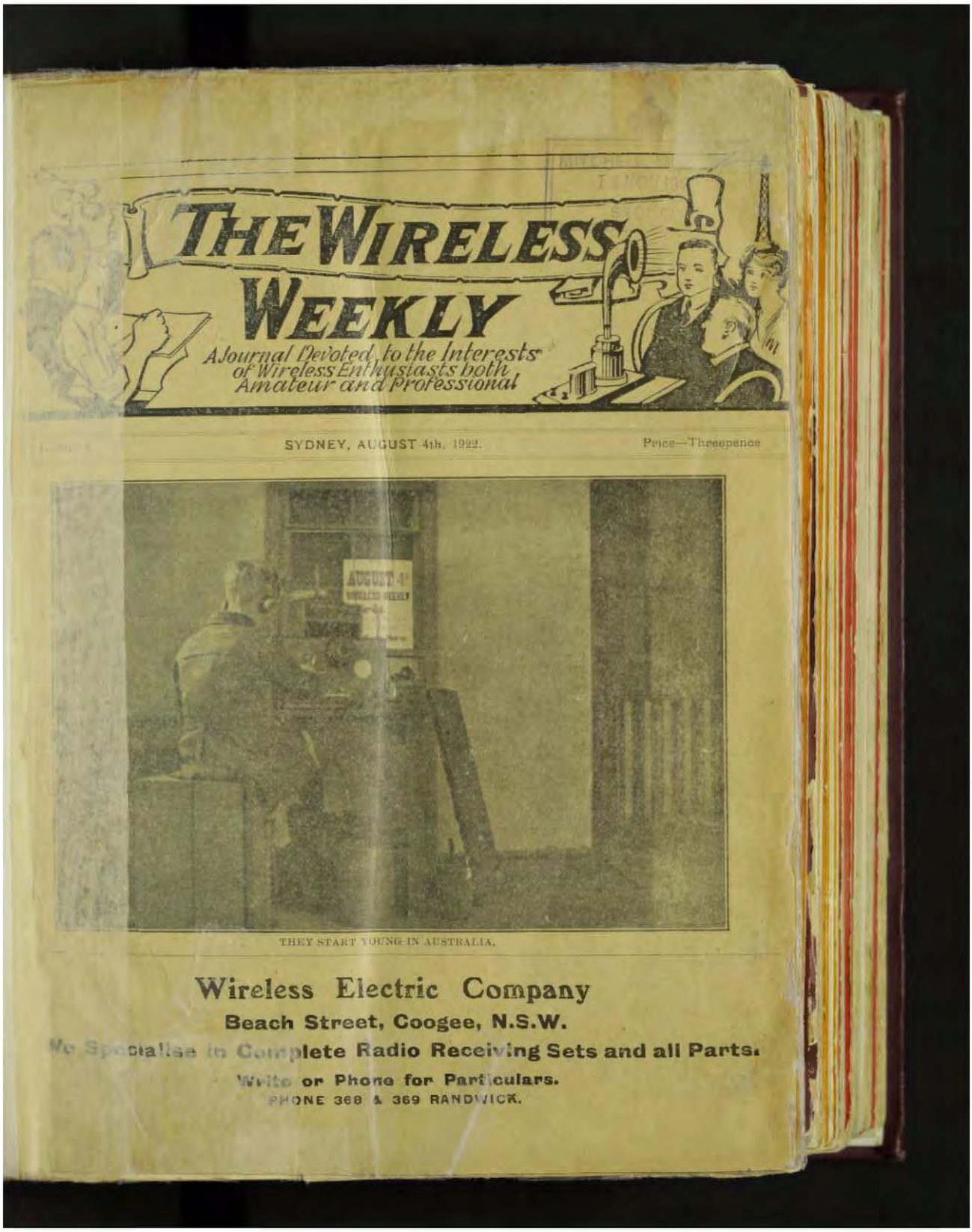


THE WIRELESS WEEKLY

A Journal Devoted to the Interests of Wireless Enthusiasts both Amateur and Professional

SYDNEY, AUGUST 4th, 1922. Price—Threepence

THEY START YOUNG IN AUSTRALIA.

SUPPLYING A NEED.

"WIRELESS WEEKLY" MAKES IT'S BOW.

In stepping into the limelight of public opinion, the "Wireless Weekly" is full of confidence.

It is not every publication that can start its strenuous life in this frame of mind, but this journal is undoubtedly justified in so doing.

In the first place, it is the first publication wholly devoted to wireless to be produced in Australasia.

The value of wireless communication is being realised more and more every day, and the uses to which it may be put in every-day life are gradually being impressed upon that section of the general public who, up to the present, have looked upon the science as something fearful and wonderful. Many of those who have troubled to look into it have become enthusiastic amateur experimenters. So expert have some become that every night they are "listening in" to European and American stations, their apparatus in many instances being home-made.

It is with the object of serving these experimenters and their professional brothers, and interesting the entirely uninitiated, that the "Wireless Weekly" is published.

It will be the wholehearted endeavour of this journal to give its readers reliable news of the latest developments in the science from all parts of the world; keep the experimenter informed on all matters concerning his hobby, and help him to put his case for the relaxation of restrictions under proper control; and generally deal with the science in an understandable way, from the elementary stages to the super-technical.

The policy is an ambitious one, but the "Wireless Weekly" is confident of being able to carry it through successfully.

The rest lies with the general public.

Swarms of Be

The 200-Metre Wa

"Just as if swarms of n buzzing round your ears,' an operator describes th heard when "listening in' metres in America.

"But there is a deal of f he added, "for you hear so wonderful sounds. M grunts, wails, growls, mo scratchings, and squeal about in the ether till one how anybody could read else in the jumble. But t

"If you get up on to th wave lengths you leave behind, but there is plenty mercial work. It is ver that the amateurs interf the commercial station case of an S.O.S. or impor nal, the 'keep quiet' is se the commercial station, a are very few amateurs wh heed it immediately."

A well-known Adelaide who is interested in wirel his hobby to an interes At noon each day he ch chronometers by radio tim received on a set at his finds this method more than the telephone system

WHAT RADIO SPRANG FROM.

The first recorded experiments of electric signalling by conduction methods without wires were those of Morse, who signalled across a canal 80 feet wide in 1846, and later established communication across the Susquehanna River, over a distance of nearly a mile. The transmitting apparatus consisted of a key and battery connected by two long cables to two copper plates immersed in the water on one side of the river, and the receiver on the other side was simply a galvanometer similarly connected to two immersed copper plates. When the key at the transmitter side was pressed, a deflection was shown by the galvanometer.

OUT BACK.

As It Should Be.

Dad Wayback entered the living room of the little homestead and blew out the hurricane lantern.

"Well," he said, "I've just had a look round, and everything seems O.K. It's about time to listen to see what weather I'm to expect for getting in that wheat to-morrow."

Hanging up his hat, he went to where a neat three-valve receiver stood on a table in the corner, sat down, adjusted the 'phone and switched on. He had not long to wait ere the tuning V's began to come in. Then, loud and clear in the telephone the voice could be heard: "Hello! Hello! Sydney radio speaking. The forecast for the next 24 hours is ——"

And so it went on. Dad made a few notes on the weather and listened to the reports of the day's produce sales in the city. As some of his produce was sold that day, the latter item interested him immensely, as it did many farmers scattered about the country districts.

The reports finished and Dad switched off, and looked at the clock. "In a quarter of an hour," he commented, "the Amalgamated Wireless will be sending out their concert." Mother, Sarah, Jane and Billy, who were killing time as best they could, smiled. They knew these wonder concerts, and thoroughly enjoyed them. At the appointed time Dad switched on again, tuned into the concert wave length, picked up the music, and connected the loud speaker.

With the end of the programme those lonely settlers were comforted in the knowledge that after all they were not altogether out of touch with the world, despite the fact that the nearest township was three miles away.

The output of a tube under proper design conditions is governed by the total emission of electrons from the filament. With a given plate voltage only a limited amount of emission is useful, but with a given emission the power can be greatly increased by increasing the plate voltage if tube is properly designed.

THE BEGINNER.

What is the Wireless saying?
I'm bothered if I can tell.
Jumbles of dots and dashes,
Arcs and sparks and splashes,
And Pennant Hills going pell-mell.

I must practise more with my buzzer,
And get up some speed, I guess.
It will take me a year
To get anywhere near
The man at old V.I.S.

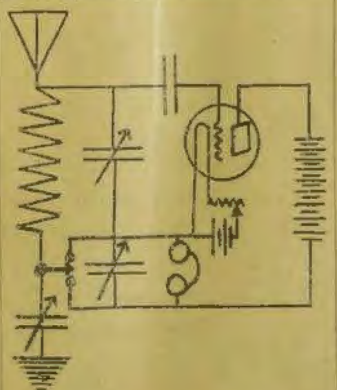
But here comes Jimmy McMahon,
So I clasp the 'phones on my head
While he sits at my feet
And swears not to repeat
What I copy from P.O.Z.
BEGINNER.

WHILE YOU LUNCH.

Another from the States

Just imagine going into a George Street, restaurant and listening to a radio concert while you lunch!

Yet this is the latest American use for the science. An up-to-date caterer in a large city has installed a powerful set, and with the aid of a loud speaker, he is able to give the music to his patrons. He took careful note, and found that his business increased by over 20 per cent. after the apparatus was put to work. The reward of being progressive!



(This Circuit is particularly adaptable to C.W. Work)

A PROMISE.

Mr. Hughes to Amateurs.

A statement of the utmost importance to experimenters was made by Mr. Hughes in the House of Representatives on July 28, according to the Melbourne Correspondent of the "Evening News."

The Prime Minister stated that facilities granted in other parts of the world would be given to amateurs here under proper control.

No restrictions, other than those to prevent interference, would be imposed.

He would see that the wireless company did not interfere in the enforcing of the laws, but that control was by disinterested Government officials.

This must be considered one of the best bits of news concerning their hobby that experimenters have ever heard; and coming, as it does, on top of the intimation that licence fees may be reduced, makes their outlook very much brighter.

The amateur will look to Mr. Hughes to keep his promise to the letter.

If you are not getting good results with your crystal set, try washing the crystal with a little warm water and soap. Continuous handling will put a film of grease over the crystal and its efficiency is impaired.

THINGS YOU SHOULD KNOW.

According to the report of a representative of the British Post Office, there are 750,000 receiving stations open in the United States.

* * *

The British Postmaster-General intends that it shall be a simple matter to get a receiving permit in that country. All that will be necessary is for the applicant to go to any post office, pay 10/-, and get it.

* * *

I have not yet heard Lyons on a crystal, but hope soon to hear the Aeolian Vocalions broadcasting.

* * *

In short wave telephones any change in filament current will change the transmitted wave length.

* * *

In using short wave telephones it is necessary to avoid any change in antennae constants, such as swinging of rat-tail. This is especially important owing to the inherent difficulty in receiving short waves CW on heterodyne receivers.

* * *

A new method of shielding telephone receivers is to make the box of steel instead of wood.

* * *

Interference, owing to coupling with another transmitter, is especially troublesome when the operator listens in during the break of the key.

* * *

Any detuning of the secondary circuit by the operator's hands is especially troublesome, and this is overcome by the steel case.

* * *

A stopping condenser in series with the grid of an amplifier is not a very efficient method of amplification.

* * *

If a tube stops oscillating all the plate current is expended in heating the plate and this current should be shut down.

Tungsten filament tubes have a limited emission with a given filament current, while coated filament tubes have an emission several times greater for the same filament current.

* * *

With ample filament emission the output varies roughly with the plate voltage, while with insufficient emission it varies as the square root of the voltage.

* * *

For best results it is necessary that the amplitude of the high frequency oscillations for moderate speech be double the amplitude for no speech.

The "Wireless Weekly" will be on sale each Friday at all newsagent. Order your copy now.

Letters for publication must be addressed to the Editor, Box 378, G.P.O., Sydney. In all cases where it is desired, letters will be published under initials or a nom de plume, but the writer's name and address must be given as a guarantee of good faith.

ALL WORKED UP.

MOTORS AND WIRELESS.

A Sydney man received a letter from America the other day. The following is an extract:—

"We're all worked up here over two things—Autos and Wireless. Most of our salesmen have cars to run around in—that is, two of them have cars and the rest have bunches of scrambled machinery on which they would like to change the labels.

"Wireless is a 'big talk' around here. Many people are placing mortgages on their homes to buy wireless outfits. Salesmen all have cars, as long runs are necessary in order to find people with money enough to buy our goods."

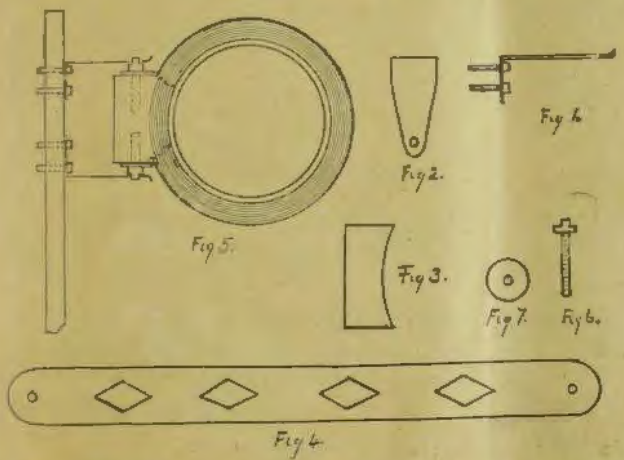
Capacitative coupling is better for long waves; inductive coupling is better for short waves, and is combination coupling for all waves.

MAKE YOUR OWN.

Honeycombe Coil Mounting.

In these days when the Radio enthusiast wishes to construct as much of his apparatus as possible, there are times when he finds it difficult to make certain fittings. Now, one of these little problems has been a cheap and effective mounting for a honeycomb coil, one that is quick in action and simple in construction. In dealing with an article like this, the author appreciates the limited pocket of many enthusiasts.

few brass washers, several studs to the shape of Fig. 6. These are ordinary deep contact studs with part of the head turned away. To make up the fitting we cut off a piece of ¾ ebonite rod about 1-inch long, flatten one side of it with a file, then, with a half-round file, shape it as in Fig. 3, to allow it to fit up against the coil. In the ends of the ebonite, drill holes and lap it to take the stud, Fig. 6. Next cut out the band to go round the coil, Fig.



The cost of the material runs into a few pence, and from practical experience this mounting gives excellent service. In making these fittings it will amply repay the experimenter to be as accurate in his work as possible. The material required is a few inches of ¾ round black ebonite rod (the quantity depends on the number of coils one wishes to make), a dozen ½-inch brass cheese headed screws and nuts, or else 5 B.A. ditto, a small piece of sheet phosphor bronze, or special spring brass, 24 gauge, no lighter. Next we require a strip of prespahn or fibre sheet 1/32 inch thick to make the band to go round the honeycomb coils, a

4. In mounting the coil you take the stud, put it through the washer, Fig 7, then through the hole in the end of the fibre band, repeating this for each end.

Now screw the studs into the ends of the ebonite for a little way, then slip in the honeycomb coil, tucking the ends of the two wires, one under each washer, which will make contact with the studs. Tighten up studs, and you have the coil ready for mounting. The clips are self explanatory, but one has to take care that they are not too near or too far apart, also that the holes are directly opposite one another. From the screws holding the clips to the panel, as in Fig 5, you connect same to the circuit.

Be careful in the selection of the right gauge and quality of the brass clips (24 gauge phosphor bronze is the best); failing that, the best spring brass procurable. One should exercise care and see that the two contact studs do not meet in the ebonite, or if they do you will short circuit your coil. It is advisable that all the metal parts of this mounting should be nickel plated, as it undoubtedly improves the appearance, and gives a splendid contact between the studs and clips, as in Fig. 5.

It will be noticed, too, in Fig. 5 that the ends of the clip are bent up and down respectively. That is to enable you to clip in your coil without the use of both hands, as it acts as sliding guides to the holes in the clips.

On Page 10: A Detector that cannot get out of adjustment.

REPORTS OF WORK IN OTHER STATES.

QUEENSLAND.

Mr. Colville, former Secretary and founder of the Queensland Wireless Institute (later incorporated with the Queensland Division of the Wireless Institute of Australasia), is at present on a visit to Sydney. The President of the branch in the Northern State is Mr. W. Finney, and the Secretary, Mr. P. A. Wilson. The branch has a transmitting and receiving set, of which it makes full use. It might be mentioned that they started with a small spark set in 1919, and have progressed into C.W. work, having an arc converter, rated at 1 K.W., and a 2 to 5 Watt Valve Radiophone, with a range of 80 miles.

The Queensland amateurs have done some good receiving work—Melbourne's and Mr. Maclurcan's concerts having been picked up on single valve sets.

WEST AUSTRALIA.

Though little has been heard of the West Australian amateur, he is very much alive, and by all accounts doing as good work as his brothers in other States. There are five transmitting licenses in this State up to the present, including one at the University. Experimenters are reputed to be the best behaved of any in the Commonwealth, and unlicensed receiving sets are very few. This is because the local Radio Inspector is very active, and is noted for the speed with which he brings culprits to book.

VICTORIA.

There seems to be more interest being taken in the science in Victoria at the present time. The Victorian branch of the W.I.A. is a live body, and can now boast of nearly 100 financial members. This branch also has a transmitting license. The amateur in this State is being well served with concerts. Amalgamated Wireless Ltd. broadcast weekly from their Canterbury station, and occasionally old V.I.M. (Melbourne Radio) gives an entertainment. Several prominent Melbourne experimenters are in conference with the Director of Radio Telegraphy, and representatives of Amalgamated Wireless Ltd., concerning the reduction of the license fee, and other matters affecting amateurs. Through their efforts it is probable that the license fee will be reduced to £1.

SOUTH AUSTRALIA.

The experimenters in South Australia are not so numerous as in the Eastern States, but they are a keen lot. Some splendid reception has been carried out by individual amateurs—European and American stations being read with ease. Telephony from Melbourne is also picked up. The University has a transmitting license, and they have been experimenting with transmitting valves, including a 5-watt Japanese tube.

RING SET.

Could it be Smaller?

An American amateur, acording to a contemporary, has just completed a ring receiving set. The entire set, outside of the slender coil, slightly more than an eighth of an inch in diameter, which encircles the finger, measures but one inch by five-eighths by seven-sixteenths.

The combination includes the crystal detector and cat whicker and switch control, with nine taps to the coil for tuning, mounted on a polished bakelite panel.

The set was tested when a nearby station was sending telephony, and not a word was missed.

THE EXPERIMENTER

In the Radio field of Research there is to-day a potent factor in the form of the Radio experimenter. By the Radio experimenter we mean that person who takes up Radio for the purpose of delving deeper into the immense possibilities that exist for further organised research. The Wireless Weekly aims at giving this experimenter all the help that it can, both by its technical knowledge and that of its publicity which is an assured success. Let us turn back about 12 to 15 years and review what strides wireless has taken in that comparatively short time. It is food for thought, and makes one proud to be an experimenter in this ever-entrancing scientific subject. Ahead there still remains a lot of spade work to be done, and here you experimenters have an unlimited field for sound scientific research. In discoveries that are likely and will come to light you are again helping humanity, and that is what we ultimately aim at. A few problems that face the experimenter have up to date been unsolved, and one of the greatest is Q.R.M., caused through "Static." Now, as most of us know, there are three distinct kind of static, and scientists have, to some degree, been able to eliminate one or two, but there still remains Q.R.M. We suggest that the experimenters of Australia get down to hard facts and face this problem, and by their individual efforts we have no doubt as to the success that will be achieved. Has anyone really studied the possibilities of the value as applied to locating precious metals, such as gold, platinum, silver, tin, etc. Really the opportunities that are ahead are unlimited. We hope that those who really have the good of this science at heart will be up and doing so to speak. If one traces the growth of present ideas in wireless work it can be ultimately traced to the activities of amateur experimenters, and been exploited by commercial concerns. The strides that have been made in America in radio work are far ahead of other countries, and it can all be traced to the activities of the genuine experimenter. We in this country are to a great extent under Government restrictions which debar a lot of us from launching out with our ideas. However, we hope the near future holds out encouragement, and by the judicial use of those privileges we hope to make a big name in the annals of wireless telegraphy and telephony through the activities of research of the Australian radio experimenter. Now is your opportunity to prove to the world what the experimenter is capable of doing, but do it well and win through once again as others in foreign countries have done in the past.

THE GOOD THEY DO.

Case for the Amateur.

What good do these amateurs do? One often hears the question asked, but seldom is there a satisfactory answer given to it.

Amateur experimenting has indirectly done a lot of good, and is continuing to do so. The work of Mr. Chas. Maclurcan, Sydney's leading experimenter, may be instanced. Only recently he established what is thought to be a world's record in low power transmission, and still later he succeeded in getting good readable signals from his station at Strathfield to New Zealand, using just under nine watts power. The technical data of such feats as this is of great value to the science.

A large proportion of the amateurs are young men just about to select a career, and the fascinating hobby will be the cause of many taking up wireless as a profession. Who can deny that their early investigations will help them?

Little Eavesdropping.

In their experimenting days, with crude, home-made apparatus, they get results that are little short of wonderful. Might not there come a time when, as fully-fledged operators, they will be called upon in some emergency to solve a problem tackled in those experimenting days?

Those who say that amateurs eavesdrop on commercial messages are evidently not in close touch with them. While there may be one or two who do, it might be pointed out that fully eighty per cent of the experimenters cannot read the code at commercial speed. As long as they can catch the call letters of the sending station they are well satisfied.

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AMATUERS NOT CURIOUS.

The Eavesdropping Bogey.

Much has been heard lately of the necessity for ensuring the privacy of radio communications by the prevention of eavesdropping by the amateur, and this argument has been used against the proposed easing of restrictions governing the granting of receiving licences.

To the general public, and, perhaps, at first glance, to the commercial radio man, this question seems of great importance, but when one obtains a more intimate knowledge of the psychology of the amateur it dwindles to comparative insignificance.

LONG WAVE PRESS.

It needs a large amount of time and patience to master the continental code sufficiently well to be able to copy ordinary commercial traffic, and when an amateur has given sufficient time to his hobby to do this, he is more concerned with testing new circuits and arrangements of apparatus than in reading messages which have no personal interest for him. In fact, after having learned to read code at the speed of 12 words per minute necessary to qualify for a valve licence, he gives very little attention to reading, being satisfied merely to identify the station working and then to go on experimenting with his apparatus. This is borne out by the fact that many of our well-known experimenters are unable to receive at greater than the qualifying speed. Even expert amateurs usually copy only long-wave press and other C.Q. work, which is, of course, sent out for all who wish to listen.

MORE BROADCASTING.

Those amateurs—not interested in experimental wireless—and they are very few—quickly tire of listening to an endless buzzing, and usually work only when a concert is being broadcast. With the advent of more 'phone broadcasting stations and of amateur transmission, the listening in on commercial messages would be negligible.

Then, again, as in ordinary line telegraphy, messages of commercial importance are invariably coded, while, in the case of high-powered long-distance work, the use of automatic transmission at a speed of several hundred words per minute is a particularly efficient safeguard against indiscriminate listening as well as a great economy of time and power to the station transmitting.

As examples of what little importance is attached to this matter elsewhere, in U.S.A. no licence is necessary for installing a receiving set.

JOHNNY'S LAST SIGNAL.

(A RADIO STORY BY C. Q.)

"Mum! Dad! Listen to this!"

Little Johnny's voice was shrill with excitement, and the poor, wasted hand that held the wireless receiver to his ear was trembling pitifully. Johnny had never been able to run about like other boys, and his few years had been chiefly spent lying wearily on the sofa under the kitchen window.

When the doctor from the nearest township, many miles away, had last seen Johnny, he had shaken his head sadly, and stepped out to his mud-stained car.

It was Dad who got the idea first. He was absent-mindedly reading from a month-old paper, when he came across instructions for making a simple wireless set. "Just the thing to amuse Johnny," he thought, and when Johnny was told about it the idea seemed to take complete possession of him. It strongly appealed to his imagination that he might hear sounds from the far-off Sydney which he could never hope to see.

"First get a cardboard tube," read out Dad, and Johnny's eyes eagerly searched the kitchen for something which would serve the purpose. Mum suggested using an old calendar, and with the aid of scissors and paste even Dad was satisfied with the result. Wire was the next difficulty, but part of an old-fashioned electric bell was discovered in the tool box, and it was decided to use the wire from this. Many happy hours were spent making this little set, and when a kindly neighbour presented Johnny with an old 'phone receiver and a box of mineral specimens, some of which seemed likely substitutes for the "crystal" described in the paper, Johnny's hopes rose very high. Two or three evenings later, when Dad had finished suspending the long length of fencing wire which was to do duty as an aerial, the little family gathered round Johnny's couch, and after trying different scraps of the minerals Johnny was at last rewarded by very faint, but unmistakable, signals which caused him to cry out with joy.

After listening for a few minutes Johnny lay back completely exhausted. Mum bent over him anxiously and smoothed the damp hair away from the little forehead. "Oh! if only I could hear some music," whispered Johnny, "I would forget this nasty old pain." Mum held the receiver to his ear, and suddenly his face lit up with a wonderful light, which struck a pang of apprehension to his mother's heart. She stooped low, and heard his last ecstatic whisper.

"Mum, listen to this!"

DON'T HIDE IT!

Advertise Your Hobby.

To get the "man in the street" interested in Radio, it should be the duty of every experimenter to "boost" the science.

Do not hide your light under a bushel, so to speak, but let everyone know just what you are doing and why. It is hard to get the general public interested in anything, but the sooner it is interested, the more speedy will come the time when everybody will be making use of the science.

And don't forget this: As soon as everybody gets talking Radio, the Authorities will begin to waken up and realise that the present rigid regulations need to be relaxed.

RADIO BATTERIES.

Selection and Care.

By W. F. TURK.

An electrical storage battery is composed of a number of cells or accumulators, in which the electrical energy absorbed by chemical changes during the charge is partly returned during the discharge by the reversal of these chemical changes.

The radio "A" battery has a capacity of 60 ampere hours, and an E.M.F. of 6 volts. The cells are made of a number of lead plates, the grids of which are filled with specially prepared paste or active material, made from a secret formula. The "positive" and "negative" plates are burnt in separate groups to plate carriers, and assembled with separators between each positive and negative plate.

THE UPKEEP.

The required number of positive and negative plates and separators are assembled in ebonite jars, which are then fitted into wooden boxes. The cells are connected in series, and finished off in the usual way. After being filled with electrolyte of a specific gravity of 1.250, the battery is ready to be put on charge, and the initial charge is a most important factor in the life and upkeep of the battery.

The Star Batteries Limited have recently opened up a Service Station at 43-45 Wentworth Avenue, and being manufacturers of the "Star" radio battery, they undertake the recharging, and repairs if necessary, and also keep a number of special service batteries fully charged, for the convenience of customers. A nominal charge is made for the use of one of these batteries while the recharge or repair is being carried out.

"B" BATTERIES.

For the radio "B" battery, it has been very difficult up to the present to secure storage batteries, and in most cases dry cells have been used, which have to be discarded after a few months' use. But a new "Star" battery is now being manufactured for this purpose at a very low price, and this can be charged when necessary, and will last a few years with proper attention.

It is of course a recognised fact that one of the most important parts of a radio set is the battery, and therefore it is essential that a reliable battery should be used.

Further information on this subject will be published in later issues.

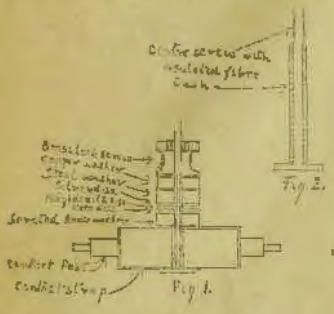
To get a radio receiving licence write to the Director of Radio Telegraphy, Prime Minister's Department, Melbourne.

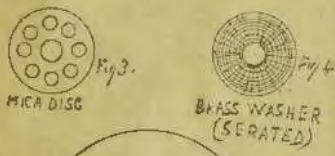
FOOL-PROOF DETECTOR.

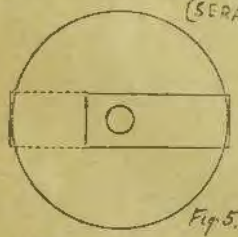
How to Make It.

The Radio experimenter who requires a stable detector, in fact one that you can drop on the floor, will welcome this design, employing Molybdenite as the basis. How many of us have had our good tempers ruffled by losing the sensitive point on the crystal after having diligently searched for it for quite a little time.

The writer experienced the same thing many times till it was a case of designing some type of detector that really would stand rough treatment. This detector can be built of the usual scraps generally found about an experimenter's Radio room. If one can have the entrée to a lathe so much the better, as it will greatly facilitate the making of this instrument. The actual cost of material required would be about 5/- at the outside. The particulars of material are as follow:—A small piece of ebonite 2 inches in diameter, ½-inch thick, with a hole of a ¼-inch drilled in the centre; a piece of ¾-inch round brass, 3/16-inch thick, with ¼-inch hole drilled in centre; also the following to same dimensions: copper and steel washers. A silver facing piece is required of ¾-inch diameter by about 1/37-inch thick, with ¼ hole in centre; a piece of mica and molybdenite of ¾ diameter and ¼ hole in centre. A centre spindle threaded with 3 m/m, and a thumb nut for same, together with an insulated sleeve of fibre, whose outside diameter is ¼. This, together with two pieces of 4.000th brass and two binding posts, completes the list of parts required. The building up of this detector requires some explanation, and by referring to the diagrams you will see how this is done, and the order in which the different metals come in contact. The mica discs should be constructed as in Fig. 3, and the simplest and best way of cutting these holes is with a drawing compass with a fine needle point in place of the lead. The silver and steel disc have to be soldered together, and there is only one way to do this satisfactorily, and that is by using a piece of sperm candle as the flux. This is the biggest factor in making this detector a satisfactory instrument.







Plan of Ebonite disc with contact straps above and below.

A good way to rough-up the serrated face of the brass washer is to get the sharp end of an old file. Make the serrations as even as possible. When the detector is assembling the two contact posts, the ebonite disc can be inserted into a suitable holder and mounted according to taste.

To trace out the circuit we will take it that a current passes in at the left-hand post in Fig. 1; it goes along the contact strap under the ebonite disc up the insulated centre screen, making contact with the lock or thumbscrew, down through the different discs, along the upper contact strap, and out to the right-hand contact post. So you can see the purpose of the insulated fibre bush which goes up flush to the top of the copper washer. To set this detector for signals get the buzzer in your room going, and gently slacken off the lock nut on top, and at the same time move the serrated brass washer till you hear the strongest buzz in the 'phones. When you get that, screw down the lock nut on top and listen in.

Your Aerial.

Give It Attention

The aerial on an experimenter's station, once it is erected, is the last part of his outfit that ever has any attention.

During the rough weather of the last two weeks or so, several experimenters have had it brought home to them, that it pays to give that aerial the little attention that is due to it. A good plan is to make it a rule to lower the aerial once a month, examine it carefully, and see that all the wires are sound, the pulley blocks free, etc. Should one find that the insulators have become grimy through the action of the weather, smoke and dust, clean them thoroughly.

Examine the spreaders for cracks, and see that any soldered joints are in tip top condition; also that the lead in is clean and dry.

Flexible steel cable has a habit (though galvanised) of becoming rusty, and very brittle, so examine it thoroughly, and should it show signs of wear, fit in a new piece. Otherwise you will have a Saturday afternoon's work fitting a new pulley wire at the top of a mast, at a time when you feel least inclined to do it.

This little inspection of the aerial system will pay you; get busy right away!

Reports of club meetings and activities will be found under this heading. The Secretaries of the various bodies are invited to send along such reports for publication. Brevity will be appreciated. Manuscript should reach the Editor, Box 378, G.P.O., Sydney, not later than Tuesday in each week for insertion in the following Friday's issue.

ILLAWARRA CLUB.

The first (inaugural) meeting of the Illawarra Radio Club was held in the Carlton School of Arts on the evening of Thursday, 20th July. The attendance, although fair, was not quite up to expectations. It is expected that the membership will be increased considerably when the existence of the Club becomes more generally known.

After various motions as to the formation of the Club had been carried, the following office-bearers were elected:—President, C. D. Cuthbert; Vice-Presidents, L. R. Hewett and A. E. A. Atkinson; Hon. Secretary, W. D. Graham; Hon. Treasurer, J. W. Mann; Business Committee, C. Binns, S. Atkinson and W. J. Smith; Technical Committee, C. Borthwick, E. G. Bailey, F. H. Kirkby, and C. A. Gorman. Messrs. Hewett and Atkinson were also appointed Club Delegates to the approaching Inter-Club Radio Conference. The subscription has been fixed provisionally at 10/- per annum, payable in advance. It has been decided, as a temporary arrangement and until other Club-room provision can be made, to hold Club meetings in the Carlton School of Arts every alternate Thursday. All communications and inquiries concerning the Club should be addressed to the Hon. Secretary, W. D. Graham, 44 Cameron Street, Rockdale.

THE WIRELESS INSTITUTE.

The last meeting of the Wireless Institute of Australasia, New South Wales Branch, was held at the Clubrooms, Dalley Street, Sydney, on Tuesday, when Mr. Wallace Best lectured on electrical and mechanical energy. This lecture was one of a series of elementary talks for the benefit of new members and those not too far advanced.

The next General Meeting will be held on August 8, which will be visitors' night. The star item of the evening will be a special lecture.

The Institute has an interesting syllabus ahead, including a number of valuable lectures and demonstrations by those in the front rank of the science.

Particulars as to membership may be obtained from Mr. Phil Renshaw, Hon. Secretary, Box 2120, G.P.O., Sydney.

METROPOLITAN CLUB.

The Metropolitan Radio Club, the largest body in New South Wales, continues to attract members. There are now nearly 200 names on its register. The next General Meeting will be on Wednesday next.

The final arrangements are being made by the Committee for the public exhibition of radio apparatus under the Club's auspices. This will be the first exhibition of its kind in Australasia, and it should be a success. Intending exhibitors, who have not already got them, may secure entrance forms for their apparatus at the General Meeting, or from the Secretary, c/o Miss Wallace, Royal Arcade, Sydney.

MILITARY ASSOCIATION.

On Monday, the Military Radio Association will hold a General Meeting at the Engineers' Depot, Moore Park, when members are asked to roll up in force. Members have benefited considerably by many interesting lectures given under the Club's auspices, and the Committee are working hard to keep interest at its present pitch.

The Association's Hon. Secretary is Lieut. H. Greenberg, 169 Cowper Street, Waverley, who will supply all particulars as to membership.

NORTH SYDNEY CLUB.

A successful concert in aid of the funds of the North Sydney Radio Club was held in St. James' Hall, Phillip Street, Sydney, on Wednesday. The organisation was a credit to all concerned, and the entertainment by the "Follies of Pleasure" was much enjoyed. The Club is one of the most active in the Sydney suburbs. It has a crystal receiving set and an 80-ft. aerial at its Clubrooms.

The Hon. Sec. is Mr. M. Rich, "Wimmera," Alfred Street, North Sydney.

WAVERLEY CLUB.

The Waverley Amateur Wireless Club is a go-ahead body which has of late been going into the subject of transmission. Some time ago the Club was granted a licence for sending out on 200 metres, and for several evenings they broadcasted C.W. and telephony, which was received well in the vicinity.

At a recent meeting of members, it was announced by the Secretary that the Club had been allotted a 1,000-metres wave length for broadcasting telephony. The necessary apparatus to use the wave length is being obtained from England.

Henry: "Bill planned to tap the Council's high voltage mains to send a message to Perth."

James: "Was his plan carried out?"

Henry: "No, but Bill was!"

STATION CALLS.

Following are the principal Radio Stations in Australasia and the vicinity, together with their call letters. The times in parenthesis are the hours of working. Where no times are given, the stations were continuously:—

AUSTRALIA.

ADELAIDE, VIA; BRISBANE, VIB; BROOME, VIO; COOKTOWN (6 a.m. to 8 p.m.), VIC; DARWIN, VID; ESPERANCE (6 a.m. to 8 p.m.), VIE; FLINDER'S ISLAND (9 a.m. to noon, 2 p.m. to 6 p.m.; closed on Sundays and holidays; to report once on Sundays and holidays) VIL; GERALDTON (6 a.m. to 8 p.m.), VIN; HOBART (6 a.m. to 8 p.m.), VIH; KING ISLAND (9 a.m. to noon, 2 p.m. to 6 p.m.; closed on Sundays and holidays; to report once on Sundays and holidays), VZE; MELBOURNE, VIM; PERTH, VIP; ROCKHAMPTON (6 a.m. to 8 p.m.), VIR; SYDNEY, VIS; TOWNSVILLE, VIT; THURSDAY ISLAND, VII; WYNDHAM (9 a.m. to 6 p.m., Monday to Saturday; closed on Sunday), VIW.

WESTERN PACIFIC ISLANDS.

EITAPE (6 a.m. to 7 a.m.), VZX; KIETA (9 a.m. to 10 a.m.), VIU; MANUS (1 p.m. to 2 p.m.), VZO; MOROBE (5 p.m. to 8 p.m.), VZK; MADANG (6 a.m. to 7 a.m., 9 a.m. to 10 a.m., 1 p.m. to 11 p.m.), VIV; KAEWIENG (6 a.m. to 6 p.m.), VZR; NAURU, VKT; MORESBY (7 a.m. to 7 p.m., Monday to Saturday; to report on Sunday), VIG; RABAUL, VJZ; SAMARAI (9 a.m. to noon, 2 p.m. to 6 p.m.; closed on Sundays and holidays; to report on Sundays and holidays), VIJ; WOODLARK ISLAND (temporarily closed), VIF.

Nauru Radio looks out for ships on 600 metres wave-length, especially from:—

10.30 to 11.0 a.m., 2.45 to 3.15 p.m., 4.0 to 4.30 p.m.

NEW ZEALAND.

AUCKLAND, VLD; AWANUI (8 a.m. to 1 a.m.), VLA; AWARUA (6.30 p.m. to midnight), VLB; CHATHAM ISLANDS (4 p.m. to midnight), VLC; WELLINGTON, VLW.

Awanui Radio works with Apia Radio on 2,000 Metres between 10-10.45 a.m., 1.15 p.m. to 2 p.m., 6.15 p.m. to 7.45 p.m. (winter months 5.30 p.m. to 7 p.m.), and 10.15 p.m. to 10.45 p.m. New Zealand Time. The finishing time depends upon the volume of traffic to be handled.

COOK ISLAND.

RAROTONGA (6 p.m. to 2 a.m.), VMR.

SAMOA.

APIA, VMG.

TONGA.

NUKUALOFA (10 a.m. to 3 p.m.), VSB.

FIJI.

SUVA (Monday to Friday, 9 a.m. to 1 p.m., 2 p.m. to 3 p.m., 7 p.m. to midnight; Saturday, 9 a.m. to 1 p.m., 7 p.m. to midnight; Sundays and holidays, 8 a.m. to 8.30 a.m., 7 p.m. to midnight), VPD.

All watches kept on local Mean Time.

Starting from next issue, the "Wireless Weekly" will publish from week to week lists of calls of vessels and land stations under control of the Commonwealth; also other ship stations that are likely to be heard here. If these lists are kept by the amateur, they will make a complete and valuable work of reference. Additions and corrections will also be published from time to time.

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What do you want to know?

Every reasonable specific query in the field of general wireless addressed to the Information Department will receive a prompt reply.

While lengthy replies cannot be given to complicated questions involving extensive research or computations, this department aims to be of maximum service in supplying information as to what books or other sources may contain answers to these questions.

A stamped addressed envelope must accompany each question, but the writer's name will not be published if he so requests.

Address the Information Editor, "Wireless Weekly," Box 378, G.P.O., Sydney.

MUSIC IN THE AIR.

Our leading experimenter (Mr. Chas. Maclurcan) is back at his Strathfield home after a spell at Kosciusko, and once more there is music in the ether over the south-eastern portion of the continent.

On Sunday night he resumed his transmission testing, and there were numerous amateurs upon the 1,400-metre wave length to catch the music and speech. The telephony, as usual, was excellent, modulation good, and speech as clear as the tones of a bell. Experimenters spread over a very great area reported good reception.

Mr. Maclurcan will be transmitting again on Sunday night.

INDEFINITE.

Amateurs all over New South Wales are sorry that Amalgamated Wireless, Ltd., have ceased broadcasting their excellent concerts.

Some weeks ago it was stated that the company was moving the radiophone apparatus to a new aerial at the Knox Street premises, and the concerts, which had grown to be greatly appreciated, were discontinued on that account.

It is now said that the resumption of the entertainments is indefinite.

PLEASING RUMOUR.

A persistent rumour is now circulating among amateurs that a couple of commercial concerns are seeking permission to broadcast music and speech from Sydney.

Nothing definite on this subject can be obtained, but it certainly appears that there is "something in it." Of course, with amateur radio making the strides it is, the logical conclusion is plenty of broadcasting.

Let us hope that Rumour is not a lying jade on this occasion.

Published by W. J. Maclardy, "Truro," Powell Street, Neutral Bay, at the Offices of W. M. Maclardy, 249 Castlereagh Street, Sydney.

SALE & EXCHANGE COLUMN.

Three Lines (approximately 15 Words), may be inserted in this Column for 9d.

Extra Lines or part thereof, at 6d per line.

FOR SALE—Crystal Set, Loose Couple, Detector and Phone Condenser. Primmer and Lockley, Gordon Road, Gordon.

ONE Tresco Coupler, 20,000 metres, brings in American stations in one valve. Address above.

FOR SALE—4 Volt, 4 Amp. Generator; in good order; £1. W. Martin, 4 Childs' Street, Lidcombe.

FOR SALE—Loading Coils (plug type); 600 to 2000 metres. Sandcliff, Macpherson Street, Manly.