



WIRELESS WEEKLY

May 4th, 1923.

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GRACE BROS. LTD.

Broadway, Sydney



Vol. 2.

May 4th, 1923.

No. 18

A Talk with Wireless Weekly.



DAY BY DAY it is becoming increasingly difficult to obtain a license to receive. This state of affairs cannot and must not be allowed to continue. Wireless business is becoming cramped; what is the reason?

When the new regulations were drafted, the Government boasted that they were the finest set of regulations in the world. Surely the Government has not changed its mind. There are experimenters who have applied for licenses three months ago and still no word from Melbourne.

It is surely time that New South Wales was able to look after their own wireless problems. Under the present system all applications must go to Melbourne and there await their chance of being dealt with. More applications are being sent in daily, and the Wireless Department is slipping further and further behind.

In Sydney we have a Wireless Inspector who is absolutely impartial, popular, and thoroughly capable of attending to this State. We refer to Mr. Crawford. We feel sure that something of this sort must eventually be done, so why wait? Do it now!

Of course, it is very easy to offer destructive criticism, but the policy of Wireless Weekly is to assist wireless, and we would be glad to have suggestions from our readers.

A great number of experimenters are using Starlight aerials. That is, their aerials only

appear when the sun has set. There must be many hundreds of these; their reason probably being that they would rather take the risk of using an unlicensed station than have to wait many months for their application to receive attention, and then chance being refused.

In connection with a speed test of 12 words per minute for holders of valve licenses, this is absolutely hampering wireless development in Australia. The reason for this was that in the event of a valve energising the aerial so causing interference, the licensee would understand when he was told to be quiet. This system is purely idealistic.

In the first place if an experimenter is using a valve which is energising his aerial, those with whom he is interfering would not possibly know who was causing the trouble, and consequently could not call him; even if they did, in all probability he would not worry to read what was being sent. The average experimenter does not read everything he hears; he is after something definite as a rule. As a suggestion, W.W. thinks that if some very definite signal was sent, meaning that interference was taking place, such a signal, by virtue of its being distinctive, would achieve the result far more satisfactorily and quickly. If some such rational scheme were adopted, there would be no need to worry about imposing this operating restriction on receivers.

As for transmitters, the idea of a speed test

is quite right and rational, but not a receiving license.

If those with valve licenses are really causing trouble, then remove the cause of the trouble and forbid the use of regenerative circuits.

One final word. Those living many miles from the Metropolis have a pretty monotonous existence at the best. As they could not possibly interfere with commercial stations, even if they tried, why impose any receiving restrictions on them at all. They should be given every encouragement, and certainly should not have to wait months for a license, which even then is doubtful. As a suggestion, why not

allow local postmasters to grant a receiving license merely on application and payment of the 10/-; such postal districts to be at least 20 miles from the nearest land station.

In this way a tremendous amount of unnecessary expense and trouble could be saved and proper encouragement given when it is deserved. The revenue of the Wireless Department would also be correspondingly increased.

In conclusion, Wireless Weekly announces that it is going to fight for amateur wireless, and would be glad of the co-operation of those whom it is trying to assist.

A Loose Coupler Set.

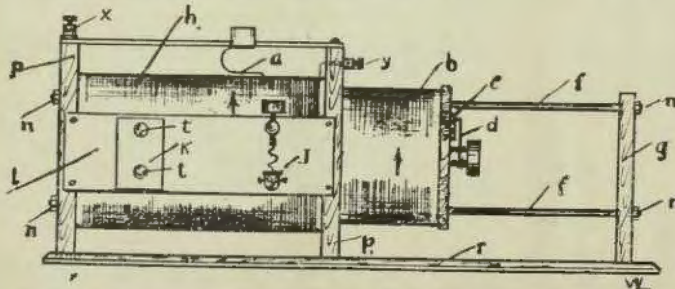
MAKE YOUR OWN.

Owing to the numerous inquiries for Vol. 1, No. 4, of "Wireless Weekly," now out of print, which contained "How to Make a Loose Coupler Set," we again publish this article:—

A simple and effective loose-coupler crystal set is shown here, and for the expenditure of a few shillings, and by following out the

ing Awani, New Zealand, and most Australian stations, and you will be able to listen to the concerts, if favourably situated.

Get two cardboard tubes, about 6 inches long, and 4 1/2 inches and 4 inches in diameter respectively, and give them a good coat of shellac, first making sure that they are thoroughly dry.



directions, a wireless set may be constructed, which will have a range of about 2,000 miles, with a good aerial, and a wave-length of over 2,000 metres.

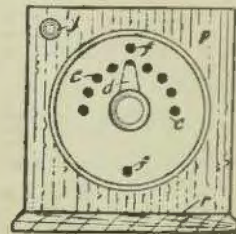
With a set of this kind, you should have no difficulty in hear-

ing. Wind the larger tube, the primary with 24 or 26 gauge enamelled wire, a single winding being all that is necessary, and mount the tube between two square pieces of wood, P' and P', having a circular hole in it, to allow the secondary tube

to slide inside the primary.

A brass rod and slider are mounted on top of the primary as shown, the slider "a" making contact with the primary wire along a track from which the enamel has been carefully scraped from the wire, so that as the slider is moved along the rod, contact is made with each wire separately.

A terminal is fixed on the slider rod at "x," and another terminal is placed in a convenient position, on the other wooden end at "y," and one end of the primary winding is connected to "y." The other end of the primary wire is secured to the cardboard tube, but is not connected to any terminal. It is a "dead-end."



The terminal "y" is the aerial terminal, and it is here that you join your aerial wire, while "x" is the earth terminal, and is to be joined to a water pipe or other suitable earth.

It will be readily understood that the current from the wireless waves

Trans-Pacific Tests

WILL THERE BE ANY?

DOES THE AMERICAN AMATEUR KNOW?

The following paragraph, published in an American radio magazine, dated April, 1923, while talking about THE TRANS-ATLANTIC TESTS:—

"It is not without the bounds of possibility to pre-suppose that an amateur "relay round the world" is not far off. WERE THERE RADIO AMATEURS IN AUSTRALIA, Japan, China and the Philippines, this would be but a matter of making the necessary arrangements and conducting the preliminary tests."

The Trans-Pacific Tests, which we understand, will be held some time in May, cannot be successful unless more publicity is given to the matter. The average amateur has no interest in it. Why? Simply this, that those who are controlling this test have not tried to interest him sufficiently.

Do all the American amateurs know about it, or is it only one small body of amateurs there that are interested in these tests?

We will be pleased to hear from the Trans-Pacific Committee on this question, and ask them in the name of the amateurs in general to give the matter more publicity before it is too late.

TRANS-PACIFIC RADIO TESTS. PRIZE LIST.

First six prizes, to be given to entrants having the most complete log of signals received during the tests. Prizes donated by: Western Electric Co., Ltd., open order, £10/10/-; Colville & Moore Wireless Supplies, open order, £5/5/-; Burgin Electric Co., open order, £5/5/-; Wireless Weekly Newspaper, open order, £5/5/-; Australerie Limited, open order, £5/5/-; Electricity House, open order, £5/5/-.

Three prizes for entrants having the most complete log of signals on the least number of valves. Separate Heterodyne not counted as a valve. Prizes donated by: W. Harry Wiles, open order, £5/5/-; Radio Company, open order, £3/3/-; Sydney Dynamo & Motor Works, open order, £3/3/-.

Two prizes for entrants who receive the greatest number of different American amateur stations. Prizes donated by: F.

Continued on page 16

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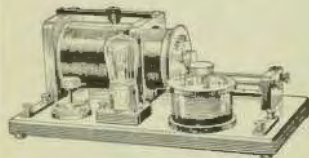
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P.O. TELEGRAPH

Continued from Page 2

comes from the aerial to "x," passes through the primary winding to the sliding contact "a," in whatever position "a" may be, then along the slider rod to "x," and so to earth. This is the complete primary circuit. By moving "a" nearer to "x" a longer length of the primary winding is brought into use, and these extra turns give you a longer wave-length.

Ordinarily, with "a" about one inch along the windings from "y," the commercial 600 metre wave length would be picked up, so that to get a concert wave of, say, 1,400 metres, you would need to slide "a" about three-quarters of the way along towards "x."

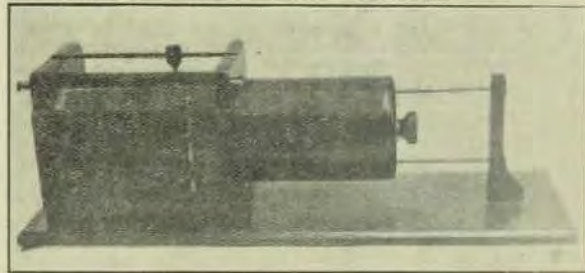
Now for the secondary winding, "h." First of all, make sure that you are winding "b" in the same

The secondary is mounted on two brass rods "f," which pass through the primary and secondary ends, and are secured with nuts as shown at "n," one end being fastened to a small wooden upright "g."

The whole is fixed to a baseboard "r," and screwed firmly in position.

The secondary is provided with two circular wooden ends, which should have been previously mentioned, the brass studs and switch-arm being mounted on one of these ends. "L" is a piece of ebonite fixed on the sides of the primary ends, and on it is mounted a simple phone condenser "K," the construction of which will be described in the next issue, and a crystal cup "j" with a catwhisker contact.

The telephones are connected to



The Completed Set.

direction as you wound the primary, as shown by the arrows. Use No. 30 gauge silk or cotton covered wire. Begin at the left hand end, and wind for about one inch, and then make a hole in the cardboard tube underneath, and putting your hand inside, draw the wire through inside the tube, in a long loop ready to connect to the first stud "e" on the left of the group of studs. Then wind along for about another inch, and repeat the looping of the wire, this time connecting to the second stud, and so on, until the end of the wire is fastened to the last stud. Any brass bolts and nuts may be used as studs, but be sure to leave a generous length of wire when making your loops for connection to these, and if possible, solder the connections. A knob and switch-arm "d" are used to make contact with the studs, and are fixed as shown.

two terminals "t,t," on the phone condenser, and the secondary circuit is completed by taking one wire from the switch on the secondary to the terminal holding the catwhisker contact, and another wire from the beginning of the secondary end (which is otherwise a free end) to the top terminal of the telephone condenser, then connect with a short wire, or brass strip, from the crystal cup to the bottom terminal of the condenser. The wires from the secondary could be brought around through the back of the primary and then behind the ebonite panel. They are not shown on the diagram.

The loose coupler has the advantage that when the amateur goes in for valve work he can still use it in conjunction with a valve panel.

May 4th, 1923.

WIRELESS WEEKLY

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Test and Conquest

ON the Trans-Atlantic telephone test when the American Telegraph and Telephone Company's officials in New York addressed a distinguished assembly of experts and others at New Southgate, London, Western Electric Hand Receivers and Western Electric Loud-Speaking Receivers only were used at the London end for the reception of the messages.

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FAT FOLKS MADE LEAN—BY RADIO.

A little girl in Massachusetts recently woke up one morning and saw her mother bending over and waving her arms about with a head-phone strapped over her ears. The child was so startled that she called the neighbours—who discovered that mother was merely going through setting-up exercises that were broadcast from Station WGI at seven o'clock every morning.

SUGGESTIONS FOR LEARNING MORSE CODE.

It will be seen that the letters go in twos. For example: A . — and N — —, except in the cases of C X Z, which has no reverse; E I S H, 1, 2, 3 and 4 dots; and T M O, 1, 2 and 3 dashes. The writer found that it only took him half an hour to memorise the code by this method. Try it.

- A . —
- N — —
- B . — .
- V . . .
- D . — —
- G
- W . — . .
- F . — .
- Y . — . .
- R . — .
- K . — . .
- L . — . .
- Q . — . .
- E . . .
- I
- S . — . .
- H . — . .
- C . — . .
- X . — . .
- Z . — . .
- J . — . .
- T . — . .
- M . — . .
- O . — . .

VALVES APPROVED FOR BRITISH BROADCAST RECEPTION

To remove any uncertainty which may exist with regard to the valves which may be used for broadcast reception in England, the position is made quite clear by the British Postmaster General having approved of the use of the Mullard valves and they are consequently marked with the stamp of the B.B.C. (British Broadcasting Co.). These valves were used by the winner of the Trans-Atlantic Test.

The Burgin Electric Co. advise that they have just received large stocks of these valves, but due to their increasing popularity, are fast being sold.

2/6 will be paid for the best "BIT" of wireless humour sent in each week. Articles sent in will become the property of Wireless Weekly Newspaper. 2/6 will be paid for each humorous drawing accepted.

Wireless Books

- Radio Telephony for Everyone**, by L. M. Cockaday, Posted 9/8.
- A.B.C. of Vacuum Tubes in Radio Reception**, by E. Lewis, Posted 6/4
- Wireless Telegraphy and Telephony**, by A. Morgan, 9/4 posted.
- Radio Experimenter's Handbook**, valuable information is given on Antennas, Receivers, Transmitters, and Vacuum Tubes, by M. Sleeper, 6/4 posted.
- Radio Hook-Ups: Book of Circuits of Receivers, Amplifiers, and Transmitters**, by M. Sleeper, 4/10 posted.
- Design Data for Radio Transmitters and Receivers**, by M. Sleeper, 4/10 posted.
- Construction of Radio Phone and Telegraph Receivers for Beginners**. Prepared specially for the Radio Novice and Experimenter, by M. Sleeper, 4/10 posted.
- Construction of New Type Transatlantic Receiving Sets**, by M. Sleeper, 4/10 posted.
- Radio Year Book, 1923 (First Year)** Book of Reference for all interested in Broadcast Receivers. 2/3 posted.

“THE WHITE WAY BLOCK”
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BETWEEN TRANSMISSIONS.

A new radio time schedule drawn up by Inspector G. C. Kolster, of Boston, Mass. (U.S.A.), insists upon certain silent periods during local broadcasting. This is to allow "fans" to "tune in" for distant stations, enabling long distance experimental work to be carried out. It also ensures variety of entertainment. This has been put into effect already in Boston, and amateurs are duly thankful.

Wireless Made Easy.

Just the book for the Amateur; contains full instructions "How to Build a Home Receiving Set," price 9d., post free.

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MAKE YOUR OWN

"Interference" From Receivers.

How to Use Regeneration Without Radiation.

Many of us know that the howls that sometimes disturb our radio programmes are caused by one of our neighbours whose regenerative set is acting like a miniature transmitter when he tunes and passes the wave-length on which we are listening. We hear his radiated energy interfering with our own reception. How to spare your neighbours this nuisance by adding one stage of radio frequency amplification to your set is told in this article.

The ordinary aution is so much more effective when used with a well-designed feed-back circuit than in a non-regenerative outfit that there are comparatively few grid-tube sets used in the latter fashion, says "J.V.L.H." in "Popular Radio."

Regeneration has two points of especial utility:

First, it neutralises a large part of the wasteful resistance in the ordinary aerial and in the receiver circuits (thus giving louder signals and better selectivity).

Second, it provides a convenient means for receiving continuous wave telegraphy or for picking up telephone carrier waves by employing the self-heterodyne method.

The first of these advantages is perhaps the more useful, especially when it is necessary to use rather poor aerials for receiving.

The second point represents a possibility that is of tremendous help to the individual user of a regenerator, but as it requires the set to be placed in the oscillating state, it may create a good deal of interference to reception by other listeners within a zone of several square miles.

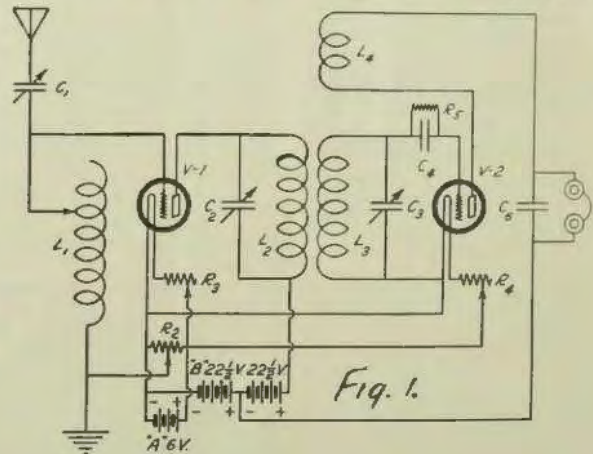
This matter of interference caused by oscillating regenerators seems to be by no means as serious as it was some months ago. When radio novices were setting up feed-back circuits of all conceivable types and, in the absence of competent instruction, were allowing them to oscillate continuously and slightly off-tune from the broadcasting wave-lengths, it was nearly impossible to receive a complete radiophone programme. Of course, these unskilled users themselves heard nothing but whistles, louder than the interfering tones they produced in their neigh-

hours' outfits; largely as a result of this many of them have learned to use their receivers properly without allowing them to oscillate. Self interest has thus brought about a great public benefit.

The ideal condition in which there will be no interference from regenerators has not yet been reached, however. Occasionally, while listening to a broadcasting station one hears the swinging boat note or whistle which proves that someone in the vicinity is tuning his receiver by the "heterodyne search" plan. In the suburbs of New York such interference nowadays is often only momentary, but there is no need even for that. It is entirely feasible to pick up long distance radio-telephone signals by tuning one's receiver with the feed-back set some-

what below the oscillating point, and if this is done it will cause no inconvenience to other listeners. Some otherwise good regenerators are so designed, however, that it is practically impossible to tune over even a rather small band of wave-lengths without either readjusting the amount of feed-back or losing the benefits of regeneration. This is especially true of many of the plate-variometer outfits, in which helpful amplification can be had (for a single setting of the plate circuit inductor) only over a small wave-length range. Tuning beyond such limits results either in negligible regenerative amplification or in the production of oscillations that may greatly disturb nearby receivers.

There are several ways in which



one may get most of the useful features of regeneration without causing the radiation of interfering waves from his receiving aerial. With these arrangements it is feasible to pick up signals from distant stations by the heterodyne or beat-note method, and to increase signal intensity by regenerative amplification, resulting, in part, from neutralization of circuit resistance. As they depend, however, upon the use of a radio-frequency repeater between the antenna and the feedback circuits they will not permit great reduction of aerial resistance; it is consequently desirable to use these circuits with an antenna which is itself of sufficiently good design to be an effective wave-absorbing system.

A simple circuit that includes such a repeater tube is shown in Figure 1. Here the antenna is connected to the ground through a tuning condenser of about 0.0005 microfarad maximum capacitance and an inductor of some 50 or 100 microhenries. Across this coil is connected the input circuit of the repeater tube, as shown; the grid potential can be controlled, from 0 to 6 volts positive of the negative filament lead, by means of the potentiometer. The output circuit of the repeater tube contains the tuned primary of a short wave inductive coupler; the balance of the circuit is the conventional transformer feedback or "tickler" arrangement. In making the installation the only point that requires special care is the choice of the proper constants for the coils and condensers that will enable the circuits to tune to the wave-lengths it is desired to receive. The operation of this circuit is a little more difficult than that of the ordinary single-circuit regenerator.

In the first place, there are two sets of circuits that can oscillate independently. The whole idea is to prevent the first tube (repeater) and the aerial from generating oscillations, and to confine this action to the second tube and its circuits.

In the second place, there are three tuned circuits (C1-L1; C2-L2; and C3-L3) and two couplings (L2-L3 and L3-L4) to adjust. But once the proper constants are chosen and the outfit is correctly set for reception of some particular wavelength, it will not be found difficult to tune to others.

Probably the best way to start using this receiver is to connect it up as shown, then to light only the detector tube, to set coil L2 as far as

possible from L3 and to couple the aerial coil L1 to secondary L3. This makes the set a simple two-circuit regenerator with inductive feedback, and it may be tuned to a nearby broadcasting station in the ordinary way. Thus one can find fairly closely the best values for C1, L1, C2, L2 and L4. Of course the final tuning should be done with quite weak coupling between L1 and L3, so that the inductance of each coil will not be too greatly influenced by the reaction of the other. There remains only the determination of proper values for L2 and C2, and the co-ordination of the adjustments throughout the set.

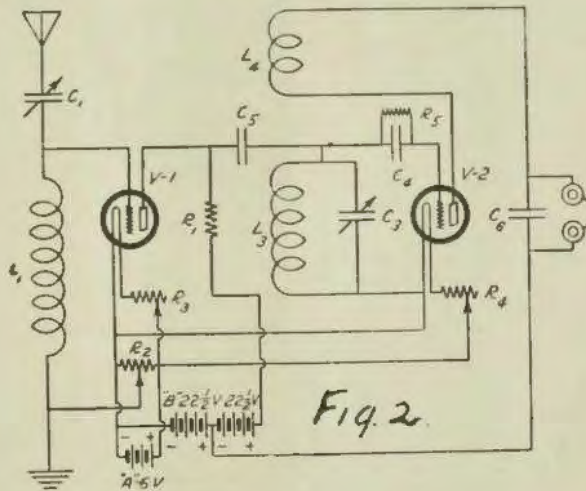
This will not be difficult if the operator now removes coil L1 from the vicinity of L3 and couples L2 and L3 with moderate tightness—of

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be tuned, simply by making comparatively small changes in the settings of the three condensers.

Once working, the antenna circuit may be left tuned to approximate resonance with the desired wave, and the potentiometer set at a point well toward the positive end (so that the aerial will not oscillate) and then forgotten, until the opera-



course, turning on the filament of the repeater tube also. If the potentiometer contact is too near the negative end the repeater tube will be likely to oscillate as he adjusts C2 and L2, so it is well to turn it well over toward the positive end of the potentiometer winding while he is making his first adjustments.

There is no reason why he should not use identical coils for L2 and L3 and the same kind of variable condensers for C2 and C3. If he does this, he may set C2 and L2 to the same values that have just been determined to be the best for C3 and L3. Then the whole set can

tor wants to make a substantial change in wavelength. For smaller variations the condensers C2 and C3 are handled just like the primary and secondary condensers of an ordinary two-circuit tuner, and the couplings L2-L3 and L3-L4 are handled like the primary-secondary and secondary-tickler couplings of such an outfit used with regeneration. He can throw these circuits into oscillation by moving L4 nearer L3, in order to pick up carrier waves by means of the beat-tone method, and he can thus get regenerative amplification and selectivity in these circuits. Yet the repeater

tube will prevent the oscillations from feeding into the aerial circuit and radiating interfering waves.

The first tube is referred to as a radio frequency repeater rather than an amplifier, because little amplification will be had at broadcasting wave-lengths if the potentiometer contact is kept far enough toward the positive end to prevent the aerial system and the first tube from regenerating and thus tending to oscillate. By decreasing the positive potential thus applied to the grid the operator can take further advantage of regenerative amplification in this first tube and get considerably louder signals, but if he goes far in this direction he will be back where he started, for the repeater tube will begin oscillating if the coupling L2-L3 is slightly reduced and the oscillations will be radiated as interfering waves.

Proper operation of this outfit requires the first tube to remain in the non-oscillating condition regardless of changes in the circuits; the regeneration supplied in the detector tube circuits is used for selectivity, amplification and heterodyne pick-up.

The constants for the instruments used in such receivers have been stated many times, but for the sake of completeness it may be well to repeat. There will be some deviation from normal, in a good many cases, to get best results; but a typical set of values of general utility is the following:—

Condensers, C1, C2 and C3 of 0.0005 microfarad maximum capacity, preferably fitted with verniers; coils L1, L2, L3 and L4 each 50 turns of No. 22 B & S double-cotton-covered magnet wire wound on paper or bakelite tubes of 3½ inch diameter, with taps at 20, 30, 40 and 45 turns; potentiometer, 200 ohms; filament rheostats, 6 ohms; grid leak, 2 megohms; grid condenser, 0.00025 microfarad; by-pass condenser 0.005 microfarad; tubes, UV-201 or VT-1; filament battery, 6 volts (storage); plate battery, two or three 22½ volt blocks. A good antenna would be a single wire from 100 to 150 feet long (including down-lead) with the horizontal portion some 40 feet or more above the earth. All of these values are stated for use on amateur and broadcasting wave-lengths.

A little additional ease of adjustment may be had, at the cost of some selectivity, by using the circuit of Figure 2. The elements are the same as before, except that C2

and L2 are omitted and R1 and C5 added. R1 is a coupling resistor of about 50,000 ohms, and C5 a fixed condenser having about 0.0005 microfarad capacitance. With this arrangement the only important variables, once the set is adjusted to approximately the best condition, are C1, C3 and the coupling between L3 and L4.

It will be found that with the Figure 2 circuit there is much less tendency for the repeater tube to produce oscillations in the aerial circuit; and that the potentiometer contact can be moved much nearer its negative terminal. Further, the tuning is considerably simpler than that of Figure 1. It will be noted that the plate circuit potential of the repeater should be increased to about 60 volts in order to offset in part the effect of the resistance unit R.

Either of these two circuits is capable of sharper tuning than the ordinary single-circuit regenerator and, on a good aerial, will give excellent results. With reasonable care in adjustment the user can do all the searching for long-distance stations he may desire, taking the full advantage of the heat-note for locating weak signals, and yet be secure in the knowledge that he is not interfering with his neighbours.

Wireless.

A Plea for Its Encouragement

Continued from Last Issue

It was regrettable, however, that wireless and other scientific pre-war achievements received little official encouragement in Australia. Records that had been made in Australia many years ago were not considered by Military Authorities; in fact, the use of Tanks was not recognised until the recent Great War was well ahead, although it was an Australian invention of some years before, whilst sound and wireless waves that had been demonstrated in Australia as useful for sound-ranging were not made use of until the final years of the Great War. Even Gallipoli before the War had been deemed a useless place upon which a landing could be made; yet the pre-war official report to that effect was not brought to light until the war had been concluded.

The Great War, therefore, taught one great lesson, and that was to

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give increased attention to scientific development, so that the best use could be made of same for all purposes.

The lack of recognition of Australia's place in the world's scientific achievements, as in the ignoring of Hargrave in discovering the secret of human flight, was the incentive to the speaker to establish a Board to Encourage Invention, to which he donated one hundred guineas, and in order that Australia could get widest recognition of her

Continued on Page 12

May 4th, 1923.

WIRELESS WEEKLY

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WIRELESS HUMOUR.

SHE "NOSE."

Margie: And he had radio eyes.

Sue: What do you mean, radio eyes?

Margie: Oh, just eyes with a broad cast.

(Crosley Weekly).

TERMS USED IN RADIO PRACTICE.

(By JOHN D. FORREST, in "Radio News.")

For the information of those embryo Marconis who are not quite familiar with abstract terms used in radio practice, I herewith set down the most important of the whole glossary. Needless to say, these

Coherer: One who listens in, in conjunction with another.

Compass, radio: An instrument construed by sea skippers as devised to reflect upon their navigating skill. Used by radio fiends in apartment houses and other residences of earnest practitioners.

Continuous waves: Expedient resorted to by modern women. Sometimes called Marcel or permanent waves, used to hide hairpins and middle age.

Converter: A machine for changing the round holes in doughnuts



WIRELESS AT HOME.

Father (with his party of "listeners-in" in the kitchen): "Hark, cook, that's the Hague!"

Mother (looking in, and smelling the smoke): "That's not only the 'big,' but the whole breakfast burning!"

WHY WE NEED SECRET RADIO.

When the girls get to sending their kisses by radio, they mustn't be too particular who tunes in on them.

(Kansas City Star)

Miss Plate: I don't go much on that Grid fellow.

Miss Filament: Why do you say that?

Miss Plate: Because you can see through him too easily.

Miss Filament: Well, anyway, he doesn't "hum" like that Alternator chap.

Little coils called Ticklers,
Hooped upon to the plate;
Make the amateurs V. T.'s
Start to oscillate.

How to make Grid Leak—
stick a pin in the back tyre.

have been glossed over as much as possible:—

Automatic Receiver: My wife on pay nights.

Ether: An anesthetic which should be applied to all users of spark coils.

Aerial Ammeter: An instrument devised to tell more lies than a candidate for alderman. Much cussed and discussed by bams.

Antenna, harp: An aerial erected in Ireland.

Arc: The first non-radio-equipped vessel, owned by Nough & Co., Ltd., for navigating the eddy currents in a highly damped period.

Arrester: A man with a red nose, big feet and who wears a blue suit.

Amplifier: An apparatus designed to howl like a Comanche Indian when a finger is pointed at it.

Amplification, co-efficient of: The difference in range of a receiver as told by the salesman and that found by the purchaser.

Beat: A circuitous route assigned to policemen for sleeping on, and for their osculation of cooks at back doors.

Characteristic curve: See Paris styles for summer.

Choke Coil: An instrument formed of manilla rope.

into those of trapezoid form.

Coupler: A darkly attired individual with a long face who is the original cause of divorce.

Current, damped alternating: Expression used by curious persons who touch live, public service companies' power mains.

Cyclogram: A message transmitted by means of a bicycle.

Cyclograph: A cyclograph is a er— Why, don't you know what a cyclograph is? Any dunce knows that.

Damping: A peculiarity of speech indulged in by a bachelor who has lost his singly possessed collar button down the drain pipe.

Dielectric: The ultimate end of persons who read "Danger, High Voltage" signs and are not convinced until after the coroner arrives.

Discharger: The successful competitor in an argument between the boss and bossee.

Earth: An object of great weight, mainly used to hold down balloons. Also a segregating place for radio fiends. Much used for the planting of grass, maize and antennae.

Eddy currents: A species of electricity discovered by Mr. Eddy, of "Indoor Sports" fame.

Electric stress: A lady electricist. Electromagnetic waves: A natural phenomena utilised for the broadcasting of

Ground: A process through which chalk and limestone goes before being mixed with sugar and sold on the market for 6d. per pound. Also a resting place for dissipated static currents, losing duellists and much dug up by archaeologists and prohibition agents in search of the missing link and rye respectively.

Impedance: A large weight looked about the ankles of boarders.

Jigger: One of the fans who reads the comic papers in pursuit of the adventures of one Dinty Moore, et al.

Static: A fiendish device imported from tropical climates to keep the radio experimenter from heaven, a factor which has greatly affected the language of millions between 1898 and the present.

THE WRITING ON THE WALL.

Mr. G. R. Challenger writes:

I am of opinion that official broadcasting is coming and also that there will be many subscribers to every one experimenter. Now being an enthusiastic experimenter, I am out

for myself and my brother experimenters. You mention that subscribers will be unable to listen to broadcasting owing to howling valves; this, I contend, is quite correct as we stand to-day.

Then the question is asked, "Who is going out?" we say public opinion rules. Now who will be the public opinion folk, the experimenter or the subscriber. I say the subscriber, and that means out goes the "hams." So the sooner we learn to control ourselves the better for all concerned.

The controlling of ourselves appears to present a rather difficult task, but it is not the case if we appoint Honorary Radio Inspectors. I would like here to make it plain that I consider Honorary Radio Inspectors would be our best friends and not enemies; they will be experimenters themselves and will in helping us help themselves to enjoy the privileges granted to us.

Howling valves—this is a point that I consider is owing to experimenters not understanding their sets and the control of valves. There are plenty of clubs and other places where information re operation of sets may be obtained. Why doesn't the amateur find out before he causes all this interference.

Interference — this is something that has decreased almost to a minimum on commercial wave lengths during the last few months, for while there is any 400 metre stuff about the "hams" are after it.

Now once again I support the appointment of Hon. Radio Inspectors if they were available, and were amongst the experimenters and amateurs they would impart some most valuable information, and hence we would learn to control ourselves and also the illicit experimenter who is too mean to pay 10% may be compelled to.

And for your last paragraph re transmitting stations. The terrific hum from imperfect soothing out is in my consideration no neglect or wilful doing, but only that the knowing how to has been missed because, apart from really breaking the regulations by causing such damped oscillations it is the desire of every owner of a transmitting station to have his speech as clear and free from hum as possible. Amateur transmitters, if you can't stop your hum, appoint Honorary Radio Inspectors as soon as possible, and then you will receive a lot of valuable help; so will receiving stations.

Free Wireless Sets

or an Order on any Advertiser in "Wireless Weekly"

SEND 5 SUBSCRIBERS and secure a 10/- ORDER

Send us 16 Annual Subscribers—with Names, Addresses and Cash—and we will send you a

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(without Phones)

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3 " " " " " " " " 6/-	
4 " " " " " " " " 8/-	
5 " " " " " " " " 10/-	
AND TEN SHILLINGS FOR EVERY 5 SUCCESSIVE SUBSCRIBERS	

Write Subscriber's Names plainly, and state name of Firm we are to make the Order on

Wireless Weekly Newspaper

33 REGENT STREET

SYDNEY

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May 4th, 1923.

WIRELESS WEEKLY

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OUR WIRELESSES COLUMNS.

Mr. Schultz has been listening in lately to Mr. Newman's (BMC) music, which he reports comes in about strength 5.

Mr. J. H. Leadbitter, of West Wyalong, reports receiving telephony tests of a number of amateur transmitters, and conveys his thanks.

Mr. J. C. Rice, grazier, of Hollbrook, N.S.W., announces that he is receiving concerts both from Sydney and Melbourne.

Mr. G. M. McMahon, from Arianah Park, is down in Sydney for a week or two. Mr. McMahon is a very keen experimenter, and intends to spend his time in Sydney seeing what new ideas in wireless he can take back to the country with him.

Mr. H. A. Warden, the well-known country experimenter, has moved from Mingandi to Gilgandra, and has just got his receiving set going again.

He complains about the instability of all the new radio phone stations excepting 2CM. He suggests that this state of affairs is due to stray capacities.

Mr. E. L. Morris, Hume Street, Toowoomba, is receiving Mr. Maclurean's Sunday evening tests.

Master P. R. Jamison, age 15, Pitt Street, Parramatta, is

doing good work receiving telephony on a crystal.

Master W. Nicholls (2MV), of Leichhardt, also reports receiving Mr. Maclurean and others on a crystal.

The British Postmaster-General, in an interview, stated that "Oxford Radio" had a press service superior to any other station of this kind in the world. It is at present dealing with 80,000 paid words weekly, not including press service.

Mr. Chas. D. Maclurean is the new President of N.S.W. Division of the Wireless Institute.

It is rumoured that Mr. Wilson, Acting General Manager of Amalgamated Wireless, Ltd., has resigned. Many wireless men will be pleased if this proves correct.

At the 3rd annual show of the Agricultural Bureau of Auburn held in the Auburn Town Hall on Saturday, 24th inst., a very successful demonstration was given in telephony. By the courtesy of the Burwood Radio Club and Mr. Geo. R. Challenger, of the Western Suburbs Amateur Wireless Association, speech and music was heard all over the hall with about 350 present. The set used in receiving was a 3-valve set, designed and constructed by G. R. Challenger, who operated the same. A single wire aerial about 120 feet long was used, and a magnavox.

Get Your Wireless Gear at Electricity House

387 GEORGE STREET (OP. STRAND). TEL. 2961 CITY.

Condenser Plates, 1/9 per doz.; Condenser Spindles, 2/9 per set; Condenser Ends, 1/9 pair; Honeycomb Coils, from 3/6; Honeycomb Mountings, 3/- each; Filament Resistances, 7/6 each; Calibrated Dials, 1/6 each; Knobs, 1/6, 2/-, 2/6 each; Contact Studs, 1/9 per doz.; Switcharms, 3/-, 4/6; Terminals, 6d. each; 'Phone Condensers, 1/6; Grid Condensers, 1/6; Variable Condensers, 25/-, 30/-.

Murdoch's 'Phones, 35/-; Myers' Valves, 35/-.

Catalogues, 9d. each, including wiring and other diagrams. All makes of Telephones and Valves.

Crystal Cups, 1/-; Detectors, 5/- each; Loose Couplers, 40/-; Cabinets, Ebonite, Bakelite, and All-round Materials.

Complete Crystal Sets, £3/10/-, £6/10/-, £7/10/-; Valve Sets, from £9 to £35, 1, 2 or 3 valve; Radiotron Valves, 37/6; Vernier Rheostats, 15/-.

INTERVALVE TRANSFORMER, 40/-.
Closed Iron Core.

UNDER NEW MANAGEMENT.

Works Manager: Raymond McIntosh.

General Manager: J. S. Marks.

All Communications to the Firm.

The President of the W.S.A. W.A., who recently visited Victoria and Tasmania, has now returned to Sydney. Mr. Burman enjoyed his trip, and has a lot of things to tell us about the Victorians.

Mr. Colville gave a very interesting wireless telephony demonstration at the Sydney Society of Model and Experimental Engineers' Exhibition at Summer Hill on Saturday last, in conjunction with a display of wireless apparatus of Messrs. Colville-Moore. It proved a great success, music from a number of amateur stations being heard, a speech given by Mr. MacLurean (2CM) being particularly clear. Other stations that contributed to the success of the demonstration were 2IX, 2PK, and 2DF.

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scientific achievements, Great Britain was visited.

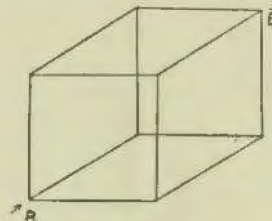
The speaker, in his quest for an organisation that could be best looked to as an Empire centre to encourage invention, won the approval of the British Science Guild, a great organisation, covering Britain's greatest scientists, and which organisation permitted the speaker to alter its constitution, so that it could best cover the scheme of encouraging Empire inventions which the speaker had in view, so that to-day the Guild stood as the Empire centre to help invention, with branches being established around the world.

The Board to Encourage Inventions that had been established in Australia had its regulations fitted to form a N.S.W. section of the Guild, allied with sections that are being formed in the other Australian States. It is linking up with various scientific bodies, in order that experimenters in these bodies should benefit by the funds that the Guild is collecting to encourage invention. The N.S.W. section already has funds in hand for the purpose, and has linked with it a branch dealing with aerial experiments, as well as a branch dealing with sound ranging, and it is hoped that the Wireless Institute will be affiliated with the Guild, in order that the money the Guild is collecting for experimental work can also be at the services of wireless opera-

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Our Competition Column.

An order for 2/6 will be presented to the first correct solution received for each competition in these columns. The judgment of the Editor shall be final in each and every case.



1. The above skeleton Cube made up of 12 wires, each wire has a resistance of 1 ohm. A current is passed from A—B. What is the resistance between the two points?

PUNCTUATION.

- 2.—(a) That that is is that that is not is not is not that it is.
- (b) He spoke from ~~222222222222~~ uninteresting people.
- (c) Time flies you cannot they fly too fast.
- (d) It was and I said not or
- (e) Write a sentence using the word "and" 5 times consecutively.

(a), (c) and (d), punctuate; (b), write solution in words.

3.—A butcher had a 40lb weight. Dropping it on the floor one day it broke into four pieces. He then discovered that with these pieces he could weigh. Dropping it on the meat from 1 to 40.

What were the weights of the pieces?

SHIPS YOU SHOULD HEAR THIS WEEK.

Nearing or departing from our coast.

AENEAS	MFU
ARAFURA	GBFY
ARENSKERK	PDAA
AUSTRALIA	YSN
BELTANA	MKB
BOONAH	VJQ
CERAMIC	MCP
HOUTMAN	PMC
LOUISOR	FNL
MAUNGANUI	GFYB
OSTERLEY	MOY
PORT DENISON	YGM
PORT LYTTTELTON	ZPO
WANGANELLA	VZBY
CANADIAN SEIGN'UR	XVS
MAKAMOB	VZR
NIAGERA	GBE
ST. MICHEL	PON
SUVA	VJI

DIES JOVIS.

To the Hon. Daniel Levy, M.L.A., Speaker of the Legislative Assembly,

Dear Mr. Speaker,

I am writing you re having a transmitting broadcasting set affixed in our Assembly, so that all keen radio experimenters could become connected with Parliament House. If this were done I have no doubt that a greater interest would be taken in all Parliamentary Debates.

Furthermore, in these days of broadcasting, what could be better than that every facility be given to each and all of getting in touch, and to all intents and purposes participating in, parliamentary life. For instance, in the "Herald," of 18th ult., the Rev. R. Dittarich says: "People literally in millions have their seats and 'listen-in' to concerts, sermons, &c."

A good instance also is that well-known and keen amateur, Mr. C. W. MacLurean, who has shown how a small-powered unit is capable of being heard many miles away.

Again, hospitals, &c., will be linked up in the very near future so that patients and sufferers may be cheered and encouraged by the spoken word or well-rendered music.

There are at present in this State some hundreds of radio amateurs who would pick up and listen carefully and with interest to debates taking place in our Assembly. These keenly interested amateurs are localised all over the State, from

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May 4th, 1923.

WIRELESS WEEKLY

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WIRELESS INSTITUTE OF AUSTRALIA
N.S.W. DIVISION.

The first meeting of the newly elected Council was on Anzac evening, at the Wentworth Hotel. Mr. F. Basil-Cooke, Vice-President, occupied the chair. Those present were: Messrs. Cooke, Crocker, Renshaw, MacLurean, Gregory and Mingay.

The election of a President for the ensuing year was then entered upon, and resulted in Mr. Chas. MacLurean being unanimously elected to the position.

Messrs. Basil-Cooke and Crocker were elected Vice-Presidents, Mr. P. Renshaw, Hon. Secretary, and Mr. O. E. Mingay, Hon. Treasurer.

In order to allow for the full number of Councillors, Messrs. Mingay and Renshaw then tendered their resignation as Councillors—as they were already ex-officio members of the Council.

This was accepted and Major Newman and Mr. Sid Colville were unanimously elected to fill those positions.

Considerable correspondence was dealt with, all affecting the great future of the Institute.

The exhibition organising committee reported that they had decided to temporarily postpone the actual date of the Wireless and Electrical Exhibition for a few weeks in order to permit of more stable conditions as would allow of a successful show.

All those interested are requested to note that the exhibition will be held in the very near future and there is absolutely no intention of cancelling it.

The matter of Honorary Radio Inspectors was discussed and Mr. MacLurean was nominated on behalf of the Institute for the position of "transmitter station examiner."

THE NORTH SYDNEY RADIO CLUB.

At the North Sydney Radio Club on Tuesday, the 24th ult., Mr. Charles MacLurean delivered an address upon "The Howling Valve,"

which was greatly appreciated by all present.

Mr. MacLurean explained that a great deal of trouble was caused through the use of circuits which fed back energy directly into the aerial.

The only way to rectify the trouble caused in this manner was, he said, to use either a crystal detector, with a valve as an amplifier (and surprising results could be got with this) or to use two or more valves.

The nuisance was becoming serious, and when broadcasting started it was highly probable that a wholesale cancellation of licenses would take place which was naturally very undesirable.

themselves and to continually preach

Mr. MacLurean then showed his audience a number of circuits by which the trouble could be overcome.

In conclusion he appealed to all amateurs present to play the game

DYNAMO

For charging your Accumulators—
One 120 Watt Machine Complete,
Price, £7/7/-, ready for immediate delivery.

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Daily Telegraph Building,
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RADIO SETS
and Parts to make your own

Send for Price List.

ELECTRICAL UTILITIES SUPPLY CO.
RADIO HOUSE
605 GEORGE STREET, SYDNEY.



KEY SWITCHES

For Valve Panels
(48 ONLY)

4/6 and 6/6 each

GET IN EARLY

O'Sullivan's Electric Shop
296 Pitt St., Opp. W.&S. Board.

the gospel of "no howling" wherever they went. It was by so doing that the amateur could hope to continue in his present form and it was the duty of the Radio Clubs and all amateurs to assist the authorities to keep order in the ether.

In thanking Mr. Maclurean for his excellent address, the Vice-President (Mr. McIntosh) said that he was sure that all present would seriously consider what Mr. Maclurean had said that evening. It was quite plain to see that, unless something was done in the matter of the howling valve, the amateur would come off very badly, and it was up to everybody to do as Mr. Maclurean had said and preach the gospel of "no howling" everywhere.

The club will be open as usual on Tuesday night at 8 p.m.

ILLAWARRA RADIO CLUB.

The 21st meeting of the Club held on the 26th inst., was exceptionally well attended, almost a full quota of members being present. After the minutes of the previous meeting were read and confirmed, two more new members were elected. This steady increase of members at each meeting is very gratifying indeed.

and is indicative of the appeal and interest which the club has created among local experimenters.

The large attendance was mainly due to the special business which had been set down for the evening, namely, consideration of the proposal as to the appointment of a Hon. Radio Inspector for this District, but as a further meeting of the Radio Association had since been held at which the matter had been finally dealt with, the question of nomination from this Club consequently lapsed.

The delegates (Mr. Hewett) in reporting proceedings of this last meeting of the Association, explained that due to the pressure which had been brought to bear on the Association from official quarters calling for prompt action on this question, a further meeting of the Association had perforce been called for the previous Tuesday evening at which the matter had been more or less finalised, and time therefore did not allow the club giving the matter full consideration as was intended. The result of the Association meeting was that several nominations having been put in for the position of Hon. Inspectors, such nominations

had been put to a ballot of those present, resulting in Messrs. Maclurean, Crocker, Swinburne, and McIntyre being selected for the positions, subject to approval by the authorities. The recommendations of the Association had been forwarded to the N.S.W. Radio Inspector, and were now having his consideration.

RADIO COLLEGE

Associated with Radio Company, 18 Elizabeth St.

The next class commencing first week in June. All those desiring to learn the principles of this fascinating hobby enrol now.

Complete Course . . . £5/6/-
Correspondence . . . £1/4/-

23 LANG STREET

F. B. COOKE,
Principal.

WOLLONGONG WIRELESS CLUB.

The local club held its usual meeting on Saturday night, April 14th, at the premises of H. Williams and Son. The principal item of the evening was a lecture by Mr. J. H. Dewis, of the Amalgamated Wireless Co. on the history and general principle of Wireless. Twenty members were present. Mr. Dewis explained the subject very ably the most important items being shown diagrammatically and which were very easily followed.

After explaining the ancient methods of wireless control, Mr. Dewis explained, step by step, each stage of improved methods up to the present day modern methods. Various other important matters were dealt with, including the working and operation of accumulators, receiving phones, motions of ether waves during transmission and reception. Various questions were asked which were explained by Mr. Dewis. After the lecture various subjects were discussed, including the following:

The operation of the Crystal, operation of valve reception, transmissions, aerials, and wave motions.

H. Williams and Son loaned the members a valve reception, with one stage amplification. The members listened in with this set and the operation of various parts were explained. The members obtained a lot of information, and lectures and discussions of this kind are very instructive.

Winter is Near

Radiators from 55/-

British Electric Globes 1/3 each

Electric Irons 20/-

J. J. Hoelle & Co.

57 Goulburn Street

Factory : 49 ALMA STREET, DARLINGHURST

May 4th, 1923.

WIRELESS WEEKLY

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With reference to the Association's status it was explained that a satisfactory reply had been received from the Controller of Wireless.

Messrs. Hewett and Atkinson both spoke of the work being done by the Association, and the efforts that were being made on behalf of amateurs, and it was hoped that all clubs would come forward and support the Association that was out to protect their interests. In view of the troublesome times ahead when official broadcasting started, and with the thousands of ordinary "listeners-in" as against the comparatively small minority of genuine experimenters, it behoved all experimenters to play fair, observe the regulations, and all experimenters and clubs to band together and work for the common interest, and strive to protect, hold and maintain the rights, liberties and privileges which they now enjoyed; otherwise, if the right course was not adhered to, broadcasting, rather than being a boon, may prove fatal to the cause of the genuine experimenter. It was hoped therefore that those latter would work along the right lines with a united front, and keep their lamps trimmed in order to be able to meet and deal with any situation which may arise in the future.

Mr. F. H. Kirkby gave an interesting talk on the "Propagation and Reception of Spark, C.W. and Telephony." It was shown how the transmitted wave was received in the aerial tuned to the same frequency, and the course of these alternating currents through the various units in the set was clearly explained, from the time they entered the aerial circuit until they were detected and rectified (by either crystal or valve) and finally took the form of audible sound in the telephone receivers. The lecture was both interesting and instructive, and resulted in some enthusiastic discussion. A vote of thanks was accorded the lecturer.

A letter from the Wireless Institute, inviting all members to an All-Clubs' Night on 10th May, at which a lecture by Mr. A. B. Hector on "Co-relation of various forms of Energy" would be given, was read and it is anticipated there will be a good response from this club.

By special resolution the Club's meeting night has been changed from Thursday to Tuesday, beginning with the next meeting, which will be held at the club room, 75 Montgomery Street, Kogarah, on Tuesday, 8th May, at 8 p.m.

The Secretary (Mr. W. D. Graham, 44 Cameron St., Rockdale) would be pleased to hear from anyone interested or desirous of joining the club.

KURING-GAI DISTRICT RADIO SOCIETY.

Since the meeting on April 10th the Society has moved into new quarters, situated over Almonds' confectionery shop, about half way between the Town Hall and Railway Station, Chatswood.

The new club room, though not quite as spacious as the former one, suits the Society admirably. A fair attendance marked the first meeting of the new "rendezvous" on Tuesday, 24th inst. The minutes of the previous meeting having been confirmed, a letter from the Radio Association of Australia (N. S.W. Division) dealing with the proposed appointment of Hon. Radio Inspectors was placed before members, who after brief discussion nominated Mr. Harry Stowe on behalf of the Society.

Another matter which engaged the attention of members was code practice. This very important item has been considerably neglected of late, and consequently some of the members have found it a hard battle to gain a working knowledge of the code. Commencing at the next meeting to be held on May 8th, code practice will be indulged in at 7.30 p.m. sharp. Mr. Holtin an operator with over 30 years' experience, has kindly consented to manipulate the key.

Members who wish to take advantage of this opportunity of learning the code are requested to be in attendance punctually at 7.30 p.m. During the course of the evening Mr. Stowe explained the different types of aerials and tuning elements particularly so the variometer which is fast coming into favour with amateurs. At the end of his discourse Mr. Stowe called upon Mr. Hill to address members on interference prevention when using the valve regeneratively.

The speaker's opinion was that most of the interference was caused by direct coupled sets, namely those employing only two coils—primary and tickler with the grid connected to the aerial.

This circuit though extensively used is not so selective as the three coil system, and the latter has the added advantage of less likelihood of causing interference with others.

All enquiries relative to the Society's activities, will be promptly answered by R. R. Wilshire, Hon. Sec., Help St., Chatswood.

LEICHHARDT AND DISTRICT RADIO SOCIETY.

The usual weekly meeting of the Leichhardt and District Radio Society was held in the new Club Room, 176 Johnston Street, Annandale, on Tuesday, April 24th, when a demonstration of reception of telephony was given by Mr. F. Lett, using one step of amplification, and a loud speaker. Music and speech from 2BB and 2IX came in very strongly, and C.W. Morse was read from 3MD (Melbourne). All this was accomplished on a temporary aerial only 15ft. high, so, when the permanent antenna is erected members can look forward to achieving some excellent results. Arrangements for this work are now well in hand, and it is expected that the Society's receiving set will be in operation in a week or two.

All inquiries relative to the activities of the Society should be addressed to the Hon. Secretary, Mr. W. J. Zook, 145 Booth Street, Annandale.

THE BRIGHTON AND DISTRICT RADIO CLUB.

The first meeting of the Brighton and District (Vic.) Radio Club was held at 18 Willansby Avenue, North Brighton, on Thursday, 19th April. The attendance though fair, was not quite up to expectations. It is expected that the membership will be increased when the existence of the club becomes generally known.

After various motions as to the formation of the club had been arrived at, the following office-bearers were elected:

President, T. H. Crago; Hon. Secretary, W. Kerr; Hon. Treasurer, P. Thompson.

It has been decided as a temporary arrangement, and until other club room provisions can be made, to hold meetings at different members' homes every alternate Thursday.

The next meeting will be held at 78 St. Andrew's St., N. Brighton, Victoria, on Thursday, 3rd May at 8 p.m.

All communications and inquiries concerning the club should be addressed to the Hon. Secretary, W. Kerr, 28 Durrant St., N. Brighton (Vic.).

Continued from Page 12

tors. The only fee to be paid for this linking is a exipitation fee of 1/- per member, members of the affiliated bodies having the right to apply for financial assistance to further their experimental work.

I place this before the Wireless Institute, as I recognise it as a great body that will link together the best of wireless enthusiasts, for wireless is in such a position to-day that it needs the keenest attention to prevent the science being overdone. The wonders of wireless telephony have been so great, that what may be termed a rush for "broadcasting" has set in. In America it became quite a craze, the authorities being so rushed with applications that they issued them without the necessary restrictions as to wave lengths and time, causing much "jamming."

In Great Britain, on the contrary, there was a considerable delay in the issue of licences, both to "listeners-in," as well as to "transmitters." In fact, Great Britain was noting the mistakes that America was making, and profiting by them.

The speaker happened to be in Great Britain when same conditions were being framed for regulating "broadcasting," and he is pleased to say that the Australian Government will shortly be ready to put into action what should be sensible regulations for "broadcasting," as a meeting is to be held in Melbourne in the month of May for those interested in wireless, in order to discuss same.

The temporary delay may have its drawbacks, in that it may make many who have taken up wireless somewhat impatient, and cause what might be called a "lack of interest," but those who have the science at heart, and who can look ahead and see its possibilities of pleasure and profit, can still wait a few weeks longer, in order that best conditions can be drawn up. In this respect the speaker is happy to report that practically all the firms in Australia connected with wireless have formed an association for its best protection, and Australia should enter upon its "broadcasting" era without any of the mistakes of older countries, and with every possibility of achieving something that older countries may still be striving to attain.

The value of the linking together

of wireless experts in this Wireless Institute is incalculable, for not only are its members ardent experimenters in a science with untold possibilities for human comfort and uplift, but in time of national stress, the Institute means that Australia has at immediate hand a great band of experts whose apparatus could be used as relay stations, and so be of great national utility.

As regards the future of wireless, its possibilities are almost beyond the wildest dreams of prophecy. New uses for it are being manifested almost daily, one interesting instance recently being shown during the voyage of the steamer "Ere," from Port Pirie to Hobart. The Chief Officer, becoming ill when the ship was in the Australian Bight, the symptoms were forwarded to the Melbourne Hospital by wireless, the details of the prescription were speedily returned and made up from the ship's dispensary, so that when the ship arrived in port, the Chief Officer was in good health.

Many such instances of wireless advantages could be given, all showing the remarkable utility of the new science; hence the great army of experimenters who are endeavouring to still further widen its ways of wonder should receive the best of encouragement.

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Dan to Bersheba, so to speak—Tanworth, Laura, Wallongong, Armidale, Broken Hill, Hay, and scores of others, and, added to these, station holders and small farmers in our back blocks.

Concerts, &c., held in towns have been listened to and enjoyed in these far distant places, simply by the installing of a very simple and cheap, but effective radio set.

You will thus see how distance is obliterated and interest aroused, and thus with Parliament sitting people and persons would actually be cognisant of what their representatives are doing, and each parliamentarian would soon be alive to the fact that the persons who had elected him were listening to his utterances.

Hence I feel no diffidence at stressing this matter upon your earnest consideration. The cost would be in the region of £500, but the money would be well spent.

Microphones hanging here and there in the Chamber would not be unsightly, and would suffice to col-

lect and transmit the whole debates. These microphones are somewhat similar to electric fittings, and with a note amplifier attached, transmission would be an assured fact to all, even the most distant parts of the State.

What a result!

What a change!

What a chance!

Please forgive this long letter, which with your consent I will send copies to the Press.

Cordially yours,

ROBERT STOPFORD, M.L.A.,
President,

Balmain Amateur Radio Club.

Continued from page 3

E. O'Sullivan, open order, £2/2/-; Universal Electric Co., open order, £2/2/-.

Two prizes for the most complete log of entrant using a hard valve as a detector. Prizes donated by: Radio House, open order, £1/1/-; Miss Wallace, open order, £1/1/-.

One prize, for the most complete log of entrant using a soft valve as a detector. Prize donated by: J. H. Dewis, open order, 10/-.

One prize, for the most complete log of entrant using the most original circuit. Prize donated by: Malcolm Perry, open order, £3/3/-.

RADIO TO PREVENT MINE DISASTERS.

The movements of 500 men engaged in construction work on a tunnel located thirty miles from headquarters in the Sierra Madre Mountains, of California, will be directed this winter by means of a radio station in the office of the resident engineer. The installation of a broadcasting station underground augurs the development of radio for controlling the activities of miners and other workmen in shafts, drifts and stopes elsewhere.

Published by W. J. MacLardy, "Truro," Powell Street, Neutral Bay at the offices of W. M. MacLardy, 241 Castlereagh Street, Sydney.

May 4th, 1923.

WIRELESS WEEKLY

Wireless Experimenters Requirements

Apparatus and Parts with a Guarantee of 100% Efficiency.

DOUBLE SLIDE TUNERS, £2; complete with phone condenser and detector panel.

LOOSE COUPLERS, £3; with detector panel, £3/15/-.

LOOSE COUPLER PARTS: Baseboard, 1/6; complete set of ends, 2/3; tubes 6d. each; slider, 3/6; secondary sliding rods, 2/8 pair; primary wire, 2/-; secondary wire, 1/6; 8 studs and stops, 2/-; secondary switch, 2/6; Crystal detector, 4/6; all loose coupler parts nickel plated.

VALVE RECEIVING SETS, equal to any on the world's market, from £16; complete with high and low tension Bat aerial wire, insulators, etc.

CRYSTAL PANEL MOUNTED SETS, £7, complete with phones, aerial wire, etc.

VALVES: Expanse "B," 35/-; Radiotrons, 200, 37/-, 201, £2, U.V. 202, £2/10/-; Myers' Detectors and Amplifiers, 35/-; Mareoni "R," 37/-; V-24, 37/-; Mullard Ora, 28/-; D.E.H., 40/-.

PHONES: Brown's single, 25/-; Murdoch's, 30/-; Bestone, 32/6; Trim's, 39/6; Western Electric, 4000, 42/-; 8000, 45/-; Baldwin's £4/18/6; Brown's Loud Speakers, £5/5/-; Amplihorns, 12/6 each.

CRYSTALS: Galena tested and guaranteed, 2/-; magnetite iron pyrites silicon, 1/6 each.

"COL-MO" CONDENSER: Ready to assemble, .0001, 7/6; .0002, 8/3; .0003, 10/-; .0006, 12/3; .0008, 15/6; .001, 18/6; assembled and adjusted, .0001, 10/- to .001, 25/-; with vernier control, 10/- extra on assembled price.

EBONITE TUBE: 3 in., 3½ in., and 4 in., diam., 12/- per ft.; Rotors, 5/6 each.

TRIPLE HONEYCOMB COIL: Mountings, 18/6; Remler, £1/4/-; Plugs, 4/- and 5/-.

INTERVAL TRANSFORMERS: Jefferson, £2; Radio Frequency, 10/- each.

TERMINALS: From 5d. each; studs, 2/- and 2/3 per dozen.

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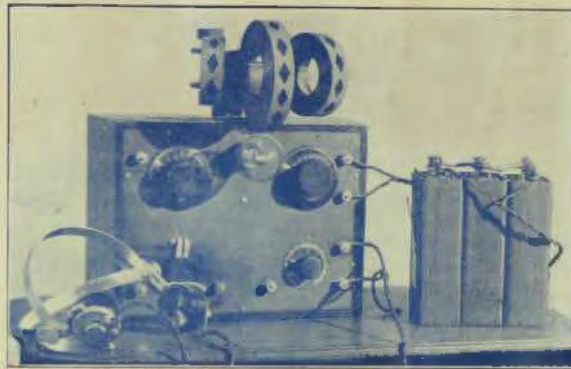
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