite programme of the proceedings are available at the time of writing, it is understood that the transmission will commence at 10.45 a.m., and will last until about noon.

A full description of the great scene will be broadcast by the Federal Government, together with the history-making speeches by H.R.H. the Duke of York and high Commonwealth officials.

Dame Nellie Melba to Sing.

An added attraction for those fortunate enough to listen-in will be songs by Dame Nellie Melba. The great artist has on several occasions stated her emphatic objection to the broadcasting of her voice, and although she has relented on this one great occasion, it is safe to say that listeners will not again enjoy the opportunity of hearing her sing for many years to come—it at all.

It has been announced by the P.M.G. Department that where any person is desirous of placing a sign in a hall or in a public place for the purpose of giving a demonstration, no special license fee will be required, it being desired to give every individual who cares to listen an opportunity to do so without expense being incurred.

WIRELESS IN BUSH SCHOOLS

(By Kenneth Anderson.)

Throughout the Australian countryside there are scattered little schools that deserve more pride and credit than they usually receive. In the remote parts of the bush, there are little outposts and workshops of knowledge and enlightenment, in each of which some gallant youngster just out of his or her teens is training a group of children for the strenuous business of life. The work is well and gallantly done. But when we recognise that, it should not make us contented to leave these teachers and youngsters to do their best in isolation. By pioneering in these remote places, the fathers and mothers of the children have shown that high courage and enterprise on which a country depends for its future. In a sense these pioneers who are breaking in new territory, and their children are the advance guard of the future. They deserve well of the State, especially of the city. It is a matter for thoughtful patriotism, and it is high time that we had more patriotism of the thoughtful

kind to decide how the great cultural resources of the metropolis can be tapped to stimulate the education of those youngsters. We have got far beyond the stage when we thought that all a dairyman needed to know was how to tell one end of a cow from the other. The aim of all life, at Oxford or at Sea Lake, is to live keenly, except with a keen mind. The problem which the Education Department must continually deal with on behalf of us all is to how to give some breadth of outlook and inspiration to these little lost schools. Of course it mainly rests with the teacher to wake up the minds of youngsters under his care. If he does not start the process, nothing else can. It is the keen teacher that the wireless will help most. Maybe it will not be long before Dimboola is listening to London or Paris relayed by 3LO. If the country boy and girl can be made to feel that they are not missing the other side of life, the flow of ideas, the outbreaks of fine music, and the rest of the life of culture, the more active minds of them will be all the more content with the sturdy open-air independence so many city dwellers envy them.

The Certain Cure

(By "FLEXMORE".)

The door opened quietly, and the doctor, seated in a big lounge chair deeply engrossed in thought, did not notice the arrival of the newcomer until a deep, hearty voice laughingly said:—

"And overwork has killed so many other valuable men, old chap, that you had better take an immediate holiday. What's to do, Doc.?"

Bruce, most famous of Queensland surgeons, looked up with a pleased smile that betokened the friendship he felt for George Harrison; and as the other pulled across another of the Medical Club's big comfortable chairs, he said:

"Well, how's the boot business, George?"

"Much better than the medical business, apparently, old chap. You're looking years older these last few months, Doc., and if you don't let up you're going to be a very sick man, and I'm no doctor and can see it plainly. Do the Latin names you chaps play with contain any description of your trouble?"

Bruce's face had again assumed a grave look as the business man voiced the opinion that Bruce could feel was only too correct, and he leaned across to him, after scanning the big reading-room to assure himself that nobody was within hearing, and explained in a subdued voice:

"George, here's no other man in Australia I'd confess this to but yourself, and I know you'll respect my confidence. It'll do me good to tell someone."

medical man in conjunction with the usual means of surgery, would permit that greatest of dread scourges, cancer, to be effectually eradicated from the human system, provided it had not got too good a grip.

"I was naturally interested, and without taking too many people into my confidence, I examined it, and although there was no possibility of an actual demonstration, I felt assured that his claims were, if anything, on the conservative side.

"At the earliest moment afterwards I made discreet enquiries amongst the profession as to the possibility of its use, and readily found that a successful doctor dare not in any way associate himself with the machine publicly, without risking the penalty of social ostracism and complete business ruination.

"They simply did not believe that the machine, which is electrically operated, could do what was claimed of it, and as no doctor could be found who would risk his reputation by making an operation, and using this machine in conjunction, the inventor was completely checkmated.

"He was a comparatively poor man, and I was so impressed with his claims that I helped him financially, and as a result, last week I received a letter stating that the poor fellow had died, and at the request made on his deathbed, the two machines he had built were sent, one to me, and the other to Dr. Marius Intagliata, the famous Italian surgeon, who is practising in Chicago.

"Now, Intagliata saw this poor fellow some time after me, and, as he is already a wealthy man, and somewhat of a revolutionary in matters medical, he promised that after the settling of certain business matters in which he was interested, and upon the successful issue of which depended his future complete financial independence, he would openly and publicly give the machine a trial, risking his professional reputation in so doing should it fail, but also assuring that his name would go down to posterity for all time should he succeed.

"Next week the election takes place here for the chairmanship of the Medical Board, and it is fairly certain that the place could be mine if I want it.

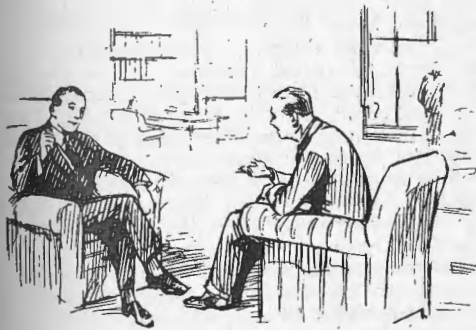
"Next week Intagliata performs his first operation using the new machine.

"The operation takes place on Wednesday at two in the afternoon, which is daybreak here on Thursday, and the results will be definitely known by midnight on Thursday, which will be four in the afternoon here on Friday.

"The Medical Board meets for dinner at six-thirty on Friday, and afterwards the election takes place."

Bruce leaned closer to the interested listener.

"George, if I could become chairman of the board, and announce there that I would in future use the machine, I would make myself a power in the Australian medical world that I have always dreamed of and hoped for. The convulsion of feeling that would follow, to be later completely vindicated by the absolute success of the machine, would fulfil my wildest



"You know how hard I've worked for years, how I've denied myself in the effort to reach success, even choking back the opportunity of sharing the comforts of home life with the most charming of girls because I'd set my mind on becoming Queensland's most famous medico. And now that I've succeeded, George, I find that the victory has been a hollow one. I'm fifty-five years old this week, and there's nothing left for the rest of the chapter but to keep fighting for further success or die. Life's very empty for me, George, and my whole being is set now on making myself a notable doctor of the world, and the means are the cause of my worry.

"When I was in England on last trip two years ago, there was introduced to me a man, who had invented a machine which he claimed, when used by an expert

dreams, but—" he stopped and mopped his forehead—"I dare not, as yet, take the risk that Intagliata is taking, much as I have confidence in the machine."

"Why not get cabled results sent you?" George's business mind promptly saw the huge possibilities of the affair.

"I dare not." Bruce's face was deeply lined with concern. "It would take all the value of the scheme away, if it was not thought that I was working independently, and all cable codes are known."

"But won't it be just as effective for you to begin after the news of Intagliata's operation are received?"

"No, George; I must ack quicker than that, and above all, I must make my announcement at the meeting of the board, if at all. The weight it will have, coming from a new chairman, will be incalculable."

"It's certainly a poser." George thought for a while: "If the cable's impossible, I fail to see what you're going to do, and, of course, if Intagliata fails, it would never do for you to risk your wonderful practice by a similar failure here. The Press publicity precludes any middle course."

"Yes, George; it's going to be mankind's only hope in this dreadful disease. Well, well"—he got up to go—"I must be off again. I feel better now that I've told somebody. I'll let you know any developments. Goodnight, George; come in and see me more often than you do. I suppose that it's a case of two very busy men, though, eh?" and he left the room.

"What is the time, now?" Bruce pulled out his watch and considered a moment.

"Her condition is very serious," he said, "and I will not leave for a few hours, until the crisis is over. It is now three o'clock, and we will not know anything for at least two hours."

He turned to the husband.

"While it may be hard, old chap, I think that if you were to return to your work it would be better, and we will call you if required. Nurse and I will watch carefully, and I don't think that there is anything really of the worst to fear. Now, Nurse, I've not had any sleep for over forty-eight hours, so that, if you could find me a quiet corner, where I could lie down for an hour, I'd be really grateful."

The husband had reluctantly obeyed the doctor's dictum, and the Nurse had repeated the doctor's request to the neighbour, who was so kindly doing all in her power for the young couple, whom the fell hand of fate had fallen heavily upon so early in their married life, in the death of their first-born.

"The only place I can think of is in young Brown's room," said the neighbour, "and it's all untidy with wireless things. 'E's a real crank on wireless, that young Brown. 'E boards 'ere Doctor, yer know), but you could rest on his bed if yer like. There ain't no couches nor nothink else yer could lie on."

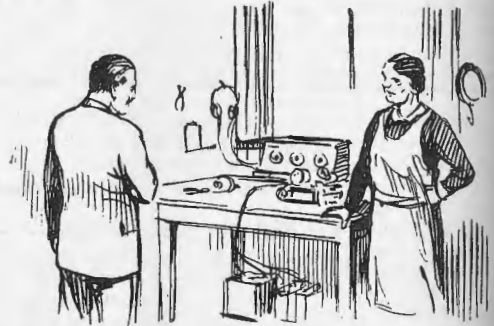
"When does young Brown come home?" Bruce's face, almost grey with loss of sleep, broke into a tired smile.

"'E finishes down at the factory at five, and 'e's 'ome 'ere in about five minutes, and on goes them earphones till they drag 'im to 'is tea at six. 'E's gorn fair balmy, that lad, since 'e started wireless."

"Well, as I must be going at about that time," explained Bruce, "I won't be disturbing the young fellow, so I'll rest there, if you don't mind."

Young Brown's room proved to be truly representative of the living quarters of so many young men

whom this wonderful science of radio has intrigued into its meshes. The bed, washstand, and small dressing table were all jammed into as small a space as possible to make room for the bench of unpainted pine that occupied pride of place at the window, and upon it were, in addition to a wireless set mounted into a little cabinet and another without a cabinet, numerous odd ends of wire, pliers, and odd paraphernalia that go to make up the wireless experimenter's kit.



"'E won't let us dare go near it to tidy it," explained the neighbour, "and my 'usband sez, 'Don't you go gettin' any lectric shocks off them things o' young Brown's; 'e'll be killin' somebody one o' these days. And yer know, Doctor, when there's a storm I git that frightened; what with wire and all about. I'm sure we'll be struck by lightnin' yet; what with 'im and 'is wireless."

Bruce smiled at the woman's chatter, and when the nurse had tactfully got her away, he stretched himself on the bed to await the passing of the crisis that was to mean life or death to this young woman. The wireless gear meant nothing to him, who had been so engrossed in the keen pursuit of that disappointing goddess, "Worldly Success," and although he had one of the finest broadcast receivers in Queensland, his busy life left little time to enjoy its reproduction.

His mind returned to the bitter disappointment that was his at the utter impotence of his position with regard to the operation that was already over, and across the world there in America, and the absolute inability he had to find out its results without completely ruining his prestige in the eyes of the public and particularly in the eyes of his fellow medicos. The machine was now stored in the warehouse of an electrical house with whom he did business, under a bond of absolute secrecy, and nobody had any idea of the contents of the big case. If he only knew what was happening there across the water before he left this little house to go and dress for the Medical Board dinner, he would have in his hand a weapon that would make him the master craftsman of his wonderful art.

He could visualise the papers throughout Australia next day:—

CANCER AT LAST DEFEATED.

IMPORTANT ANNOUNCEMENT BY DR. BRUCE

And then an account of his speech, when after his election to the chairmanship of the board, he had taken away the breaths of the learned doctors with the announcement that he could definitely eradicate cancer, unless it was in its most highly developed stages.

The tremendous argument and almost angry disbelief of the older doctors, that would be turned into

marvelling laudation, when actual physical demonstration of case after case had been made, proving its utter success, caused a rosy glow to course through Bruce's body that made him forget his tiredness.

And then—the bitter, bitter fact that the link that meant so much was missing—the means of finding out the result of Intagliata's work—did the the machine's work, combined with effective surgery, really indicate the dread scourge?

The nurse reported that the patient was sleeping quietly, and no change for the worse was taking place, and Bruce again visited the sick-room, where this frail little wisp of humanity was fighting bravely for the right to continue her care of her good husband.

His return to the little room brought a flood of utter despair, and he cast about for a solution of his trouble.

If he were sure of Intagliata's success the chairmanship of the Medical Board would be of immense value to him, and add considerable prestige to his experiments with the machine, as he proved its worth.

If Intagliata failed, and he did not wish to associate himself with any new movement, the chairmanship would only represent an annoying waste of time to him.

Certainly, it was an honour—but to an already well-established man like Bruce the inconvenience of the necessary social duties, and time required for board meeting, would be a handicap far outweighing the benefit to be gained.

He was turning it all over and over in his mind when a footstep on the back stairs was followed by the entry of a young chap, possibly twenty-four, who stopped as he saw the intruder in his room, and then said:

"Good-day! Are you the doctor?"
"Yes. You're name's Brown, I suppose. You'll pardon me for making use of your room, but I've been coming to ease my tired bones for a while."

"That's alright, Doctor. Don't move. How's the missis?"

"It's been a very close call, Brown, but she'll be alright if she goes on as she's doing. I'd better let you have your room now."

"Please don't disturb yourself, Doctor; as soon as I've had a wash in the bathroom I'm going to try out this new short-wave set I finished just before going to work this morning. I'm pretty keen on wireless, as you see."

As the young man left the room, towel and soap in hand, the Doctor looked with fresh interest at the weird assembly of wire and parts, which to this young fellow on an ordinary living wage, was sufficient to arouse an enthusiasm, that wealthy people he knew could not arouse with things costing hundreds of pounds.

He envied the young chap's intense youth and pleasure, and followed with keen interest his linking up of batteries and wires as he prepared to listen.

"Do you transmit at all?" queried Bruce.

"Not yet, Doctor," came the reply, "but I expect to be able to afford a small transmitting set soon, and I'm sitting for my ticket next month. We have to pass an examination and qualify for a license before we are allowed to transmit, but I get all my fun from reception. Would you mind if I'm quiet for a minute?" and without waiting for yea or nay he turned to the set, and with pursed lips and set face-muscles he glowingly turned two dials that were on the panel.

Slowly, slowly turned the fingers until a smile broke out on the pleased face, and turning to the doctor, he exclaimed:—

"N.P.M. first pop. I thought she'd do it."

He noticed the doctor's puzzled expression, and took off the phones to explain.

"All radio stations have a distinguishing call sign, consisting of figures and letters, and N.P.M. stands for the Honolulu Radio Station, which sends Press messages every evening on 37.5 metres. Would you like to hear the latest news? Just watch while I copy," and again putting on the phones the young fellow began to write the messages as they came along.

News of the Chinese developments in their war were given in detail, and when they began to spell out long, unknown Chinese names, the younger man took off the phones so that the doctor could himself hear the clear piercing note forming the Morse characters, that told all within hearing who could translate it, the very latest news of the world's doings.

The next message told of a serious landslide in the Austrian Tyrol, the next of the capture of mail-robbing bandits on an important American railway by the newly instituted guard of Naval Marines.



The doctor's eyes keenly followed the younger man's pencil as it traced the characters at steady speed.

"Nr. 153. Chicago. An important revolutionary step in surgical science was made here to-day when Dr. Intagliata, the famous surgeon, operated on a patient suffering from a malignant cancerous growth, and by the aid of an electric machine completely removed all traces of the complaint. The success is undoubted, and testimony of all medical men is in confirmation."

The room reeled before Bruce's eyes as he read, and he eagerly read and read again the message.

Victory! triumph! His whole being positively shouted a paean of joy at this unexpected bolt from the blue that meant the realisation of his most ardent dreams.

"Thank you; thank you." Bruce could hardly control his excitement.

"I must come along again and see if I cannot help you in your studies. Truly wireless is a wonderful science. I must go to my patient now."

The crisis was past, and Bruce left a happy man and wife when he drove at high speed to dress for the dinner.

* * *

"It is with the greatest pleasure I take the chair which you have so kindly decided I am the most fitting to fill, and I can assure you that no effort of mine will be sparing during my term of office to fur-

ther the interests of our members and the great profession we represent.

"We have had little of great moment during the past few years to assist us in the eradication and successful treatment of the major complaints that, up to the present time, have eluded the best brains of the medical profession, but I am pleased to announce that to-night I wish to make known to you that I have secured an electrical contrivance that, combined with the usual methods of surgery, which it supplements, will effectually and absolutely eradicate the great scourge of cancer, leaving no chance of it again attacking the person unfortunate enough to contract it."

A silence as the almost outraged doctors looked at one another in wonder, and then a buzz of conversation rising and rising until it had reached the pitch of an almost angry discord, filled the room.

Bruce raised his hand for silence.

"I know that I am taking the risk of being labelled a sensation monger amongst you, but I have such complete faith in the ability of the instrument to do its work that I have chosen this moment to openly champion it, and will in the immediate future, demonstrate to you its absolute value."

The rest of his address was lost in the buzz of incredulous chatter, and the staid members of the association went to their homes fully convinced that the great Bruce was certainly going to make the very biggest medical failure that history had yet known.

* * *

Now You can Learn the Code in One Night!

Thousands have done this— so can YOU

With this short cut designed by a Naval officer you can learn the wireless code in one evening. A large percentage of Radio messages are sent in code and a wonderful field is opened to you if learn it. This short cut was designed for emergency purposes during the war to qualify operators in the minimum amount of time. Used by thousands of students in hundreds of schools all over the country. No phonograph records or other mechanical devices required. Simply take the short cut we send and you will be able to master the code enough to receive messages in one evening.

FAILURE IMPOSSIBLE

Sent postpaid for Two Shilling Postal Note.

The best two shillings you will ever spend in Radio.

RADIO CODE SERVICE

G.P.O. Box 1055N, BRISBANE.

"Welcome, George! It's a pleasure to see you. Where have you been?"

"I've been in Melbourne on business a few days after I saw you. By jove! You created a stir with that machine of yours at the meeting that night. The Melbourne papers were full of it, and were frankly incredulous. How have the results panned out?"

"I have operated on six cases since, George, and only one has failed. In that one the patient came to me by far too late, and he quite understood that it was only a desperate attempt that I made to help him. All the others are cured, and what is more, cured permanently, and despite the natural prejudice the other members of the profession felt, they have candidly admitted that my claims are quite in keeping with the results I have secured. It's a complete victory, George."

At this moment the maid appeared and advised:—"Mr. Giles of the E.S. and A. Bank on the phone for you, sir. I've plugged him through."

"Good afternoon, Mr. Giles. Yes, I want a draft prepared in favour of Mrs. Farleton, 366 High Street, Stone, England, for the sum of five thousand pounds. I will call and see you a little later in the afternoon. Yes! that's it. Good-bye."

"That lady, George, is the wife of poor old Farleton who invented the machine, and Intagliata and I have bought the rights from her for ten thousand pounds, which will keep her in comfort for the rest of her life."

"And now, George, you wonder at me taking the risk I could so ill afford to take with the machine without the protection of the knowledge that I was not backing a losing horse. Well, George, I didn't take any risk, and I have to thank a young man with about ten pounds worth of junk apparatus for that fact. It was wireless that came in at the critical moment, George, and saved me"—and he related the events of the fateful Friday.

"And what's the young fellow had to say about it all?" said George.

"He's shattering the ether with the best transmitting set I could import for him that came within the scope of the permission of his license," said Bruce laughingly, "And, strictly, between ourselves, George, I go over and have a lesson in Morse every second evening at five."

FINIS.

STANDARDISING IN WIRELESS.

In this issue the Queensland Pastoral Supplies Ltd. Queensland agents for the Burndept Ltd., London, notify they are standardising in Burndept Sets. They are giving up all other makes of sets, and component parts, and have compiled a list of their stock, which they are selling at half-price. This will be a great opportunity for readers of this paper to obtain Wireless Goods at a price that cannot possibly occur again, once present stock is sold. Full list of prices will be posted on request.

Personalities

It's a sad, sad story—"The Tale of the Lost Crystal." It happened thus: 4AN senior called at the G.P.O. for a special quartz crystal which had arrived from U.S.A. Untying the package on the Parcels Office counter, he dived deep among the packing and extracted the valuable little parcel. Eagerly he opened the lid—Ah, there it was! Amid visions of a new crystal-controlled transmitter at 4AN he carried home his treasure. Proudly he brought his prize to view. But, alas—'twas found that he had retained the crystal-holder and had thrown away the precious crystal. P.M.G. office boys are now having the time of their lives looking through old rubbish boxes, etc.—but to date—N.G.

The life of a wireless uncle is a strange one. Uncle Ben, of 4QG, attended the Speedway on a recent Saturday night, and whilst standing watching the races began to converse with a policeman. Bye-and-bye the conversation drifted to wireless, when the "Bobby" told a remarkable tale. He began by telling how his aged mother enjoyed Uncle Ben's bedtime tales, as did also his little niece. Recently this little girl took sick, and it was deemed advisable to call a doctor. The little girl would not hear of it, and rather than upset her the family consulted the doctor. The doctor hit upon the clever idea of impersonating Uncle Ben, and was thus able to talk to and examine his little patient. The little girl is now well, and she proudly recalls the visit of "Uncle Ben." Uncle Ben joined the policeman in a hearty laugh—but never let his real identity become known to the man of the law, who, if he should happen to read this, may get a surprise.

Allen Hopper—well known among the old hams of Queensland—recently called into port to renew acquaintances. Allen is now operator on the s.s. Moreton Bay.

Mr. R. V. Humphries, of A.W.A., Sydney, a well-known authority on radio matters, is now supervising the installation of the new beam feeder at Pinkenba Radio Station. Mr. Jefferies (of the B. & A.W. Radio Co.) is assisting. Both of these men carried out important work in the building of 4QG.

Les Cusack has relieved Harry Coffey of the O.I.C. ship at U.I.B. Brother Coffey has taken his wireless worries to Redcliffe, and is trying to drown them in salt water.

Mr. Bardin, an engineer at 4QG, passes away many pleasant off-duty hours at his new short-wave transmitter. We're pleased to see you in action again O.M.

Mr. Mitchell, late of Boswell & Co., Sydney, is now attached to J. B. Chandler's Radio Department. Mr. Mitchell visited Brisbane some few weeks ago; evidently the climate appealed to him.

"The Sandman" (Mr. J. Tyson), of 4QG, recently spent an enjoyable fortnight down Kyogle way. He tells us he had a wonderful time among the hens and the chickens.

4QG receives some funny letters from listeners. One old gentleman, aged 84, recently wrote to Uncle Ben in the following strain:—

"I am supposed to be deaf. If anybody asked me for the loan of 5s. I couldn't hear them, but I heard those three pins drop last Saturday evening."

Proof positive that even the oldest of us are just "grown up kids."



"AROUND THE MIKE."

Uncle Ben, Uncle Jim and the Professor, with Mr. and Mrs. Dorney, before the microphone. Mr. and Mrs. Dorney recently completed a 10,000 mile honeymoon trip around Australia by car, and told of some of their experiences on the trip.

Enlarged and Reorganised—

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BROADCAST BULLETIN

Queensland's Radio Weekly.

All the Programmes
Splendid Articles

Same 2D
Price

Watch for First Issue, May 14th

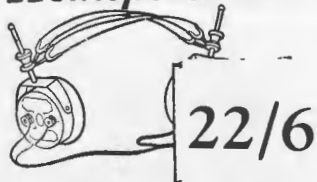
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In PHONES and LOUD SPEAKERS !!

No matter how good your Radio Set is, if it's voice is husky it is not giving you the enjoyment you should be receiving. Here are several prescriptions for this trouble specially recommended by Home Radio Service Ltd.:—

BRANDES

Matched Tone
TRADE MARK
Headphones



At the Price BRANDES Headphones are the best value in headsets now obtainable. They carry a "money back" guarantee if you are dissatisfied after a 10-day free trial. Fitted with adjustable headbands they are noted for their lightness, comfort and efficiency 22/6

SPITFIRE Headphones

Are made from the best materials and are noted for extreme lightness. They have adjustable headbands which fit easily. Efficient alike for valve or crystal set use. They are recommended 15/- by the best authorities.

BURNS LOUD SPEAKERS

The full, free tone, together with the exactness of reproduction and the attractive harmonising design, produces a most satisfactory combination. Their tone is exceptionally loud, yet by means of the convenient adjuster it can easily be regulated to harmonise with the subject being reproduced. The extremely sensitive tone quality brings in the slightest variations of sound. The distinctive appearance which the handsome pyralin bell, polished black enamel finish, and nickel trim presents, makes "BURNS" a horn that will appeal to the eye as well as to the ear.

BLACK, £ 6/6/-; TORTOISE SHELL, £ 6/17/6; MOTHER OF PEARL, £ 6/17/6

STROMBERG-CARLSON MASTER CONE

This Master Cone is a triumph in reproductive engineering, uniting the genius of the old masters to the marvels of present day science. A sound-board of selected wood completes this unusual instrument and gives it the ability to reproduce accurately every sound vibration imparted by an artist or instrument. Every tone, semi-tone and over-tone comes to you clear and undistorted. £ 11/11/-

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The clearer and more rounded tones of the BRANDES Table Talker are accounted for by its goose neck horn. The patent material of which it is constructed eliminates all harshness and metallic resonance. 45/-

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These products are recognised as being in their class, examples of true value in every sense of the word. Made only of the best materials, 35/- they are always efficient and reliable



On Multi-Valve Systems

(By MANFRED VON ARDENNE, Berlin.)

Specially written for "The Queensland Radio News"

It has occasionally been said that the advent of the multi-valve system has deprived the amateur constructor of a considerable part of his field of activity. Certainly this is right to a degree, but these amplifying systems have done away with just that part of con-

struction which is the most mechanical and the least interesting. The time gained by not having to connect and connect several exactly similar stages of amplification can now be put to much better use. Greater attention can be given to the more important parts of the receiving arrangement, and time is spread to require a deeper knowledge of the subject of wireless reception in general.

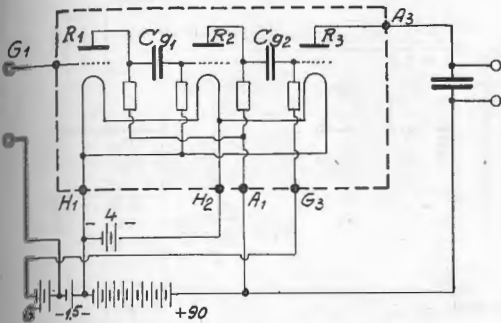


Fig. 1.

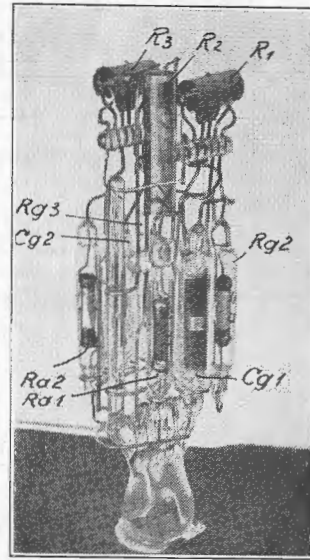


Fig. 2.

The original reason for enclosing complete amplifiers in a single tube not much larger than an ordinary triode-valve was the extremely low value of stray capacities resulting from the ultra-short connections. In practice, however, it has been found that even from the point of view of mere cost of production the arrangement in question, due to Dr. Loewe, is more advantageous than the conventional method of mounting the components in the way usual in receiving sets. Financial reasons mainly led to the construction of a three-valve low-frequency amplifier enclosed in a single tube. The theoretical circuit diagram of this triplex-valve is given in fig. 1. Each stage is dimensioned according to the principles given by the writer. Valves with amplification factors of 33 are used in the first two stages, together with anode resistance of about 3 megohms. The low filament emission required with these high plate-circuit resistances is of the greatest advantage with regard to the long life of the filament. This fact naturally is of primary importance with multi-valve systems.

Amplification of such a triplex valve at different audio-frequencies is shown by the measure curve given in fig. 3. As will readily be seen, the distortion due to inconstancy to amplification across the range of audible frequencies is remarkably small in comparison to other amplifying arrangements. Normal anode-potentials are quite sufficient for satisfactory operation, since both the two high-impedance valves and the power-valve in the last stage are dimensioned for plate-potentials of about 90-100 volts. Should a very large output wattage be required to fill a large hall with a minimum of distortion, it is advisable to use plate voltage up to about 150 volts, together with correspondingly higher grid-bias potentials. The filaments of the valves are dimensioned for voltages between 3.5 and 4.5 volts, so that no filament resistances are necessary if a 4-volt accumulator is used. The low-frequency triplex-valve, as shown in fig. 4, consumes a filament current of 0.3 amp. As is the case with all such resistance coupled amplifiers, a

It is of interest to note that, should such a valve become damaged in any way, the repair is scarcely more difficult than with ordinary valves, which is rather important, considering popular doubts on this point. The interior of such a low-frequency triplex

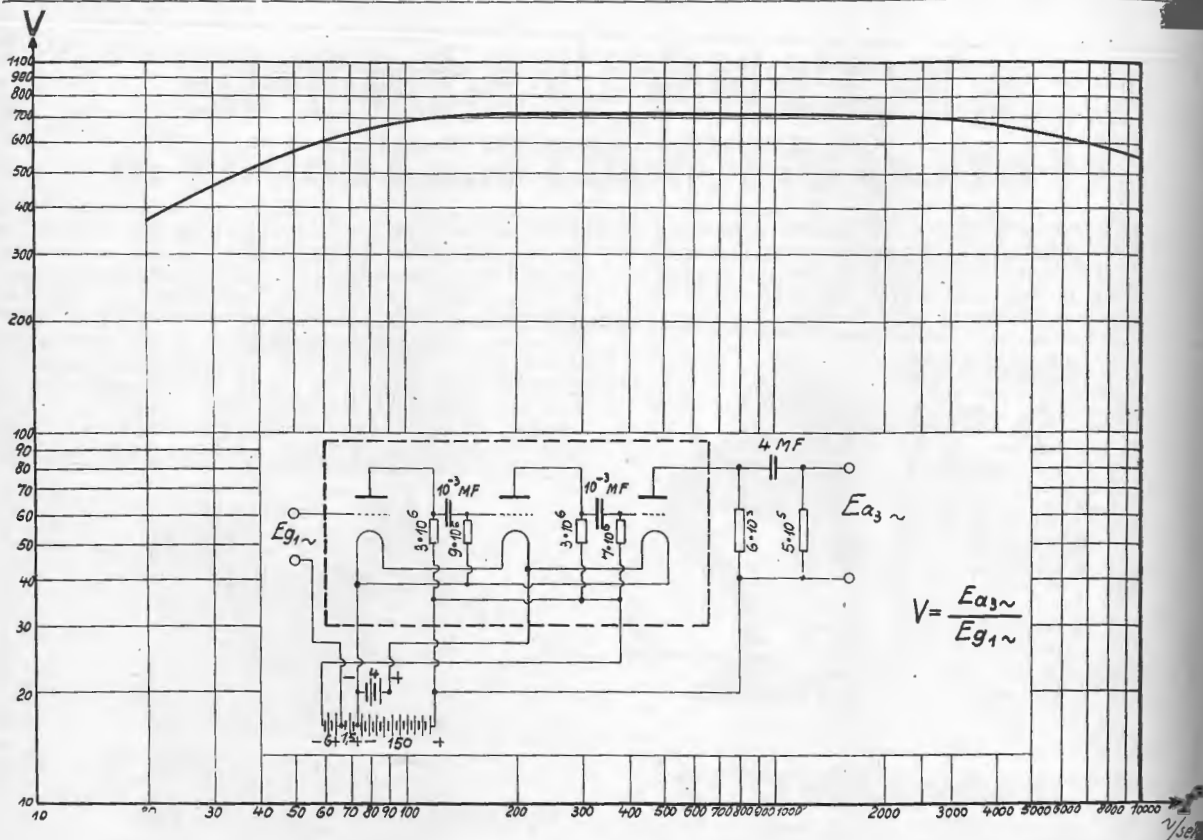


Fig. 3.

very useful receiver for the more powerful stations is obtained if a tuned circuit consisting of a coil of suitable inductance with a variable condenser in parallel is connected across grid and filament of the first valve and loosely coupled with the aerial. Rectification takes place in the first valve as anode rectification mainly due to the influence of the stray capacities parallel to the first anode resistance. As the tuned circuit used has very low losses many distant stations may generally be received on the headphones or, in the case of high-power stations, on the loud-speakers without any reaction whatever. Apart from this simple arrangement, very many various circuits exist, where multi-valve systems are used to great advantage either by themselves or in conjunction with ordinary single valves.

Since the triplex valve necessitates six instead of more usual four connections, the specific valve socket seen in fig. 4 had to be constructed.

The same socket is used for the high-frequency duplex-valve shown in fig. 5. The construction of the interior of this high-frequency amplifier is shown in the photograph fig. 6. The Loewe high-frequency duplex-valve contains two special four-electrode-valves, constructed and dimensioned in accordance with research work carried out by the writer, together with the necessary coupling condenser and resistance.

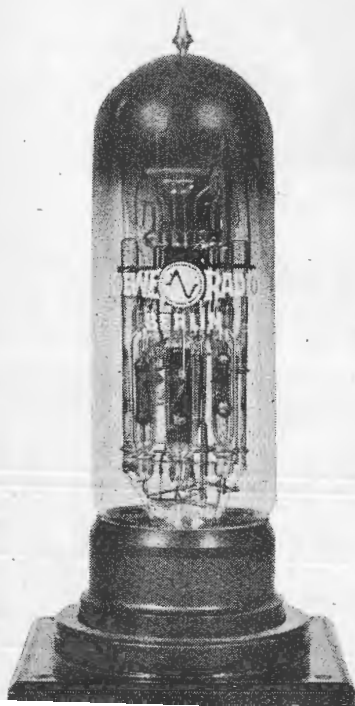


Fig. 4.



Fig. 5.



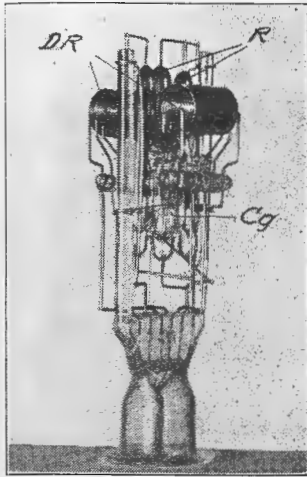


Fig. 6.

This duplex-valve allows very efficient aperiodic high-frequency amplification to be obtained on all wavelengths down to about 200 metres. Its filament consumption amounts to 0.17 amp. at 4 volts. The high-frequency-valve may, for example, be connected to the input circuit of any receiver in the way shown in fig. 7. In practice the effect thus obtained corresponds to a very great improvement of the aerial conditions. The receiver becomes much more sensitive without any difference in purity, while the slight additional tuning-control complication is scarcely notice-

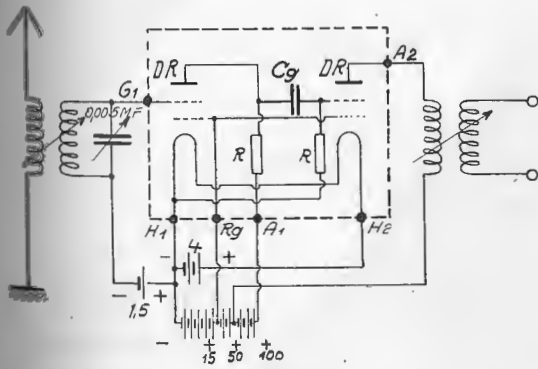


Fig. 7.

able. Extremely good results are obtained even under less favourable conditions, with arrangements embodying a high-frequency duplex-valve in series with a low-frequency triplex-valve.

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Listening to this Gilfillan Radio you find it hard to believe the broadcasters are not actually in your home; You will hear all the subtle over tones and shadings of voice or instrument that give music its truest charm.



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Simplicity of operation, selectivity, fidelity to tone, everyday dependability for perfect results—these are reasons why you should investigate the GILFILLAN 1927 NEUTRODYNE.

AND IT'S SO EASY TO OWN THIS FINER RADIO! You pay a deposit and the balance the easy Harrington way, and secure immediate ownership. ACT TO-DAY!

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Clyde
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WHEN ?

The alteration took place on the 1st of March, when Clyde Type C7 was selling at £4/10/-, C9 at £5/10/-, C11 at £6/15/-, and C13 at £7/10/-.

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BATTERIES**

Made by
**The Clyde
Engineering
Co. Ltd.**
N.S.W.



Re-Broadcasting Holland and U.S.A.

A World's Record by 2BL

Station 2BL made radio history recently, when it succeeded in re-broadcasting the Dutch Station PCJJ, owned by the Phillips' Radio Experimental Laboratories at Eindhoven.

There is an interesting story behind the construction by Mr. Raymond Allsop, Chief-Engineer for Broadcasters Ltd., of the set which enabled the Dutch station to be re-broadcast. On the morning of the day on which the reception was to be carried out, Mr. Allsop commenced to look around among his gear at Coogee home for the necessary material with which to build a three-valve short-wave receiver. This he assembled in his laundry, borrowed an aerial from a neighbour, and connected through his telephone terminals on to Broadcasters Studio in the city. Here the reception was amplified, relayed to the Station at Coogee and rebroadcast from there.

Mr. Allsop commenced his experiments at noon on Thursday, and at 4 o'clock succeeded in picking up the Dutch Station. This was re-broadcast by 2BL, whose listeners-in were able to listen to a programme being given 14,000 miles away—something that has never been done before in Australia. PCJJ was then working on wave-length of 32.47 metres.

The same night the experiments were continued, and at 8.30 WGY, the General Electric Coy.'s station at Genectady, New York, was picked up. Listeners at 2BL were able to hear clearly speeches delivered by four members of the Australian Industrial Commission now in America. In this case the distance was 9000 miles, and the station was 5000 watts, the same as PCJJ.

Not only is this the first time that re-broadcasting of this nature has been heard in Australia, but it is regarded as a world's record. Hundreds of listeners have telephoned and written congratulating Mr. Allsop and the station on the achievement.

Further experiments are being carried out.

The following reception from PCJJ during the experiments should be of interest to listeners:—

4.00 p.m.—Sydney mean time; orchestral number, "Minuet (Beethoven).

4.5 p.m.—After an address which was repeated he said the old familiar radio announcers' quotation, "One moment, please" (in English).

4.13 p.m.—Announcement in Dutch.

4.14 p.m.—Orchestral number, "I'd Climb the Highest Mountain," with vocal refrain sung in English.

4.15 p.m.—Announced in English, orchestral number, "Katinka."

4.19 p.m.—Announcement in broken English.

4.20 p.m.—Orchestral number, "Egyptienne Ballet" (ini).

4.21 p.m.—"Egyptienne Ballet"—continued.

4.35 p.m.—Announcement recording Station PCJJ.

4.40 p.m.—Announcement in which the word "Holland" frequently be heard.

4.38 p.m.—Orchestral number.

4.41 p.m.—Announcement in broken English.

4.42 p.m.—Tenor solo sung in Italian, "La Donna Mobile."

4.44 p.m.—Announcement in English in which the words "Hello, Europe, Spain Holland" were heard, and then "The next item on the programme is:—

4.45 p.m.—Orchestral number.

4.51 p.m.—Announcement in broken English.

4.52 p.m.—Vocal number.

4.56 p.m.—Vocal number, "Abide with Me," sung in English by a choir.

4.59 p.m.—Orchestral number.

5.0 p.m.—Announcement in English: "We are now closing down for one hour. Greenwich mean time, 8 o'clock."

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Queensland's Radio Weekly.

All the Programmes
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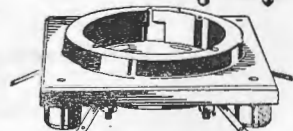
Watch for First Issue May 14th

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Are meeting with exceptional success everywhere. Because of their high sensitivity and simplicity they permit of the construction of extremely powerful yet inexpensive local and long range sets, the ideal instruments for music lovers.

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radio factors of good financial
standing please apply.



Loewe Radio G.m.b.H.
BERLIN—STEGLITZ WIESENWEG 10

THE NEW "COSSOR" POINT ONE VALVE

A REMARKABLE VALVE.

We recently had the pleasure of testing two of the new Cossor 6-volt Point One Valves, and they certainly gave a very fine account of themselves.

The big feature of these new Cossor valves lies in the wonderful Kalenised filament—the filament that never grows brittle and practically defies destruction. This has been proved by two very severe tests. The first of these was to throw from an aeroplane a number of valves chosen at random by newspaper representatives—in their original container without packing of any kind. After a fall of 500 feet these were picked up and on test proved to be unharmed.

The second gruelling test performed upon this new filament was to burn it continuously for 2500 hours (representing 2½ years' average use). At the end of this period the valve was broken open and it was found that the filament was still supple and strong enough to bear the whole weight of the valve.

These valves operate without a glow, which means there is little or no heat passing through the filament. Heat is, of course, the destructive force in a valve's life; obviously the Cossor Kalenised filament ensures a much longer life to the valve.

The normal filament voltage of this valve is 5.5 to

6 volts. The filament consumption is .1 amp. Maximum anode voltage is 80 volts, impedance 8000 ohms and amplification factor 8.

Although primarily a L.F. amplifier and detector this valve, owing to its characteristics and constant internal capacity, is particularly adapted for use in any position in neutrodyne receivers.

These valves, like all other Cossor valves, are obtainable with either standard or American base.

QUEENSLAND AMATEURS

A LEAGUE FORMED.

On a recent evening a meeting of many of the amateurs of the fourth district assembled at Wireless Centre and there formed themselves into a body which will be known as "The Queensland Radio Transmitters' League." The following were elected to office:—

President: M. M. O'Brian (4MM).

Secretary: L. J. Feenaghty (4LJ).

Treasurer and Vigilance Officer: C. Gold (4CG).

Committeemen: R. J. Browne (4RB), and A. E. Walz (4AW).

Further particulars relative to the aims and objects of this league will be published in our next issue.

Every Listener Should Own -

BROADCASTING By J. W. Robinson.

A history of broadcasting in Australia from its inception. Mr. Robinson, now Director of Station 4QG, Brisbane, has been connected with the movement since it started.

Included in this volume are the three episodes which the author has broadcast from 4QG under the collective title of "The Divine Spark." **PRICE, 1/6; POSTED 1/8**

THE FARMER GRAY VERSES

A little book containing all the verses given by Uncle Ben and Uncle Jim from Station 4QG. Get one for your kiddies. We are being inundated with orders from the storytellers' little friends, and the number printed will not last very long. A post card of the complete Bedtime Session Staff of 4QG is given free with each book.

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WIRELESS By J. W. Robinson and G. Williams.

The best introductory book on the subject. Every owner of a set should read it; it is the most concise and clear exposition of the subject yet presented, and thoroughly explains the operation of sets from the simple crystal to the multi-valve without the use of highly technical terms.

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Wireless Controlled Mechanism for Amateurs

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Sold complete with Valves, Loud Speaker, "A" and "B" Batteries, Aerial Equipment and Earth Wire.

Price £12/10/-

BEAUTIFULLY clear reception with splendid tone and volume on 4QG are possible with the Duodex 2-Valve Receiver. Southern stations can also be brought in. It operates from 200 to 2000 metre wave-lengths. The Duodex has been designed entirely by our radio engineer, and is built throughout of the best materials.

Illustrated leaflets of the Duodex Radio Set are now available at our showrooms.

Write or call for more particulars.

The **DUODEX** THREE VALVE RECEIVER

For those requiring greater volume, the Duodex 3-Valve Set has been designed. It is a handsome instrument and not only adds pleasure to a home, but is an ornament in itself.

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3-Valve Dulcephone

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Distortion in any shape or form is entirely absent, due to the careful attention to constructional details. This Three-Valve Receiver is very suitable for use in the country, as it may, if necessary, be economically operated from dry cells.

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B.T.H. C2 Loud Speaker, 6-volt 30/60 amp. hour Accumulator, heavy duty "B" Batteries, Phones, Aerial Equipment, &c., &c.

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(Described in this issue of "Q.R.N.")

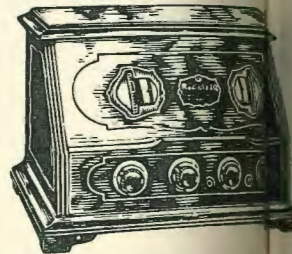
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5-Valve R. C. A. Model 20

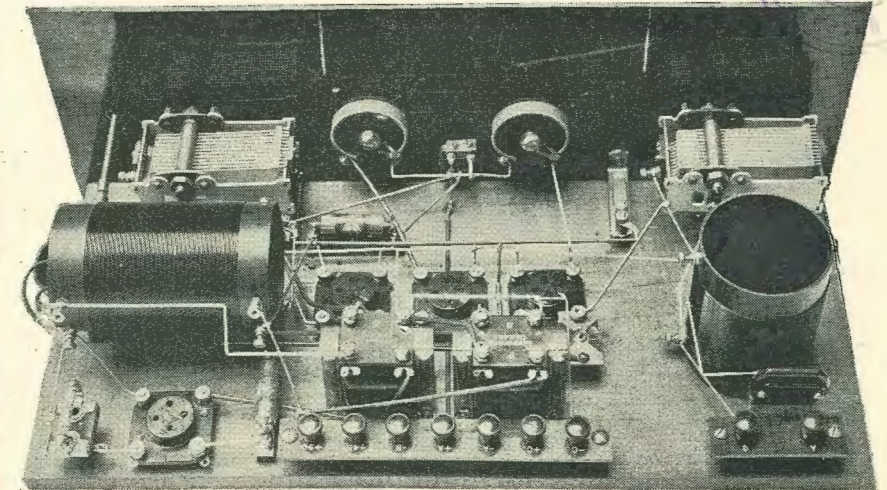
America's finest Radio Receiver—the R.C.A. Renowned the world over for their selectivity, remarkable range, beautiful reproduction, and ease of operation. The Model 20 includes a Finger Control and Mechanical Preselector Components. A very comprehensive book of instructions is given with each receiver, enabling the veriest novice to understand the principle and operation of the Set.

Price, complete with B.T.H. C2 Loud Speaker, heavy duty "A" and "B" Batteries, and all Accessories.

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WIRELES HOUSE

City Buildings, Eard St., BRISBANE



4-VALVE Browning-Drake Dulcephone

(As described in "Q.R.N.," March Issue.)

This circuit is too widely and favourably known to need comment here. Suffice it to say that Wireless House engineers have combined in this new Dulcephone model the very finest value from this wonderful circuit. Despite the fact that only the very best components are included, and the highest grade accessories supplied with this set, the price is startlingly low. Just fancy—a Browning-Drake Dulcephone for £32/10/-! Remember the Wireless House guarantee of satisfaction goes with each receiver.

EQUIPMENT INCLUDES

B.T.H. Loud Speaker (New Model C2), 6 volts 30/60 amp. hour Accumulator, heavy duty "B" Batteries, Phones, Aerial Equipment, &c., &c.

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Baldwin Type Mica-diaphragm Phones	...	30/-
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Walnut Var. Condensers, 3-plate	...	5/-
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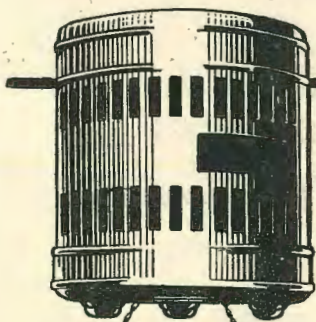
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STRICTLY in accordance with Philips policy—savings resulting from economy in production and distribution of this popular little Battery Charger are now passed on to the buying public direct.

Although the price is lower—its quality, dependability and efficiency remain unchanged, this is also Philips policy.



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No. 450 (as illustrated) charges 1 to 3 TWO VOLT cells at 1.3 amps. Consumption 25-30 Watts. Ready for instant connection to the A.C. Lighting Mains giving full wave rectification and automatic regulation—exclusive Philips features.

Fool-proof, Silent, Simple to connect.
FROM ALL DEALERS

A co-product of famous Philips Lamps, Valves, "B" Eliminators and Loudspeakers.

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A REMARKABLE ACHIEVEMENT

BEAUTY of TONE *beyond compare!*

Your Ear is the Final Judge.

Ask to hear this Philips Product at any Radio Shop. Listen to the music of your favorite quartette—piano, violin, flute or cello—and you will be thrilled by a new depth and richness of tone different from any other Speaker you have ever heard.

Greater tone range—with equal reproduction of both the high and low notes—made possible by a patented Balanced Magnet System and full floating cone—is responsible for this great improvement exclusive to Philips.

Equal distribution of sound in all directions—no mechanism to adjust and a guarantee of faithful working as long as the seals remain unbroken—are added reasons why you should choose a Philips Speaker for your set.

It is already a world-wide success.

A co-product of famous Philips Lamps, Valves, "B" Eliminators, and Battery Chargers.

FROM ALL DEALERS



PHILIPS NATURAL TONE LOUDSPEAKER



Considerable interest has been created in the radio world by the introduction of a new Udisco receiver which marks a tremendous advance in the design of receiving sets.

The Udisco Five, or Model "L" as it is known, has a one dial control, the various stations being selected by a single dial, while signal strength can be adjusted as required by turning a knob. Of course, other refinements are fitted, but the above are the only essential controls.

The new receiver is a remarkable one in many ways, and tends to upset many firmly established principles of construction. No shielding of any type is used, and yet this set is beyond doubt the most selective five-valve instrument that has been placed on the market.

At a distance of half-a-mile from 4QG no trouble is experienced in bringing in 3LO Melbourne, 2FC and 2BL Sydney, without any interference whatever from the former station, and no wave-trap of any type is necessary. This is a performance which can be equalled by very few six or eight valve sets.

At the same time, combined with this great selectivity, is a remarkable increase in signal strength, and the set is so sensitive that it will give full speaker strength on interstate stations without any aerial whatsoever, while a small indoor aerial about fifteen or twenty feet long is all that is necessary for general working.

The radio stages are now real amplifiers, and unlike the radio amplification of most sets, are not merely of use to give sharper tuning. The high amplification of the radio stages and the small aeriels possible mean that much less interference from static is experienced.

Some idea of the simplicity of control can be gathered from the fact that on demonstration the four stations—2BL, 3LO, 2FC and 4QG—have been tuned in at full speaker strength within four seconds.

Constructional Details.

In circuit and construction are many evidences of the originality of Udisco engineers. Mr. E. G. Beard,

The Model "L" Udisco Five

the chief engineer, has always been a pioneer in radio design and in the various broadcasting stations and receiving sets built by United Distributors under his supervision, many departures have been made from orthodox methods.

In this latest set tuning coils are the binocular type, which will probably now become very popular. These coils are clamped between two small bakelite plates, apparently violating the rule that bakelite and other such materials should be kept out of the field of the coil.

There are three tuned circuits, each circuit being tuned by means of a 23 plate variable condenser. These condensers are controlled by a single dial, but instead of being arranged tandem fashion as with most single dial sets, the condensers and tuning units are kept entirely separate, and are coupled in a manner similar to that adopted by the "Zenith" Radio Laboratories.

The circuit used is very different to anything previously employed, and combines all the advantages of the neutrodyne and regenerative types, United Distributors holding the patents for this throughout the British Empire and the United States.

Radio amplification is choke coupled, as with the Capacidyne circuit which Mr. Beard evolved about 18 months ago, while the same method of tuned grid circuits has also been followed.

Both these methods have proved their efficiency over the broadcast bands and short wave-lengths. Here the similarity ends as a system of neutralisation has been adopted, giving the set all the advantages of this type of construction. A rather unique construction has been adopted in this, as valve capacities are first increased and then the combined capacity of the valve and of this added capacity are neutralised, making the neutralisation almost independent of the valve used. This means that the set will work at full efficiency without having to carefully select the valves used, and this is, of course, a most important feature for country work, where an unlimited supply of valves is not available.

The reaction used is controlled by means of a small condenser, enabling full advantage to be taken of this feature over the whole wave-band. The set is fitted with UX sockets, and is suitable for use with practically any valve. The usual 201A type is the most popular, but United Distributors are recommending the new Philips A609 tubes, which require a very small current for their operation, while giving very satisfactory results. These tubes, of course, are ideal for use in centres where battery charging is a problem, and this, combined with the ease of operation and the splendid results obtained from this new set, will do much to fill a long-felt want in country districts. It eliminates from radio much of the inconvenience formerly existent, and reduces the art of reception merely to the turning of a dial, an operation which can be mastered by a child in a very few minutes.*

Club Activities



RADIO CLUBS OF QUEENSLAND.

- AUCHENFLOWER AND DISTRICT**—Secretary, L. Cribb, "Frampton," Ridley Street, Auchenflower.
- CAIRNS AND DISTRICT**—Secretary, Mr. Tarbit, c/o Mr. Les. Fitzsimmons, Cairns.
- EASTERN SUBURBS**—Secretary, A. E. Newnam, Logan Road, Fiveways, Woolloongabba, Brisbane.
- GRACEVILLE**—Secretary, H. Carter, Cr. Molonga Terrace and Wylie Streets, Graceville.
- IPSWICH**—Secretary, S. J. Aspinall, Brisbane Street, Ipswich.
- SOUTH BRISBANE**—Secretary, W. R. Gilbert, Gordon Street, Coorparoo.
- STAMBUL**—Secretary, T. Starkie, Sandgate Road, Nundah.
- TOWNSVILLE**—Secretary, E. J. Jefferies, Fletcher Street, West End, Townsville.
- WIRELESS INSTITUTE (Queensland Division)**—Secretary, A. JACKSON, A.M.I.E. (Aus.), "Clock House," Elizabeth St. Brisbane.
- WOOLLOOWIN**—Secretary, H. A. Jiear, Lisson Grove, Woolloowin.
- WYNNUM AND MANLY**—Secretary, P. J. Golden, c/o Trackson Bros., Ltd., Elizabeth Street, Brisbane.

Wireless Institute [Q'land Division]

The 1927-1928 activities of the above institute have been entered into enthusiastically by members and officers with every hope that a year of great progress and good results will be accorded their efforts.

The election of officers for the year resulted as follows:—

Patron, Mr. A. G. Jackson, A.M.I.E.E., A.M.I.E., Aus.

Vice Patrons: Professor T. Parnell, M.A., Dr. Boyd, Mr. A. J. Christie.

Past President: Mr. A. K. Lawton.

Honorary Members: Mr. S. V. Colville, Mr. C. W. Isles, Mr. J. Sutton, Mr. F. Walker, Commonwealth Radio Inspector for Queensland, Director of State Radio Service.

President: Mr. W. I. Monkhouse, A.M.I.E.E., A.M.I.E., Aus.

Vice-Presidents: Mr. S. H. Smith, Mr. A. A. Jackson, A.M.I.E., Aus.; Mr. C. H. Casperson, Mr. T. H. Dutton, Mr. J. Williams.

Council: Mr. R. J. Browne, Mr. F. Sharpe, Mr. H. Stephenson, Mr. C. W. Stephenson.

Honorary Auditor: Mr. R. D. Kennedy

Hon. Assistant Secretary: Mr. N. B. Harper.

Hon. Secretary and Treasurer: Mr. C. Dunn, box 689K, G.P.O., Brisbane.

The activities of the institute should be supported by all members, and the opportunity of learning the "ins and outs" of wireless should be taken by those for whom the institute is anxious to help; should be taken by amateurs and listeners in, who are not yet members, of joining now, in order to avail themselves of the year's benefits.

The following is a portion of the syllabus for the ensuing year:—

Council meetings will be held in the "Courier" Building on the second and fourth Thursdays in each month at 8 p.m. and 7.15 p.m. respectively, commencing Thursday, 12th May.

General meetings will be held in the "Courier" Building every fourth Thursday in the month at 8 p.m., commencing 26th May.

At each general meeting a lecture will be given selected from the following: Inductance, capacity, aerials, coils, valves crystal detectors, simple valve sets, amplifiers and multi-valve sets, transformers, wave-traps, faults and fault finding, the lecture on 26th May being on "Inductance," by Mr. W. I. Monkhouse, A.M.I.E.E., A.M.I.E. (Aus.).

Broadcasting.—On each alternate Sunday, commencing 8th May, between the hours of 10 and 11 a.m. the institute will broadcast on a wave-length of 250 metres. The session will commence with the institute's call-sign (4WI), and announcement in Morse, followed by "tune in" of musical items—10 minutes; institute announcements; Morse practice, 15 minutes—miscellaneous, 15 minutes.

Those who propose joining the institute should communicate with the hon. secretary and treasurer, Mr. C. Dunn, box 689K, G.P.O., Brisbane.

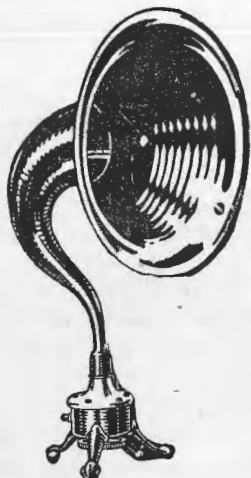
Woolloowin Radio Club

The past month has been rather a slack one as regards club activities. With rain, holidays, study, &c., several of our meetings have not been quite as lively as usual. However, now that the holidays are over, the usual attendance will be assured, and as we are due for a new syllabus of lectures, &c., a busy time is expected. The transmitter is again on the air and good reports are coming to hand. I believe the transmitter is something to be proud of—of course, 4Why Not, as our Ipswich friends do say—and, as it was constructed by Charlie and Hal Stephenson, of the Tech. Com., it will be. Our operator, Charlie, intends getting a roster going shortly in order to keep 4WN on the air a little more consistently than it has been in the past. During last week-end several Victorians and South Welshmen were worked, and almost always good reports were obtained—this with low power.

Speaking of transmitting, I have just been informed that another of our gang—Bruce Munroe—has been successful in gaining his transmitting ticket. Congrats. OM; fine business; hope to hear you on the air shortly. This news is rather a surprise to most of us, I think, as Bruce kept quite dark about the whole thing.

At a recent "off" night Mr. Grant produced a copy of that priceless paper entitled "Dookin the Dook," published by the Sydney University students. Now, as I said, it was an "off" night, so Mr. Grant spent the evening reading extracts from this wonderful Mag. In a few moments several of the gang were observed to be lying on the floor, rolling about, and holding their sides, crying the while for someone to put them out of their misery. Personally, I do not blame them, for my own sides ached for many a day afterwards from laughing that evening.

Business seems to be taking a firm hold on the lives of several of our members. Our old and tried "Zech-Tree," Mr. Harry Jiear, works like a trojan, and so much of his time is taken up thus, that for the time being an "off-sider" has been appointed, and



Burndept British Wireless

Nothing Better in the World

For BURNDEPT GOODS we supply you direct at Wholesale Prices—

40% Discount as follows.

BURNDEPT 2 Valve Sets £12-10-0 less 40% ~ £7-10-0

BURNDEPT 3 Valve Sets £20-0-0 less 40% ~ £12-0-0

Same Discount off the 4 and 5 Valve Sets—Write for Full List.

T. Rigby, Manager, "Cracow," Taroom, telegraphed Sept. 29th:—"Most excellent results Burndept Triplex Set. Brisbane, Sydney, Melbourne, all loud speaker strength."

Hundreds of other testimonials have been received—one received from Mrs. L. J. Pates, of Wamuran, on the 14th April (last month), saying there is only one word necessary to describe the result—"BEAUTIFUL."

BURNDEPT ETHOVOX LOUD SPEAKERS—recognised as the best throughout the world:—

Large Size £5/15/0 less 40% ~ £3/9/0
Medium £3/0/0 less 40% ~ £1/16/0

We are standardising in all BURNDEPT WIRELESS SETS only—giving up all the component parts and valves and all other makes of Wireless Sets.

We therefore can offer ex our stock for immediate delivery and subject to sales, the following:—

2 ONLY—5-VALVE SUPER UDISCO Wireless Sets. Agents' Price, £75 OUR PRICE THIS MONTH £37/10/ NETT (complete with everything).

These are the Super Udisco Sets, which the agents sell at £75, and must not be compared with their cheaper 5-Valve Sets at £45.
66 ONLY—565 Burndept Valves, equivalent to DE5. Usual 13/6. THIS MONTH 6/9.

22 ONLY—240 Burndept Valves, equivalent to DE. Usual 13/6. THIS MONTH 6/9.

8 only—Burndept Special Lightning Arresters. Usual, 25/- THIS MONTH 12/6.

9 ONLY—150 Turn New Burndept Coils, all hermetically enclosed. Usual, 7/6. NOW 3/9.

9 ONLY—100 Turn New Burndept Coils, all hermetically sealed. Usual, 7/6. NOW 3/9.

4 ONLY—75 Turn New Burndept Coils, all hermetically sealed. Usual, 7/6. NOW 3/9.

10 only—60 Turn New Burndept Coils, all hermetically sealed. Usual, 7/6. NOW 3/9.

8 ONLY—50 Turn New Burndept Coils, all hermetically enclosed. Usual, 7/6. NOW 3/9.

9 ONLY—35 Turn New Burndept Coils, all hermetically enclosed. Usual, 7/6. NOW 3/9.

Also a quantity of various good makes of Honeycomb Mounted Coils, from 35 to 200 turn. Selling at 5/- to 10/- each. OUR PRICE, 2/6 each ALL ROUND.

1½ Dozen Burndept Non-Microphonic Valve Holders. Usual, 7/6. NOW 3/9.

3 ONLY—Burndept Mounted Enclosed Crystal Detectors, with terminals, 7/6. NOW 3/9.

Fixed Condensers, Burndept, 125 m.f., 0.5 m.f., 0.25 m.f., 1 m.f. Usual 7/6. NOW 3/9.

Eagle, .0003 m.f.; Harms, .00 m.f. Usually 2/6 to 7/6. OUR PRICE, 1/- EACH ALL ROUND.

16 ONLY—Burndept Rheostats, Nos. 270 and 271, with Ebonite Knob. Usually 9/- THIS MONTH 4/6 EACH.

1 ONLY—Frost Rheostat, 6 ohm No. 600. Usually 6/- NOW 3/-.

1 ONLY—Signal Transformer, 2-1 ratio. Usually, £1/1/- NOW 10/6.

1 ONLY—Signal Transformer, 2-1 Audio. Usually, £1/1/- NOW, 10/6.

2 Burndept Special Enclosed Condensers. Low loss variable. No. 416: Capacity .0005. No. 417: Capacity. 001. Usually 50/- NOW £1/5/.

3 Radio Cabinets, polished rosewood, panel size 16in. x 8in. Usually, 30/- NOW 15/-.

1 Large De Luxe Radio Cabinet (rosewood), double doors at top and double doors at bottom. Usually £25. NOW £7/10/-.

Burndept 2 and 3 Pole Change Over Anti-Capacity Switches. Usually 18/6. NOW 9/3.

CRYSTALS—various sizes. Usually 1/- NOW 3d EACH.

1 Box Crystal Set Parts, including Terminals, Crystal Cup and Holder for cat's whiskers. Usually 2/6. NOW 1/- set.

6 ONLY—Marco Radio Jacks, No. 4, for telephone plugs. Usually, 2/6. NOW 1/3.

6 ONLY—Frost V.V. 199 Valve Sockets. Usually 3/- NOW 1/6.

Now is the time to buy Wireless. Write to day for Catalogue and Special List

Queensland Pastoral Supplies Ltd.

BOWEN STREET

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BRISBANE

Phones: 5410 5411 5412



Harry rarely finds time to attend meetings. Col. Grant is also exceedingly busy, I believe he will need an alphabet as big as the Chinese to place after his name by the time he is through with his study. Just at present he hardly has time to throw a brick at a bunch of noisy cats at night, so intent is he with his study. I believe Nim is also turning too and spending a couple of nights a week studying some mysterious subject or other—mostly the "other."

At a recent meeting we had present one Mr. Harris, of New Zealand, who gave us a good description of radio in general "in far-off Maori Land." Mr. Harris is one of the old hands at the game, and his early experiments date back to the days of crystal receivers for DX Morse reception, and when Morse was the only broadcasting on the air. "Them sure was the good ole days." In those days the only tuning arrangement consisted of the old "loose-coupler," built a couple of feet long, and wound with about 32-gauge wire.

Don't forget to come along to any of our meetings if any of you are interested. The crowd, or "gang" turn up every Thursday evening. The club-rooms are in Wilmington Street, Woolloowin, and everyone is welcome.

Toombul Radio Club

Quite a number of 4TC members are wondering who put the "wire into wireless." The members in question have been assisting to wind a power transformer for the club's transmitter, and there is no doubt, in the minds of their friends at any rate, that they are "quite fed up with the sight of wire."

The meeting night immediately previous to Easter was chosen for the discussion of a proposed motorcycle tour during Easter through the Northern Rivers district. Several members personally uninterested in the discussion were endeavouring to snatch a few minutes' code practice in a corner, whilst the motorcycle cranks were presumably considering the advisability of taking cream trousers, silk pyjamas, &c., with their luggage. The trip subsequently "came off," as did several of the riders—but that's another story.

Some time was spent at a more recent meeting in discussing the Lodge "N" circuit and the new Marconi KLI valves. The valves mentioned make use of a treated cathode heated by a separate filament, the filament being supplied with alternating current through the medium of house mains and a suitable step-down transformer. Whether the KLI type of valve will replace the present type with its attendant accumulator and battery charger (in the city areas), or whether it will not, would perhaps be a suitable subject for debate between radio organisations in the future.

Five-metre experiments are progressing steadily, and (who knows?) perhaps by Christmas five-metre enthusiasts may be using this wave for cross-Pacific communication.

Two Toombul hams attended a meeting of Brisbane hams on the rather notorious 1st of April. The hams decided to form a league of transmitters amongst themselves.

Meetings are held every Wednesday evening at 4A residence, Eton Street, Nundah.

Graceville Radio Club

The last meeting of the club was held at Mr. Carter's residence on April 8th. There was a good roll-up.

Mr. Williams took up a large part of the evening with the Morse class, which proved very interesting.

A committee meeting was held on the 20th instant, and the following interesting syllabus has been drawn up.

Syllabus of Subjects.

April 22nd.—Morse class, 7.45 p.m. to 8.30 p.m.; construction of low-wave set, 8.30 p.m. to 9.30 p.m.

May 6th.—Debate, "Brisban, Brisbane, or 4QG"; leaders, Mr. Brayne and Mr. Keeping.

May 20th.—Morse class, 7.45 p.m. to 8.30 p.m.; completion of set.

June 3rd.—Discussion on super heterodyne; led by Mr. Brayne.

June 17th.—Morse class, 7.45 p.m. to 8.30 p.m.; practical night with valves.

July 1st.—Visit by Mr. Robinson, Director 4QG.

We should have a very interesting night on the 22nd, when a start will be made with the low-wave set, all the parts of which are in the hands of the secretary.

Experimenters and enthusiasts of all ages will be welcomed.

Meetings held at the residence of Mr. H. Carter, corner Molonga Terrace and Wylie Street, Graceville, each alternate Friday at 7.45 p.m. Parking space provided.

Instal this British Battery!

And here's the reason why. Because the C.A.V. Battery is British built and is therefore thoroughly constructed of the best materials; because the C.A.V. is especially made for radio work; because the C.A.V. will give better service, wear longer, and give better volume and clearer reception. Instal this British Battery to-day and notice the difference. We service all makes of Batteries.



Radio Batteries

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Barnes Auto Co.

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BRISBANE



THIS is the Battery

That gives long, unstinted service for very little cost. EVERY-READY'S popularity is due to its two big features:—

- (1) Long Service due to fresh stocks constantly arriving from the Sydney factory.
- (2) Low Price due to large output and the saving of tariff charges.

“Ever-Ready” Radio Batteries

Are renowned all over the world for their excellent qualities. You may pay more, but won't buy better.

Let your next battery be an EVER-READY, and save the difference.

PRICES:

W.P., 40-Volt	12/6
W.P., 60-Volt	18/9
X.P., 40-Volt	23/-
Super, 40-Volt	30/-

SOLD BY ALL DEALERS

Wholesale from

Edison Swan Electric Company Limited
156 Creek St. Brisbane



Activities on the 20-metre waveband have been livening up considerably during the last few months. The Australian hams, however, do not seem to be as enthusiastic as their brothers overseas; I have counted only three of them during the last month, 7DX, 2SS and one local—4RB. The New Zealanders have more 20-metre stations working, and are going more consistently down here would not be out of place. Among the N.Z.'s, OZ-2AC is the loudest, at strength R6 to 7, closely followed by 3AC and 3AI, at R5. The Yanks and Hawaiians, of course, have the majority in number; my log shows about 60 of them heard during April at an average audibility of R5. The Europeans are not heard very strongly in the mornings but come in at maximum strength between 3 p.m. and 7 p.m.

Those intending to QSY down have several good “landmarks” to guide their receivers. WIK, on 22 metres, can be counted on for an evening's entertainment of “Vs,” etc., further down is a station with a very punk note and a wave as broad as Victoria Bridge who signs ANF on roughly 20 metres. Lower down are both NPO and NPM, who handle a lot of commercial QTC. All of the “20-metre boys” are congregated between WIK and NPO, although there are one or two just above this band.

Twenty metres are, without question, just as good if not better than 40 for DXing. Why not, therefore, let some of the “older” hams take a tumble and thus relieve the “overcrowding” and jamming on 40 metres?

Going further down the scale the 9 to 12 metre band is one which, up to the present, has received very little attention. OZ-2AC, AF-1B and EF-7JN were the only ones to attempt DX working on 12 metres, but what the results of the tests were, I don't know.

Dozens of 5-metre schedules have been arranged in different parts of the globe by folk who have plunged direct from 20 metres, and in some cases 40 metres, into the intricacies of the higher frequencies, and although signals have been heard over distances of 5000 miles no actual DX two-way contacts have yet been reported. It does not seem quite within the bounds of reason to jump from 20 to 5 metres and try to get signals out when nothing has been done to exploit the peculiarities of the intermediate frequencies. We are all acquainted with the good work done just two years ago by 2CM and English 2OD in the first QSO on 20 metres between England and Australia. Both these men had QSY'd from 80 metres, and had done very little work on 40, when they began racking their brain boxes on 20 metres. How 2CM blew all his “fifty watters,” tried different aerial systems, and at last worked G-2OD on a 250-watt “bottle” using a series feed Hartley circuit because the tube wouldn't oscillate late in a shunt feed arrangement; is history that's trying to repeat itself this year on 5 metres. It would be considered no extraordinary feat nowadays to pop down to 20 metres with a 5-watt tube and work the world. Why, then, all this fuss two years ago?

6-20D and our 2CM were the honoured pioneers, but they could give us little or no dope on "how they did it," although 2CM said he had an idea the 20-metre signals preferred daylight to darkness. The question again:—Why was it so hard two years ago, and so dead simple now? Maybe that extra time spent on 40 has helped us more than a bit.

The world-wide traffic relay contest, to be held this month, beginning on the 9th May and ending on 22nd, has already started a good many keys waggling, and prospects look like a monster success. The whole strain of the contest is as follows:—A North American (U.S. and Canada) station will send a short message to any competing ham, worked outside the territories of North America. The "outside" man copies the message correctly and signs off; he will then make out a reply to that message in his own words (not less than eight words), addressed to the station who transmitted it and send it (by radio) via some OTHER North American station. No points will be gained by either station if the reply is sent back "direct." There is no need to wait for advice as to when to begin, as Australia is a "replying" country. All you have to do is to send back a reply in your own words. A certificate is the prize for the best Queensland ham, so it's yours O.M. you can get it. The marking is: One point for receiving an American message correctly; 3 points for transmitting a reply.

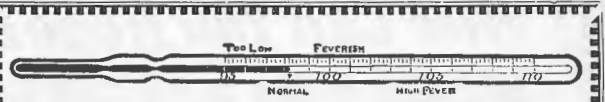
The majority of the local chaps are piling up some fine DX totals. Old 4LJ is in the thick of it every night with a signal that improves every time I hear him.

4RG and 4AB are having a contest to see who will be the first to QSO U.S.A. on a 201A. 4RG's sigs. have been reported heard over there, however, and I hope we can acclaim the winner in next month's notes.

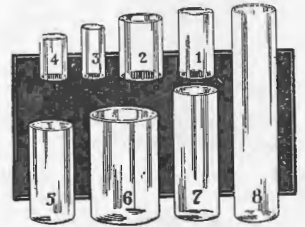
4MM has aroused suspicions by putting up a radio shack. Let's hope he'll invite the gang round for a dance at the official opening.

Not much from 4RB lately owing to "QRW with study," etc. He is usually heard every Sunday after 5 p.m. on 20-metres. He says his best DX down there is Belgian 4AU, with whom he has been keeping a reliable schedule. EB-4AU reports his 20-metre sigs. R6 to 7.

4WI is always on the air every alternative Sunday on 250 metres. Time of transmissions is from 10 to 11 o'clock in the morning. Items of topical interest to hams and B.C.L.'s; music and a fine series of lectures are transmitted. Don't miss this!—4WI will be working this month on the 8th and 22nd (May).



PLAGUE, INFLUENZA, DENGUE FEVER, and all other diseases are first indicated by a rise in temperature; therefore, a Clinical or Fever Thermometer is a necessity in every home, especially where there are children. Order one NOW and have it ready. **Price 3/9 each.** Posted 9d extra. If you paid a guinea you could not buy a better article.



Radio Battery Cells, Crystal Detector, and Lubricator Glasses (all sizes).

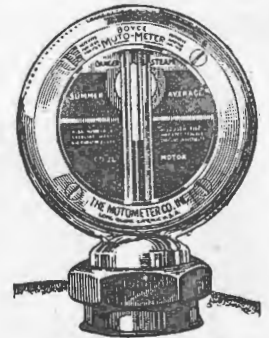
TEST YOUR BATTERIES.

New up-to-date Hydrometer for testing the gravity of the electrolyte of storage batteries. The only Hydrometer that will float right and give accurate tests. The best made. **Price 10/6 each.** Postage and packing 2/ extra.

Others at 5/6 each.

IMPROVED PETROL TESTERS

The unsatisfactory working of the petrol motor is often due to the spirit being too dense. The tester will indicate the quality. **Price 10/6 each.** Posted 12/6.



MOTO METERS.

Midget size 15/ each; posted 1/ extra. Universal size, 27/6 each; posted 1/6 extra. New tubes fitted to broken ones.

Illustrated catalogue posted free on request~

Wilson Nafis & Co. Ltd.

99 Wharf Street, Brisbane
(next Fire Station)

Enlarged and Reorganised—

THE NEW BROADCAST BULLETIN

Queensland's Radio Weekly.

All the Programmes
Splendid Articles

Same Price **2^D**

Watch for First Issue May 14th

How Can You Hope for Good Reception when you use Obsolete Radio Parts?

A Lightning Arrestor is a positive necessity for the adequate protection of any radio receiver. The Emmco Lightning Arrestor is mounted on a bakelite base, and the gap principle prevents static corrosion, at the same time affording an easy path to earth for heavy static discharges. Price 4/3.



Made of moulded bakelite, adaptable for all standard valves and with rubber shock absorbing cushions, Emmco valve sockets cannot become displaced by long usage. Price 4/6.



Emmco transformers amplify music and speech without distortion, because they are designed and manufactured to the highest possible degree of electrical and engineering efficiency. Ratios 2 to 1, $3\frac{1}{2}$ to 1, 5 to 1, $7\frac{1}{2}$ to 1. Price 21/-.



Every detail in the Emmco Headphones is manufactured to the highest standard of efficiency. A light spring band, with sliding adjustment, on each earpiece enables them to be worn with the utmost comfort. Price 21/-.



Constructed with one new style metal frame and bakelite knob the Emmco Rheostat cannot lose its adjustment, because of the double inside grip on sliding arm. Price, for 6, 10, 20 and 30 ohms, 4/6.

**Obtainable at
All Dealers—**

IT can't be done. You may have heard excellent reception of local stations two years ago on your present set, but since then the number of stations has doubled, wave-lengths have become crowded, tuning sharper, and thousands of new sets have added to the din of oscillating valves.

To bring in the same results as you had two, maybe one year ago, you must double the efficiency of your set. It is not necessary to buy an entirely new receiver, it can be done by discarding old worn components for new parts that have been designed to meet these conditions.

Emmco parts manufactured in Australia to withstand climatic conditions unmet with in any other part of the globe where radio parts are made, will meet your requirements. For instance, the Emmco Super-het kit supplies you with the most essential parts for building the King of Receivers (designed and matched for uniform efficiency by experts), full instructions, diagrams, etc., for putting it together and all at a price that makes it available to everybody. The new way—the Emmco way—is not only far better in results, but it is far cheaper.

The Emmco Radio Handbook is now available free to all users of Emmco parts. Contains 24 pages, including all Australian and New Zealand call signs, selective circuits and up-to-date information. Get a copy from your dealer.



Manufactured by

Electricity Meter Mfg. Company Ltd.

SYDNEY N.S.W.

Queensland's New Radio Weekly

The "Broadcast Bulletin" to be Enlarged and Revised

Commencing from Saturday, 14th May, the little paper which has been published every week containing advance broadcasting programmes and known as "The Broadcast Bulletin" will be completely reorganised, enlarged and thereby transformed into a worthwhile weekly radio paper.

Its size will be that of the Queensland Radio News and it will contain in its first issue 32 pages.

The price will be the same as the old Bulletin—twopence per copy—and in keeping it at this figure it is felt that all radio enthusiasts will realise that an honest effort is being made to cater for them at the lowest possible rate.

Up to the present Queensland has not had a weekly radio paper. With the tremendous increase in licenses in this part of Australia it is felt that the time has now arrived for the publication of such a radio journal in this state.

In future "The Broadcast Bulletin" will contain articles which will interest listeners generally. Full detailed advance programmes of the various broadcasting stations will also be published and much reading matter of interest will be included in the paper.

NEW LOWER SUBSCRIPTION RATE

The old "Bulletin" was not eligible for registration at the G.P.O. as a newspaper, and full postage rates had to be paid on every copy. This naturally made the subscription rate somewhat high.

The new paper, because it will contain articles and news matter in addition to the programmes will, within a few weeks be daily registered as a newspaper thus reducing the postage rate considerably.

Accordingly, the annual subscription rate from 14th will be lowered from 11/6 per annum to 9/6 per annum. Old subscribers will have their subscriptions carried over for a longer period and each will be advised to this effect in due course.

Nine shillings and sixpence is a modest sum to pay for 52 copies of a paper that will supply you with programmes, news items and general reading matter of a high order. Send your subscription to-day.

CATERING FOR COUNTRY LISTENERS.

It is realised that for a weekly radio paper to be of service to those listeners in the country must reach the reader in time to give him the full week's programmes.

The paper will, as heretofore, be dated Monday. It will be for sale in Brisbane on Saturday, but country listeners will be especially catered for by posting all country subscribers' copies on Thursday night, thus enabling the paper to reach almost any part of Queensland by the following Monday—in good time for the full week's programme.

The new "Broadcast Bulletin" (dated May 16th) will be on sale at all newsagents on Saturday, May 14th.

Look for the new "Broadcast Bulletin" on Saturday, 14th May.

"Variety is the Spice of Life"

Don't be content with one Station only. If you live more than a mile from 4QG., you stand a good chance of being able to tune-in to Sydney and Melbourne with the aid of --

The GIBSON Wavetrapp



This high-grade instrument was designed in Brisbane when broadcasting commenced, and is the only Wavetrapp which has stood the test of time. If you have seen similar instruments, they can be only of GIBSON design, or a copy. Attached to your set in ONE MINUTE—trouble proof—guaranteed.

Ask Any Dealer for the GIBSON Wavetrapp.

£3 with full instructions.
Satisfaction or money
back.

Designed by, and
Manufactured for

Leighton Gibson

Radio Specialist, Box 106B,
BRISBANE. Tel. J3167.

A TYPICAL REPORT.

Dear Mr. Gibson,—

The Wavetrapp you left with me last week for trial has more than fulfilled my most sanguine expectations. Prior to installing your Trap I could not hear 3LO Melbourne at any time whilst 4QG was on the air, but I can now receive that station at almost any hour at loud-speaker strength without any hindrance from the local station. 2FC and 2BL are also now free from any local interference.

I shall be only too pleased to prove the above remarks to anyone you may send along who wants a really efficient Wavetrapp.

Yours truly,

J.N.N.

(Name on request.)

USE YOUR HEAD

Cut Prices, Slander, Hearsay, Habit,
may cause you to buy other Valves

BUT—

for the sake of your sanity and best results

Buy **DE FOREST** Valves

and have no regrets

FOR SALE EVERYWHERE

De Forest Valves

TYPE D.V.5.—Takes 5 volts
at $\frac{1}{2}$ amp. on filament.

11/-

Plate voltages, detector 18-22 $\frac{1}{2}$
volts.

Plate voltages, amplifier, 60-
150 volts.



D.V.5.
Filament 5 volts
.25 amp.



D.V.3.
Filament 3 volts
.06 volts.

De Forest Valves

Type D.V.3.—Takes 3 volts at
.06 of an amp. on filament,

13/-

Plate voltage, 16-22 $\frac{1}{2}$ volts,
detector.

Plate voltage, 60-120 volts,
used as an amplifier.

Both Types Fit Standard American Socket.

Factory Representatives:

INTERNATIONAL RADIO CO. LTD.

200 CASTLEREAGH STREET, SYDNEY.

Queensland Distributors:

HOME RADIO SERVICE LTD. "COURIER" BUILDINGS, BRISBANE.

Through the Years

4QG'S ENGINEER WITNESSES A MIGHTY CHANGE.

In 1901, when the then Duke of York (now King George V.) visited Australia, wireless of any kind was practically unknown.

It was decided, however, with the meagre facilities at its disposal, for Australia to welcome by wireless its distinguished visitors.

A small set of apparatus was erected at the Signal Station at Point Lonsdale, Port Phillip Heads, and an aerial was swung from the flag pole.

As the steamer "Ophir," carrying the Royal party, approached the coast, a call was made, but it was not until the steamer's smoke was dimly visible in the distance that communication was established between ship and shore. At that time a little boy of three years lived at the Point Lonsdale Lighthouse.

To-day wireless has become quite a common utility and form of entertainment.

During the recent visit of the Duke and Duchess of York to Queensland, people in far distant centres were able, per medium of broadcasting, to hear full descriptions of all that was going on, and to hear the reproduction of the Duke's voice as he addressed the people.

Behind the technical arrangements of all those

broadcasts from 4QG was the same little boy (now a grown man) who witnessed that first message of greeting to the present Duke's father—the King, 26 years ago.

Mr. F. W. Stevens, 4QG's Chief Engineer, has certainly been interested in wireless a long while.

SINCEREST FLATTERY

It speaks volumes for the prestige of 3LO Melbourne that its methods should be a model for newer and more recently founded studios. Mr. Maurice Dudley the 3LO announcer recently received a request from an announcer in a new studio requesting some practical hints and advice on the art of announcing. Mr. Dudley's obliging reply contained the following hints:—Keep programme strictly to timetable. Speak rather more slowly than usual. Be ready to fill in should any item finish before advertised time. Have next turn ready before preceding one finished. Vary announcements as much as possible, in order to avoid stereotyped speeches. The correspondent received several pages of advice which should be of great benefit to himself and his listeners.



The "Blue Spot" Supertone III. CONCERT SPEAKER

Prices of "Blue Spot" Concert Speakers—

The SENIOR, all mahogany, Concert Speaker, ... 153/- The JUNIOR, all mahogany, Concert Speaker ... 90/-

Guaranteed UNDER London Prices

Ask your Dealer, or write for List of "Blue Spot" Specialities

The Masterpiece of Loud-Speaker Construction

A Master Piece indeed!

No other loud speaker constitutes such an elegant and valuable instrument at so modest a price. Built in accordance with principles laid down after long years of study devoted to the problem of tone and conductivity, the "Blue Spot" Supertone III embodies an achievement of supreme importance in the realm of sound technique. In its design, materials and construction, nothing has been missed in obtaining the most handsome appearance and perfect tone production.

That the "Blue Spot" Supertone III is indeed a masterpiece is amply evidenced in the extraordinary popularity it enjoys.

"BLUE SPOT" PHONES

Mahogany, Green or Black, 27/6. Green Cross, 21/6
White Cross, 13/6

Wholesale only

ALEC. McCULLOCH & Co.,

Agents and Importers

King House, Queen Street, Brisbane

PHONE —
CENTRAL 1718

TELEGRAMS—
"ALECMAC"

4QG. JOTTINGS

On Anzac Day (Monday, 25th April), special steps were taken by Station 4QG to cater for listeners who were unable to attend the various functions. In the morning, the Memorial Service, held in St. John's Cathedral was relayed. In the afternoon, the Returned Sailors and Soldiers' functions in the Brisbane Botanic Gardens was relayed, and at night, the Citizens' Anzac meeting was relayed from the Exhibition Hall. In each case the reproduction of the various speeches and musical items were perfect.

The broadcasting of motor cycle races by 4QG from the Brisbane Speedway is still proving exceptionally popular. Strange to say some of the most enthusiastic listeners to Spedway races are American wireless amateurs. Quite a number of letters have been received at the Station from various parts of the United States, and these have shown that the motor races are followed with keen interest by the writers.

Mr. P. Beran of Anchorage, Alaska, has written saying that on one Saturday night recently, he was greatly interested in the Golden Helmet race. Frank Arthur the well known Toowoomba rider, was his favourite, but fell. Mr. Beran asked 4QG to convey to Frank Arthur his kind regards and best wishes for better luck next time.

Professor Elin, Head of the Voice Department of the Conservatorium of Music, Manilla, who is visiting Australia on a holiday is to give three Sunday night recitals at 4QG on 1st May, 22nd and 29th May from 9.30 p.m. to 10.0 p.m. Professor Elin will be supported by Mr. Luis Amadeo Pares (violin) and Miss Gertrude Anderson (piano).

Some of the staff of 4QG whilst in the South recently took advantage of the opportunity to listen in and test the clarity and strength of their own station. It was found that little difficulty is experienced by people in the South, in cutting out their local Stations and bringing in 4QG with great volume. This convincing testimony of the strength of 4QG signals when one considers that at the time of testing there were no less than two "A" class stations of five kilowatts and at least two "B" class stations of moderate power simultaneously on the air. The

wireless set used for testing purposes was a simple two coil three valve receiver.

The broadcasting of the football match direct from the Exhibition Ground, when Brothers and Suburbs met in the Old Buffers Cup final, was a complete success, and during the progress of the game, Station 4QG was deluged with telephone rings from listeners who desired that particular form of broadcasting be repeated on some future occasion. The description of the Match was given by Mr. Stan. Phillips, the secretary of the Brisbane Rugby League. It was Mr. Phillips' first experience at descriptive broadcasting, and the manner in which he carried it out was such that listeners might well have imagined that he was greatly experienced in such work.

During the programmes of transmission by Station 4QG from the Wickham Park bandstand on Sunday evenings, the noise of trains passing through Roma Street station is very often registered on the microphone and broadcast, the railway line being only about 75 yards distant from the bandstand. A few days ago, during the transmission of the news service from the studio of 4QG, the engineer on duty in the station listening-in to the announcer's voice, was surprised to hear a train whistle coming through with remarkable distinctness. Investigation showed that one of the studio windows had been opened to admit fresh air to the studio, and the sensitivity of the microphone had registered the whistle of the train which was passing through Roma Street, a distance of over a quarter of a mile from 4QG.



A CROSS in this square denotes that your subscription expires with this issue.

Subscription 6/6 year

Why Girls Leave Home

and go to town to buy their men's wireless parts

I Don't Know!

E. A. HOLT

Electrician

Stanley St., opp. Railway Yards

stocks everything you need at the right price.

Electric Lighting Electric Motors
Radio

Anything Electric Ring J4379

Some Constructional Hints

Extension Shafts for Short-Wave Work.

Anyone who has tried it knows the difficulty to be encountered in making extension shafts of insulating tubing for short-wave work. Usually a piece of brass rod, the same size as the instrument shaft, is inserted in the front-panel dial, and the two shafts are inserted in the ends of a length of tubing made from some insulating material, being held by set screws.

But when the set screws are tightened enough to keep the shaft from slipping, the tubing is apt to split. The trouble may be overcome in the following manner: Procure two pieces of strip brass, about three-quarters of an inch longer than the diameter of the tubing to be used, and two square brass nuts, with short screws to fit. Tin both sides of the brass strips and one side of each nut. Drill a hole in the centre of each strip, large enough to pass the screws. Drill a hole of the same diameter near each end of the tube. Then solder the nuts to the strips, keeping two edges perpendicular to the length of the strips, and centring the holes in the strips carefully over the holes in the tube. Bend the ends around the tube and solder them together, forming a complete collar at each end. The extension shaft may then be fitted to the regular shafts, and the screws tightened. It will be seen that by this method all strain on the tube itself is removed, yet the collars form a very firm and permanent means of holding the extension shaft rigidly.

When Winding Coils.

When winding coils and using silk or cotton covered wire which has been bought on reels, it will often be found that it is not an easy matter to stop the wire from kinking, and also make it run smoothly on to the former with an even tension.

The little device which makes matters easy, however, and a very neat result can be obtained.

The porcelain pulleys are of the ordinary type obtainable from any wireless dealer.

The pulleys are fixed on to a board 2ft. long by 9in. wide, each pulley being 6in. apart, while leaving plenty of room for the wire reel. It will be found in practice that a small wooden clamp at each end to hold the wire taut will be useful when finer wires are being used.

A Use for Old Condenser Plates.

One of the writer's variable condensers came to grief recently, and after surveying the wreck, it was decided to make use of the fixed vanes, which had almost escaped injury.

A piece of ebonite was trued up, drilled and tapped to take six screws, one vane being used as a template. One of the spacing-washers was threaded on to each of the screws projecting from the ebonite, and the first plate placed in position. The three remaining screws were then each fitted with a spacer which had been filed down to half-thickness, in addition to that

already in position. The second plate was slipped into place on the screws and was thus raised off the first plate by one half the space distance of the fixed plates of the original condenser. Thereafter a vane and a washer were applied alternately.

In this manner the plates are arranged in two piles, dovetailing but insulated from one another and separated by air. One pile should have a plate in excess of the other, and in estimating the total capacity the lesser number should be taken into consideration.

The spacing can of course be varied according to the thickness of the spacers used. The result is quite a firm job and there is very little area wasted. The terminals shown can if desired be replaced by copper lugs for making soldered connections.

"THE MASTER OF EFFECTS."

Right-hand Assistant to the Wireless Uncles at 4QG.

Some very realistic effects are frequently introduced into the bedtime sessions at Station 4QG. The "master of the effects"—at times the most noisy individual in the studio, although the microphone rarely records the pulsation of his voice—is a very busy man, and it can truly be said that his job is no sinecure. It is his job to look after the introduction of realistic touches which greatly assist the Uncles at 4QG in providing novel features for the amusement of the children.

In one of their sessions some weeks ago Uncle Ben Uncle Jim conducted an imaginary trip by steamer across the Pacific, through the Panama Canal, Tennessee cottonfields being their destination. On this occasion the "master of effects" had his hands full with the introduction of the following realistic noises:

Motor car, trotting of a horse, siren of a steamer, engine-room telegraph and bells, screws of steamers churning the water, storm at sea and thunder, the working of machinery and automatic coaling of the ship, motor boat, aeroplane; and the striking of a match. The kookaburra was also heard, and a train in motion.

The "master of effects" at 4QG is indeed a valuable asset to the Uncles and inseparable from their sessions.

Enlarged and Reorganised—

THE NEW

BROADCAST BULLETIN

Queensland's Radio Weekly.

All the Programmes
Splendid Articles

Same 2D
Price

Watch for First Issue, MAY 14th.

Broadcasting—A Necessary Service

(By "RAY DIO")

It is interesting to consider the phases of broadcasting since its inception four or five years ago. The development from the scientific toy or hobby stage to the present-day standard of utility is surprising. Certainly very few of the pioneers foresaw the uses to which their experiment in science would be given.

It is not unreasonable to say that the youth—the intelligent and energetic youth—of the country took the first active interest in the art. Proud parents boasted of their sons' exploits with "a few bits of wire"; but were seldom interested enough to take the matter seriously.

Hobby Stage Gave Way to Entertainment Stage.

When business and technical men got together and prepared the plans for the structure of the future broadcasting industry they considered it entirely as an entertainment business. The stage of broadcasting mechanical music had not passed, and the light-hearted enthusiasms as well as scientific exploits had made broadcasting essentially a medium of entertainment.

Thus the entertainment side of the business of broadcasting was naturally the principal one—if not the main one that was studied. Even the theatres in some countries openly expressed their fears of broadcasting invading their domain of theatrical entertainment service.

Certainly the broadcasting companies took the matter up with enthusiasm and interest in the service for listeners. The class of music broadcasted was constantly surveyed, and a genuine effort made to provide listeners with a first-class service of music. The only limitation on the service was the technical one of the efficiency of the transmitting equipment and of the listeners' receivers.

General Utility followed the Development.

With improved musical programmes came a large increase of listeners. One might instance the very successful broadcasting of grand opera by 3LO Melbourne. It set everyone talking and the many visitors to homes of friends who had receivers began to think of getting sets of their own.

The continued improvements in the station, the studios and in the programme service, together with the development of more suitable and efficient receivers gave a decided filip to the business. Listening sets were installed in every street and in country districts.

But the broadcasters did not confine their activities to musical service. The utility of the new medium as an educational factor and as a means of conveying to listeners more than musical entertainment. News services, market reports, weather information, and lectures on popular subjects were introduced. Church services also had carried a popular position of preference in listeners' opinions.

The country listeners were specially catered for. In addition to the market reports and weather information, specially prepared lectures and talks by authorities and experts on country pursuits were arranged. These are much appreciated and have a direct utility value to the listeners interested.

Other aspects of utility service could be mentioned in detail. Announcements of special and urgent importance to listeners; election speeches and results;

enquiries for missing or absent relations in times of serious emergency—all these phases are almost daily occurrences.

The broadcasting of the speeches and descriptions of the ceremonies connected with the tour of the Duke and Duchess of York are of special interest. The ceremonies to be held at Canberra this month will be a prominent feature of most stations, and the broadcasting of the description of those ceremonies will enable listeners throughout the Commonwealth to take an interest in the opening of Canberra in a manner that no other service could provide.

Two New Ultra-Selective Receivers

Latimers Wireless Supplies Ltd., of 3 Hamilton Street, Sydney, are the agents in Queensland for Chapin five-valve broadcast receivers, Paradyne five and six valve broadcast receivers, Warren Headphones, Rola re-creator speakers, etc.

On the night of 20th April, under severe test, located on the roof of the OK Buildings—some 200 to 300 yards from the powerful 4QG station—very excellent results were obtained on a six-valve Paradyne receiver, using a fifteen-foot aerial some five feet above the flat roof. Mr. C. R. Strange, the managing director of this company, was successful in tuning in Station 2FC, Sydney, which was quite satisfactorily heard in the presence of three or four witnesses, 4 band and Mr. Jack Lumsdaine's item at the picnic coming through very well with the faintest sound of 4QG at times. This undoubtedly is an excellent result at such close proximity to the super-power station.

On the night of 22nd April some further tests on the six-valve Paradyne receiver were carried out at Eagle Junction, by kind courtesy, at the residence of Mr. Reid. Approximately 85 to 100 feet of indoor aerial was used, and stations 2BL Sydney, 3LO Melbourne, and 2FC Sydney were very satisfactorily tuned in by Mr. Strange with ease, in each case with excellent strength and clarity. On the outdoor aerial the five-valve Chapin receiver delivered the "Argus" news service from Station 3LO Melbourne with wonderful clarity and volume whilst 4QG was operating.

Both of these machines are within the reach of everyone; the five-valve Chapin lists at £25 complete, the five-valve Paradyne at £36, and the six-valve Paradyne at £40. This firm invite enquiries addressed either to their temporary showrooms at OK Building, Queen Street, Brisbane, or to their Sydney Office, at 3 Hamilton Street, Sydney.

These sets are of the tuned radio frequency class with special refinements for undistorted reproduction and distance getting.*

Judging by the expressions of appreciation passed by visitors to Station 4QG, the appointments of the station compare more than favourably with its southern competitors. Both visitors and artists performing there have their comfort fully considered, especially in the beautiful reception room, with its club-like interior furnished with comfortable lounge settees. But it is in passing from the reception hall to the small studio that one is made fully alive to the value of contrast, as the effect of the draping in rich blue is a most striking one.



To All My Little Friends,—

Well, kiddies, here I am again, and it certainly does seem a long time ago since I wrote to you through this page. I hope this letter finds you all happy and bright. How many of you heard our famous race for the Green Coat? Perhaps I should have asked who didn't hear it. It was a grand success, and although I had set my heart on winning it I was glad and happy to see Uncle Jim ride so well and win the prize. The trouble now is that I have the trousers and Uncle Jim the coat. They look very odd on both of us, so I think some day we will have to race and see who can win the complete suit.

Now that the winter is coming on we are receiving a bulky mail from New South Wales, Victoria, and New Zealand. To any little boy or girl who reads the "Radio News" in any of these States I would specially invite them to listen-in to us (if their sets are powerful enough), and then to write and let us know if they enjoy our sessions.

Uncle Jim and I have been having rather a strenuous time lately. The Sandman, as you all know, has been away on holidays, and Uncle Jim and myself have been telling the stories nearly every night of the week. However, the Sandman is now back again, and will amuse you with his many musical instruments.

Now, children, there's a Guessing Competition on this page in the form of filling in the hour and minute hands of a watch at a time you think Uncle Jim will get out of bed on the morning of Saturday, May 14th. I don't know whether he gets up early or late, but judging by the number of times he comes late to the radio I'm afraid he's a pretty late riser.

So set to work, children, draw the watch hands in very carefully, and post your entry to the Editor of this paper, marking the envelope "Uncle Ben's Guessing Competition."

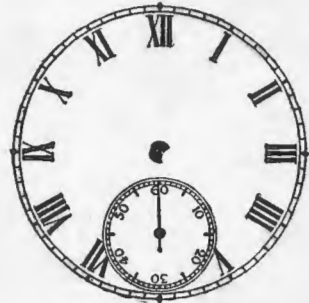
Well, so long little ones. Keep smiling—look always on the sunny side of things,

Yours affectionately,

UNCLE BEN.

WHAT TIME DOES UNCLE JIM RISE ?

You all know Uncle Jim—and you all know he has a habit of getting to the studio late for the bedtime stories. I tell him he must get out of bed too late in the morning, but Uncle Jim generally blames Tony or something or other. He says he is an early riser, but personally I have my suspicions. Anyway, on Saturday, May 14th, we are going to make a note of the time Uncle Jim "gets up." You are asked to guess what



time this will be, and to fill in your attempt on the above dial. The competition closes on May 20th. Address your attempts, "The Editor, 'Queensland Radio News,' Box 1095N, Brisbane," marking your envelope "Uncle Ben's Guessing Competition."

The first prize of 5s., and a second prize of 2s. 6d. will be forwarded the child who sends in the entry nearest the correct time.

LITTLE MISS BRISBANE'S STORY COMPETITION.

This competition did not receive the support that it should have, due probably to many children considering themselves unequal to the task of writing a story about the Gumnut Gnome and the Wattle Fairy. Sixteen attempts were received, and on the whole they were very good. The prizes were awarded as follows:—

First Prize.

BESSIE HORROCKS (aged 10 years), Pomona (Q. Id.).

Bessie's story was well written; it had an interesting "plot," and was accompanied by some beautifully coloured sketches to illustrate the story.

Second Prize.

ELSIE BOYES (aged 14 years), Torwood, Brisbane.

Elsie also sent in a nice story, which we found to be quite interesting.

Space forbids the publishing of these stories, but the prize money will be forwarded to the two little ladies who won the prizes.

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THE NEW BROADCAST BULLETIN

Queensland's Radio Weekly.

All the Programmes
Splendid Articles

Same 2^D
Price

Watch for First Issue, May 14th

BRITISH **Brown** THROUGHOUT



The Incomparable **Brown** in Seven Superb Models

Now that Broadcasting has awakened such an intense national interest, it is only natural to find that Loud Speakers, in common with many other commodities, Radio or otherwise, must be produced in a variety of types at prices that will be within the reach of all. It is for this reason, therefore, that there are now available seven superb models of **Brown** Loud Speakers.

Of all the Loud Speakers on the market to-day, the **Brown** is unique, because, by a brilliant application of an entirely original principle, it achieves results which can be obtained in no other speaker. **Brown** principles of design and construction can be found only in **Brown** Loud Speakers. The famous tuned reed mechanism, which permits the use of a supersensitive cone-shaped aluminium diaphragm as thin as paper, is responsible for a tonal purity and mellowness which must be heard to be fully appreciated.



Obtainable from all Radio Dealers.

Sole Agents:

NOYES BROS.

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Sydney.
115 Clarence Street
Newcastle:
11 Watt Street.
Brisbane:
Perry House, Elizabeth St.
Agent for W.A.:
J. R. W. GARDAM,
138 Murray St., Perth.



Radio in Motion Picture Direction

*Broadcasting Employed for First Time in Direction of
"Old Ironsides," a Paramount Picture*

For the first time in the history of motion pictures, radio broadcasting was employed, when James Cruze directed the action of 50 sailing frigates in battle during the filming of "Old Ironsides," a Paramount picture. A portable station, licensed by the U.S. Government as Station KFP, was used. It operated on 110 metres.

The use of radio receiving sets and loud speakers have been used in motion picture production before, but it remained to James Cruze to employ radio broadcasting from an eminent cliff to obtain the accurate movements of the old-time sailing frigates.

"Old Ironsides" tells a story of daring youths against a background of an historical incident in 1803, when America and England joined hands to rid the Mediterranean Sea of Tripolitan pirates, who had for years been exacting monetary tribute from great powers. The picture shows how the youths who manned the old sailing frigate, "Old Ironsides," stormed the forts on the Bay of Tripoli, and rescued men and women who were under ransom. It was during these battle scenes that James Cruze delivered his inspiring direction from Radio Station KFP.

The transmitter was entirely self-contained, and was operated from Columbia batteries. A single UX 210 De Forest valve was used as its oscillator, the plate supply being derived from heavy duty Columbia "B" batteries. The power was limited to 15 watts, and the little station's range was therefore confined

thus, minimising interference from local broadcasting stations.

Each wooden sailing frigate that took part in the mimic sea battle in "Old Ironsides" used a short-wave receiver. The standard Reinartz circuit was used, and to make doubly sure that the director's voice would carry through the din of battle, two stages of Jefferson audio frequency amplification were added to the regenerative detector on each short-wave receiver. Brandes headphones were used by Wallace Beery, George Bancroft, and the other Paramount players in receiving their special instructions.

The rigging of the old-fashioned sailing frigates did not lend itself to the fastening of modern aerials, so some of the receivers had to work with aerials only six feet long. However, in actual operation it was found that the stage of amplification introduced in the microphone circuit of the transmitter made a tremendous difference, and Director Cruze's voice could be clearly heard. Cruze gave direction by speaking into a Western Electric phone, and instructions were picked up by the unit concerned. Thus was this novel radio detector made to handle a fleet of old-time sailing frigates scattered over an area of 20 square miles and carrying thousands of actors.

Radio has been called upon its short career to perform many strange duties, but in this latest application of directing motion pictures, it demonstrated its great adaptability in a truly dramatic manner.

BRITISH & AUSTRALIAN WIRELESS COY.

MANUFACTURERS OF

'B. & A. W.'

RECEIVERS

ALL sets made on the premises under PERSONAL SUPERVISION, and are guaranteed unconditionally to do all that is claimed for them by the salesman. HIGHEST GRADE PARTS are used and we do not spoil good circuits by using cheap components.

OUR PRICES ARE AS FOLLOWS:—

Crystal Sets, complete £ 2 to £ 4/10/-.	2-Valve Set, complete with A.R.38 loud speaker, £ 13 (dry cells).	4-Valve Set, complete with B.T.H. loud speaker, £ 37/10/ (6-volt ac- cumulator).
1-Valve Set, complete with headphones, £ 6 (dry cells).	3-Valve Set, complete with A.R.38 loud speaker, £ 19 (dry cells)	5-Valve Set, complete with B.T.H. loud speaker, £ 50 (6-volt accumu- lator).

B. & A.W. SPECIALS.

4-Valve Resistance Coupled Set, complete with B.T.H. loud speaker, £ 45.	5-Valve Neutrodyne, complete, £ 60. Super-Heterodynes built to order at the lowest possible price.
--	--

Note Specially—No poles Required—just an indoor aerial

All prices include installation within 20 miles of
Brisbane.

If you are experiencing any trouble with your set,
ring Central 2057.

BRITISH & AUSTRALIAN WIRELESS COY.

Note New Address

18 ALBERT HOUSE, ALBERT STREET - - - - - BRISBANE

Phone, Central 2057.

A Radio Miscellany

(By H. KAYESS.)

A wireless chess match between members of the Commonwealth Parliament and members of the British House of Commons has been arranged for this month, to celebrate the opening of Canberra as the Commonwealth capital. The beam service is to be used.

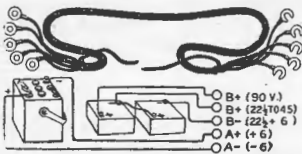
Long-distance chess is not new; there was a cable match, lasting eight hours, between London and Chicago recently. This match was very successful, possibly because to avoid mistakes, each message sent began with a confirmation of the last move received from the other side. The same system will doubtless be adopted in the inter-Parliamentary chess match.

Play will be on two consecutive days, giving twelve hours at the board. Arrangements have been made for an Australian empire in Britain to represent the Commonwealth Parliament, and a British empire in Australia to represent the House of Commons.

The British Amplion Company recently opened up in America, and the full range of Amplion speakers is now manufactured and sold in that country. One of the newest lines to be introduced is known as the "Grand," and is built into a cabinet 34in. by 33in. by 11in. with hinged doors that reveal a handsome ornamental grille, behind which the entirely new type of speaker is concealed. A new principle of reproduction is used—a combination of soundboard, air-column and cone, and it is claimed that this latest production of the famous house of Graham represents the very last word in radio reproduction, quality and volume being all that could possibly be desired.

One of the most ingenious methods of simplifying connections and making absolutely sure of good contacts is exhibited in a set that is shortly to appear on the Queensland market under the trade name "Ambu." Contacts from all the components are brought out to points below the sub-panel, which is of the highest-grade insulating material. Grooves are then machine cut between all contact points that are to be connected and the "wiring up" is done by the simple and ingenious process of running molten metal into these grooves. Loose, corroded or leaky connections are thus eliminated by a method that is so simple that we are curious to know why no one ever thought of it before!

Battery cables with various coloured leads greatly simplify the making of connections from the several batteries to the terminals of the set. The coloured



leads act as guides and greatly reduce the risk of making wrong (and possibly costly) connections.

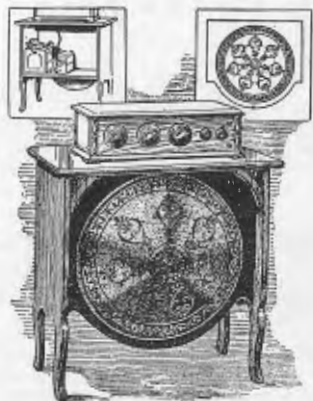
These cables are obtainable at any wireless shop, in five-foot lengths, containing five or seven different coloured leads with the necessary lugs and clips. The whole is made neat and strong by means of an outer enclosure of braiding. Well worth fitting to any valve set.

Ever since the advent of broadcast reception we have regarded the dry-cell "B" battery as having reached its highest possible stage of development in the form of a number of small round cells more or less surrounded by insulating compounds and contained in a container of waxed cardboard or other material. One of the leading battery makers has now placed on the market a battery in which flat strips of carbon and zinc are piled alternately one above the other with the active material (or paste) sandwiched in between. This method of assembly has the distinct advantage that the whole of the case or container of the battery can be packed "full of battery," thus avoiding the wasted space that necessarily occurs when cylindrical cells are assembled in groups. These new batteries are stated to give 50 per cent greater output than the ordinary kind, external sizes being the same.

Since the invention of the three-electrode valve, there has been little change in its form except in the way of improving its performance and developing special types for special purposes. A new type of valve is now being produced—one that bids fair to effect great and satisfying simplification in the construction of sets, and also in the reduction of filament battery consumption. Known as the multi-valve, it contains one filament, divided into three sections, each of which is accompanied by the relative grid and plate. In other words there are all the elements of three valves contained within the single glass bulb, which is of about normal size. The connections for the extra two grids and plates are brought out to binding posts at the sides of the base, while the four prongs in the base fit the normal American sockets. It will readily be seen that the multivalve converts an existing five-valve set into one of three valves—one of the new valves and two normal ones. The current consumption is thereby greatly reduced, and of course, a much more compact set can be built.

Great Britain now grants licenses for receiving sets free of charge to those who are blind. On presentation of a prescribed certificate at any post office a listener's license is issued, free of the usual tenn-shilling fee.

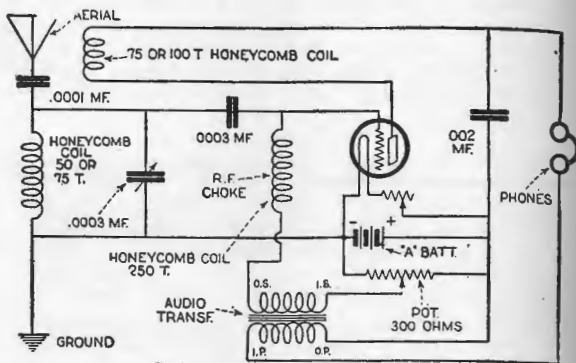
Recently we were very interested to examine and hear a sample of a new type of loud speaker that has just arrived. As will be seen from the illustration, it comprises an attractive console table to carry the radio set, with a twenty-two inch cone loud-speaker and sounding board forming the front of the cabinet. The speaker with its sounding board may be quickly removed to permit access to the batteries



which can be conveniently housed on the shelf provided. This unusual combination is most pleasing in appearance, and the tone and volume provided by such a large diameter cone are remarkably good.

Much has been heard recently of electric-reproducing phonographs bearing the euphonious names of "Panatropé," "Orthophonic" and the like, and it is truly a revelation to compare the performance of one of these with that of the ordinary style of phonograph to which we have been accustomed. The price of these new instruments is rather on the high side at present, but readers will be interested to learn that if they are at all mechanically inclined they can construct electric reproducing phonographs for themselves. The results are nothing short of remarkable, and the writer can speak from actual experience. A new device has recently made its appearance, and is known as a "pick-up"—made under various names by at least half a dozen manufacturers. When sold as an outfit it comprises three parts—first the actual "pick-up" component which is attached to the tone arm of any ordinary phonograph instead of the reproducer normally fitted. The "pick-up" carries a needle which runs on the record in the ordinary way, but its "works" are purely electrical, and the vibrations of its needle set up minute electric currents which are led through a flexible lead and dummy plug to the detector socket of any radio set, after the detector valve has been removed. On setting the phonograph in motion and setting the pick-up, the wireless set is switched on, and the speaker connected as usual. The speaker at once commences to reproduce the music or other matter from the record with a purity and fidelity that is delightful. And now that records are made by electric processes, one can look forward to the finest of reproduction during bad periods of static if one of these devices be fitted up. The cost of the whole outfit in America does not amount to more than three or four pounds, but if you are handy with tools you can make a "pick-up" device like the writer's from an ordinary gramophone reproducer and a Baldwin reed-type adjustable phone unit. Should any reader wish to have particulars of this simple job I should be only too pleased to help with information as to how it can be done.

For those who are experimentally inclined, we give this modified Cowper circuit, which uses no "B" battery and is perfectly stable in operation. It will be noticed that it is of the regenerative reflex type, but only normal components are called for, and of course



is one of the cheapest possible to operate. Headphone results are quite good at fair distances, and altogether this is a circuit that is well worth experimenting with. The diagram gives the values for the various units.

"WEDDING MARCH" ON THE AIR.

Following a rather unusual request, Station 2BL recently broadcasted the "Wedding March." This was done at the request of two enthusiastic listeners to 2BL who were married at St. Oswald's Church of England, Haberfield. The bride and bridegroom marched down the aisle to the tune of the "Wedding March" broadcast by 2BL, and reproduced by a loud speaker in the church.

2BL FASHION TALKS.

An added attraction to the already interesting programme supplied by 2BL during the women's session has been arranged for. This is a monthly report to be cabled alternately from Paris and New York and which will be broadcast. It will give listeners the opportunity of learning the latest fashion developments on the other side of the world.

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SCHMERTZER'S VIRELESS

(By Will H. Lister in "The Moreton Mail.")

Schmertzter's got a vireless, und eferybody but der missus vos been bleased already.

Schmertzter says id's a great concern und vipes de old voooman oud mit schpeaking—und dot's a schange.

Mrs. Schmertzter reckons der ting don'd vos goot, und dere vill be droubles uf Christy schtops mit id efery efening. She says dot he don'd took no notis mit der bed-dime sctories, but sits oop haluf of der night listening to jazz bands, singing, orchesters und how to raise pigs ven you don'd can raise enough to feed dem.

I knew ven I first hearen dot Christy had got a vireless, dot some day laddter or sooner, I would haf to go und listen-in or seddle any argumentations dot would come along in dot family.

Id habbened already yet so sooner as gesterday afternoon.

Mrs. Schmertzter called me as I vos going der road along mit Housen's grey mare dot I hafen to do some harrowing mit on der farm already.

"Look, Henrich," she say, "I wish you gomen in to tal mit Christy. He sits dere mit dose tings by his ears on, und ve don'd got no goot mit him on der farm."

"Vell," I say, as I leaned me on der schliprail, "dot keeps him kerviet, don'd id?"

"Dot not id!" she say loudly, "vhy de odder night ven dey gifen oud der market brices fon Brisbane, dey said dot fowls vos been sold dot day for more as efer ve got, so Christy ven der midnight gomes schneaks

oud und put apoud dirty or forty into some crates und by daylight vos been at der railway schtation mit. Den dot night he hearin mit dot vireless dot fowls don'd got sold more as apoud haluf vot he hearen der night before—dot's made him vild."

"Ah, vell," I say, "I've seen Christy vild more as often as vonce, so gome alonk und ve see him already again—vot?"

Und ven I got me by de inside of Schmertzter's house dere he vos mit dose delephone tings schtrapped by his head.

"Don'd you vork now no more, Christy," I say. "Nein," he say, "und I don'd vill undil I gif der schap dot told me der brice dot dose fowls vos sold for some few vords by exclamations."

"Explanations, you mean!"

"Don'd madder vot I mean," said Christy, "he'll know so sooner as vot I schpeak mit him, but dis blessed ting don'd vork der right vay or else dey don'd gif me der blace vhere he schpeaks fon."

"Vhy, Christy," I said, "dot's not a delephone, dot's a vireless."

"Den I don'd got no schances mit him, vot?"

Shoost den der schilder came in fon der school und dey hafen der ledters fon der post office, und von vos fon der firm dot Christy vos send der fowls to. He obened id, und ven he saw dot he got a bigger brice dan der vireless schap had said, he handed der ledter to me mit shoost dese few vords—"Aind't he a plooming liar."

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Although it is but a few weeks since the highly successful opening tests were made from the big transmitter in Melbourne, feeder stations are already under construction at Sydney, Brisbane, Adelaide and Perth.

The feeder station at Brisbane is to be housed at V.I.B., Pinkenba, and the short-wave aerials will be slung from V.I.B.'s hugh mast.

The engineers who are assembling and erecting this station are already well known to many readers of this magazine.

The engineer-in-charge is Mr. R. C. V. Humphery, who was sent up from Sydney by Amalgamated Wire-

less (A.'sia.) Ltd., to supervise the whole undertaking. Mr. Humphery was also connected with the erection of 4QG, and did the greater part of the constructional work there. Mr. Humphery is an extremely capable engineer, whose articles in southern radio journals have been read with interest by many Queenslanders. He has been connected with radio all his life, and secured a splendid training in the science at the College Mariette, Boulogne (France).

Mr. L. S. Jefferies, who is assisting Mr. Humphery, is a partner in the British and Australian Wireless Co., of Albert House. He was approached by A.W.A. and asked if his services might be loaned for a short period. Mr. Jefferies, too, assisted in the erection of 4QG. He is a clever young engineer, and naturally feels a little honoured in being chosen for this important work.

Full Details Next Issue.

In our next issue we shall give our readers very complete information concerning this station from the pen of Mr. R. C. V. Humphery. Mr. Humphery has also promised us an article on "Mathematical Calculations in Radio" at an early date.



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Questions Answered

"Two-Valver," Morningside.—A two-valve receiver employing the P1 circuit should be capable of bringing in the southern stations if correctly wired. The 199 valve which you state you are using may have lost its emission; this would account for the weak signals. Have the valve tested at a reliable radio store.

Additional parts would be required if you desired to convert your present receiver into a Browning-Drake. We do not see any reason why a good receiver should not be built from the parts you have in hand. We shall shortly publish a good two-valve circuit.

"S.M.," Longreach.—We very much regret that we are unable to forward a blue print of the Browning-Drake four. A schematic and back of panel wiring diagram for this receiver were both published in our March issue.

The "A" battery should consist of three 1.5 volt dry cells connected in series; the total voltage of

these cells would be 4.5 volts. For best results the "B" battery should have a total voltage of 90 volts.

"C.C.B.," Albion.—(1) The valves should be Mullard MD06 type with the exception of the last stage, which should be fitted with a Mullard PM4; (2) four rheostats may be used, but the results would not be any better; (3) this receiver is reasonably selective, but it is doubtful as to whether it would eliminate 4QG at three miles. An indoor aerial of approximately 80 feet would sharpen the tuning considerably.

"E.G.," Kalbar.—The correct wave-length and power of station 7ZL, which is situated at Hobart, is 535 metres and 3000 watts.

"W.E.B.S.," Mossman.—(1) The two-valve receiver which you mention is only capable of tuning in Southern stations on earphones, not loudspeakers; (2) the Browning-Drake four is giving excellent results throughout Queensland and should be quite suitable in your district. We can thoroughly recommend this receiver, and feel sure that all the principal Australian broadcasting stations would be reproduced at good strength on the loud speaker.



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Article No. VIII.

DYNAMOS AND MOTORS.

In the seventh article consideration was given to the supply of plate and filament current and voltage to a transmitting valve by means of batteries or transformers. In this article a third source of supply—the electric generator—will be discussed.

In its essentials an electric generator consists of three parts—the field magnets, the armature, and the collecting apparatus, known either as the slip rings (in the case of alternating current machines), or the commutator (in the case of a machine delivering direct current).

The armature is a framework—usually of soft iron laminae—upon which an insulated coil of wire is wound lengthwise. The usual armature is shaped like a bobbin and is mounted to spin freely upon its long axis.

The field magnets are usually the two poles of a strong horseshoe magnet with their ends so shaped as to allow the armature to spin between them with the least practicable clearance. This is so that the magnetic field set up around the poles may be utilised to the fullest extent. This is shown in Figs. 2a and 2b. Usually the poles of the field magnets are wound with several layers of wire connected with some source of current supply, thereby turning them into electro-magnets and intensifying their field of force.

Slip rings are two unbroken copper rings mounted on the spindle of the armature, to which the ends of the armature winding are connected. Needless to say, these rings are very carefully insulated from each other and from the spindle itself. Contact is made to these rings as they revolve by means of brushes—which are usually blocks of carbon pressing against the slip rings—whereby the voltage generated at the slip rings may be led away to an external circuit.

A commutator is merely a segmented slip ring. Only one commutator is usually used, as against two slip rings. The two brushes are arranged in such a fashion as to be contacting on opposite segments of the commutator at any instant.

The segments of a commutator are even in number and the several coils of wire that are wound on the armature have their one end attached to one segment and their other end attached to the next segment. The reason of course is that the brushes make contact on opposite segments and so complete the electrical circuit through the coils. Further, it is usual to connect the beginning of each coil to the segment of the armature, which carries the end of the preceding coil, though occasionally the same result is obtained by making the brushes so wide as to bridge the gap between any two neighbouring sections of the commutator. This has the ultimate effect of making all the windings on the armature into one big coil.

The principles on which a dynamo (as such a machine is usually termed) works have been dealt with in the article on induction; suffice it to say that the move-

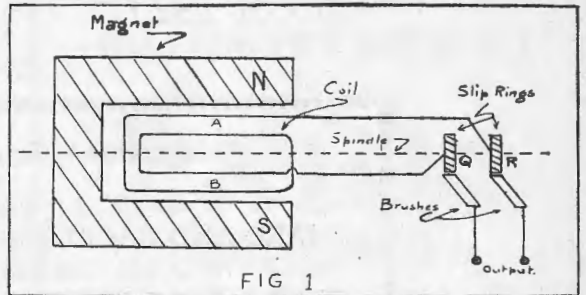
ment of a conductor (the armature) across the lines of force of the field magnets sets up a voltage in the armature capable of being tapped and utilised in an external circuit.

The windings on the field magnets may be excited from an external source—in which case the dynamo is said to be “separately excited.” It is usual, however, to utilise some of the current produced by the rotation of the armature, and such dynamos are known as shunt wound, series wound or compound wound.

A series winding is shown in Fig. 2a, wherein it is seen that the whole of the output at the brushes is fed through the field coils, and the external circuit in series. In shunt winding the field coils (Fig. 2b) are in shunt or in parallel with the external circuit. In a series wound dynamo the field coils consist of a few turns of heavy wire, while for a shunt wound dynamo a large number of turns of fine wire is used.

A compound wound dynamo simply incorporates both series and shunt windings.

Next, to discuss the working of such machines, suppose one considers one coil on an armature in a dynamo fitted with slip rings. As shown in Fig. 1 this coil is free to spin within the field of the magnets marked N and S, and its ends are carried out to the



slip rings Q and R. If now this coil be rotated the effect of the magnetic field is noticeable. So long or for such instants as the coil is in a position at right angles to the line NS there will be no voltage generated, for at these instants the conductor is not “cutting” any of the lines of magnet force between N and S (it may be regarded as sliding along the lines of force, but so soon as the coil swings past this position and continues its rotation the conducting wire of the coil cuts more and more lines of force, until it cuts a maximum number when passing for an instant across the line NS. Continuing its rotation, the coil cuts a decreasing number of lines of force until it reaches, at its next “perpendicular” position, another zero point, but one where the former “top” of the coil (A) is occupying the position formerly held by (B).

Thus, in a complete rotation of 360 degrees, there will be two zero and two maximum points, the zero

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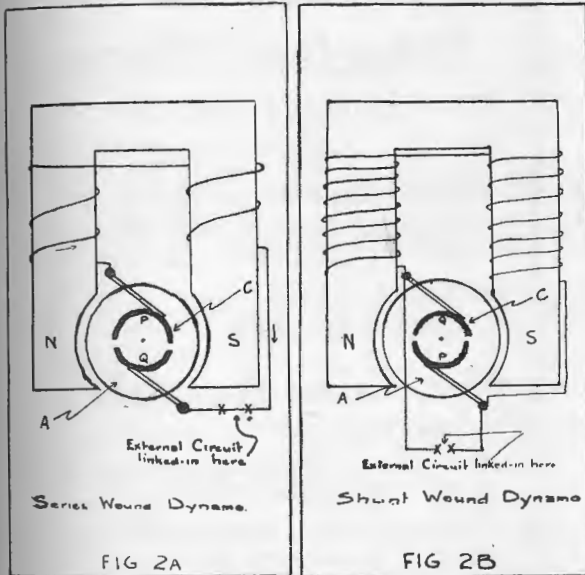
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points occurring when the coil takes up a position at right angles to NS and the maximum points occurring half-way between these positions.

If brushes leading to an external circuit be connected to the slip rings an opportunity will be afforded of noticing that the current derived from the rotation of the coil starts at a zero value, rises to a maximum, decreases to zero again, and then rises to a maximum in the opposite direction, and again falls to zero. A consideration of the earlier articles will show that this is due to the fact that the direction of the induced current depends upon the direction in which the conductor or coil cuts the magnetic field. Thus such a machine, known as an alternating current dynamo, gives an output of alternating current the frequency of which depends upon the rate of rotation of the armature.

Now, using such a machine as a starting point, one comes to consider the changes necessary to change the output to direct current. This is done by using a commutator in place of the previous slip rings.



The best way of illustrating the working of a commutator is by a diagram. Suppose that Figs. 2a and 2b are utilised. Herein is shown a two-segment (or two pole) commutator (C) firmly fastened to the armature (A). The field magnets (N and S) and the brushes are as shown.

Now, it is obvious that when the armature is in the position 2a the current derived from the brushes will be in a certain ascertainable direction, say as shown. But when the armature revolves 180 degrees the current direction in the coil will be reversed.

However, the brush which was formerly contacting with the segment (P) of the commutator has now made contact with segment (Q), which is, after the half-turn of the armature, now of the same polarity as was P formerly—Fig. 2b.

Thus, the output of such a machine will always flow in one direction—it will be direct current—though there will be a decided ripple necessitating some method of smoothing and filtering. By using many coils on the armature and a corresponding increase of commutator poles a steadier output with less fluctuation will be obtained.

Electric Motors.

Such a machine—the direct current dynamo—may be turned into an electric motor by a reversal of the normal order of procedure. If in this case the armature fed with current through the commutator and brushes instead of having current drawn from it, the coils on such armature will exhibit magnetic polarity—as described in the last article.

Suppose in Fig. 2A that any point (X) on the armature close to the magnetic pole N becomes of north polarity, and an opposite point (Y) close to the magnetic pole S simultaneously becomes of south polarity (these points are not lettered in the diagram to obviate confusion, but readers should have no difficulty in following the description), then the two north poles (N and X) will repel each other, and the two south poles (S and Y) will do likewise. Similarly there will be strong attraction between S and X and between N and Y. Thereby a torque or twisting force is applied to the armature, and it commences to rotate into a position where Y is close to N and X close to S. This, due to the principles of magnetic attraction, would be the final position if it were not for the action of the commutator, for while the rotation was continuing the brush formerly in contact with P is now in contact with Q. Thereby the current flowing round the coil has been reversed in direction, and the side of the armature that was formerly north is now south, and matters are back in the position shown in 2a. Then commences again a period of repulsion between the pairs of like poles with a corresponding rotation of the armature. This rotation will obviously continue so long as current is supplied to the armature and the rotation of the spindle may be utilised by means of a belt to drive machinery or other mechanical appliances.

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Whispers from Maoriland

Wellington's new 5000 watt. broadcast station is now in the course of erection on Mt Victoria. The actual site of the station is just a shade over 600ft. above sea level. The building is being constructed of reinforced concrete, and has progressed to the stage where the walls are all but completed. The work should be complete in another six weeks, and as the site is free from the remotest possibility of shading, and the towers are to rise 160ft. above it, the giant voice of the new 2YA should be heard nightly within a radius of many thousands of miles.

Australian stations have been coming in well of late, but from a point of view of strength and clarity 4QG, Brisbane, must take pride of place, closely followed by 2BL, Sydney, and 2FC, Sydney. 3LO, Melbourne, has done well and seems to be gradually increasing in strength with the approach of winter.

On a recent Friday evening 2FC, Sydney, broadcasted the Leichhardt Band, and those who tuned in here got excellent reception. The programme was of high standard, and has placed 2FC on a higher level of popularity with listeners than it had previously reached.

A remarkable feat, so far as radio is concerned, was carried out at Gisborne, when, by arranging a chain of wireless amateurs, a detailed account of the fight, Tom Heeney v. Paolini Uzeudun, at Madison Square Garden, New York, was received there. The arrangements were carried out by Mr. I. O'Meara, the well-known Gisborne amateur, who communicated with the officials of the Radio Club in America, and they attended to the details there. Owing to possible weakness in the daylight signals direct from New York, a relay was arranged to a Jamaican amateur, who transmitted to Mr. O'Meara. The Radio Club sent a special operator to the ringside, accompanied by a boxing expert, who dictated the message. As an additional precaution the president of the Radio Club maintained communication with Gisborne to ensure that everything was working smoothly. The message came through without a hitch, while the result of the fight was available in Gisborne five minutes after the contestants left the ring.

There are now approximately 20,000 licensed receiving sets in this Dominion. Auckland (10,000), Canterbury (6000). Wellington and Otago combined (about 4000). It seems strange that Wellington should be so far behind, but it is to be remembered that radio finds many enthusiasts among the farming community, and Auckland and Canterbury both have a pull over Wellington in this connection.

Mr. Clive Liddell, of Lyall Bay, experienced capital reception of an American concert on one Sunday recently, on his home-built short-wavelength set. At 20 minutes to 4 he picked up music from 2XAF, relayed from WGY, the General Electric Company's station at Schenectady, New York State, U.S.A. The wave-length was 32.77 metres. Several songs were heard, including items by Edna Ryder and James Danny, interspersed with instrumental numbers. Mr. Liddell, using two stages of audio, reproduced the concert from his loud speaker. There was an entire absence of static and fading.

When boxing bouts, &c., are broadcasted the responsible authorities should make certain that the person describing the event should understand the particular game thoroughly, for recently a good game or bout has been very poorly described.

It is understood that a deputation of amateurs from all parts of the Dominion is shortly to await upon the Postmaster-General with a view to having the wireless regulations modified in one or two main respects.

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