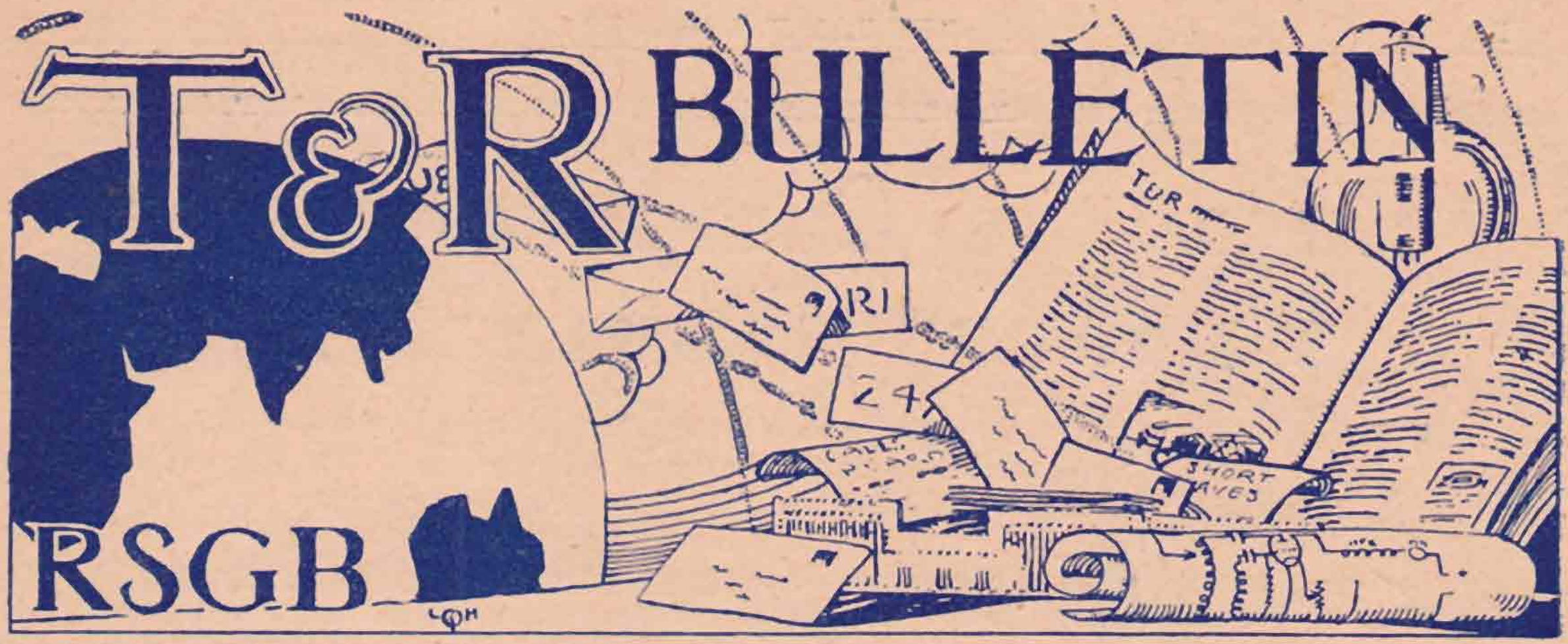
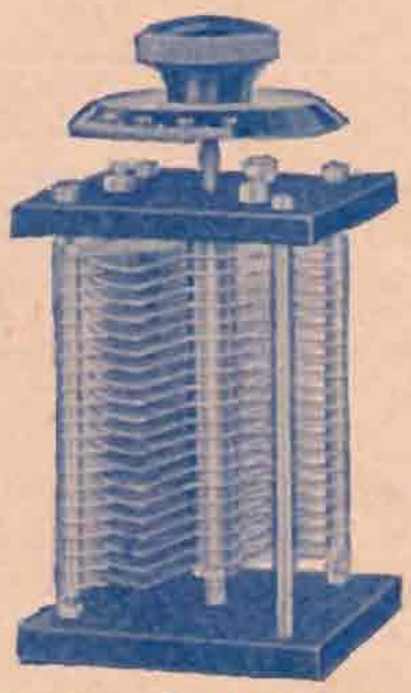



*See Article on Hertz Aerials—page 6.*

No. 4. November, 1925. Price 1/-

# Burndept Components for Amateur Transmitters

THE Burndept range of components for amateur transmitters is fully described in Section V. of the Burndept Catalogue, which will be sent free to readers of the *T. & R. Bulletin*. Particulars are given of variable condensers, keys and microphones, modulation transformers andchokes,high tension transformers and condensers, measuring instruments, etc. The Burndept C.W. and Telephone Transmitter for 100-200 metres is also described and illustrated.



*A Burndept Transmitting Condenser.*

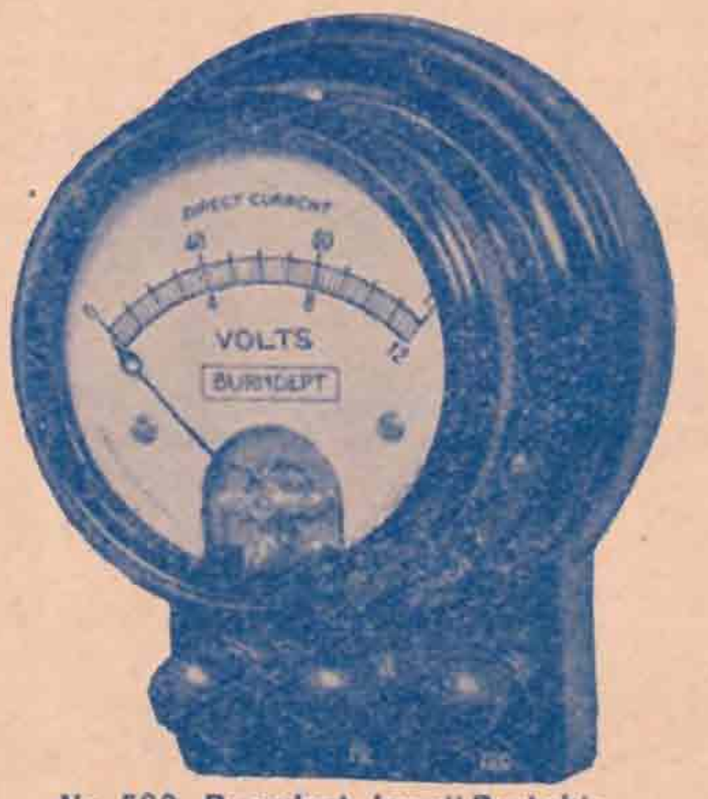
Burndept Transmitting Condensers are designed for use on wave-lengths between 100 and 200 metres. Their special features are : very high insulation resistance ; ample clearances, securing high breakdown voltages ; extremely low dielectric losses (of the power applied approximately .05% only is lost) : and patented self-centring bearings, ensuring perfect contact and constant tension. There are three types : No. 648 for 100-130 metre circuits, capacity .00015 mfds., guaranteed to stand a peak voltage of 3,000, at full capacity carries 6 amperes at 130 metres ; No. 649, for 150-250 metre circuits, capacity .0003 mfds., peak voltage 3,000, at full capacity carries 8 amperes at 200 metres ; and No. 650, for use as an aerial series condenser, capacity .00045 mfds., peak voltage 2,000, at full capacity carries 8 amperes at 200 metres. Publication No. 60, giving detailed particulars, will be sent free on request.

**BURNDEPT TRANSMITTING CONDENSERS.**

*FOR PANEL MOUNTING.*

**No. 648, .00015 mfds., 4½ ins. long - 38/-**
**No. 649, .0003 mfds., 6¼ ins. long - 42/-**
**No. 650, .00045 mfds., 6¼ ins. long - 42/-**

The measuring instruments described in the Transmitting Section of the Burndept Catalogue will interest every amateur who wishes to equip his apparatus with proper and dependable instruments which will enable him to tell exactly what he is doing, to avoid overloading and destroying valves, to detect faults, and to repeat previous adjustments with precision. Guesswork is the cause of poor results and unnecessary expense, and the use of proper measuring instruments helps one to get good results. A useful Burndept-Jewell instrument, a special portable voltmeter, is shown in this column. It has two ranges, 0-12 and 0-120 volts, and is most valuable for testing accumulators and high tension batteries, as it gives really accurate readings. This instrument is of the moving coil type.




**No. 590. Burndept-Jewell Portable Voltmeter 0-12 & 0-120 volts. 63/-**

# T. & R. Bulletin

*Devoted to the Interests of the Transmitting Amateur*

— The Official Organ of —

THE TRANSMITTER AND RELAY SECTION

of

THE RADIO SOCIETY OF GREAT BRITAIN,
53, Victoria Street, S.W.1



BANKERS:
Messrs. Lloyd's Bank, Ltd., 6, Pall Mall, S.W.1

*The EDITOR will be glad to receive articles and illustrations within the scope of the BULLETIN. The illustrations should preferably be double size and should be original. Contributions should be addressed to* 53, *Victoria Street, S.W.*1., *and marked EDITORIAL, ADVERTISEMENTS, Etc.*

## SUBSCRIPTION RATES

*The T. & R. BULLETIN IS SENT POST FREE TO ALL T. & R. MEMBERS.*

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# T. & R. BULLETIN

*The only British Wireless Journal Written and Published by Amateurs*

NOVEMBER, 1925. No. 4.

## Notices.

WITH the commencement of the 1925-26 session, which we hope will prove a record as far as DX goes, I should like to call attention to the fact that considerable concessions have been granted on trans-oceanic licences for October 15 to April 15, 1926, by the Postmaster-General to British transmitters, and I hope that you all realise that this is the outcome of persistent and energetic work of your Committee, who are untiring in their efforts to secure ideal conditions.

It is, therefore, hoped that you will all play the game and adhere strictly in every respect to the terms of your licences, as it is in this way alone that we hope to maintain the present state, and gain further concessions when and where required.

The P.M.G. specially requests us to co-operate with him and endeavour to keep the ether clear, and it is up to every member to do his bit, and report to us any breaches he may observe.

Your Committee have felt some uneasiness owing to the ever-increasing hours of broadcast programmes, and with the object in view of getting a definite statement from the P.M.G. with regard to this, we approached him and we reproduce his reply, which I am sure you will all read with satisfaction.

All members are specially requested to make sure that their wavemeters are accurately calibrated, so there may be no possible chance of transmitting on illegal wavelengths.

Also, please remember that we are in urgent need of funds to carry on the Section and T. & R. BULLETIN. Please, therefore, send in all your subscriptions at once so that we may not be interrupted in carrying on now that we have made such a good start.

The dates upon which the room at the Institution of Electrical Engineers has been booked for our informal meetings are as under, and you will notice that several dates are vacant, so far as lectures are concerned. Kindly send your names in with the subject you wish to talk on without delay.

November 20.—Mr. Gerald E. Minvalla, "Distortionless Reproduction."
December 18.—Mr. Kenneth Alford, "Power Super-Heterodynes."
January 8.—Mr. Blake, "Ionisation of the Atmosphere."

| | |
|---|---|
| January 29.—Vacant. | February 19.—Vacant. |
| March 19.—Vacant. | April 16.—Vacant. |
| May 7.—Vacant. | May 28.—Vacant. |
| June 11.—Vacant. | June 25.—Vacant. |

Offers for giving teas on these dates will be welcome.

Remember that "Unity is Strength," get all your friends to rally round and join the T. & R. Section. Let us have 1,000 members before Christmas.

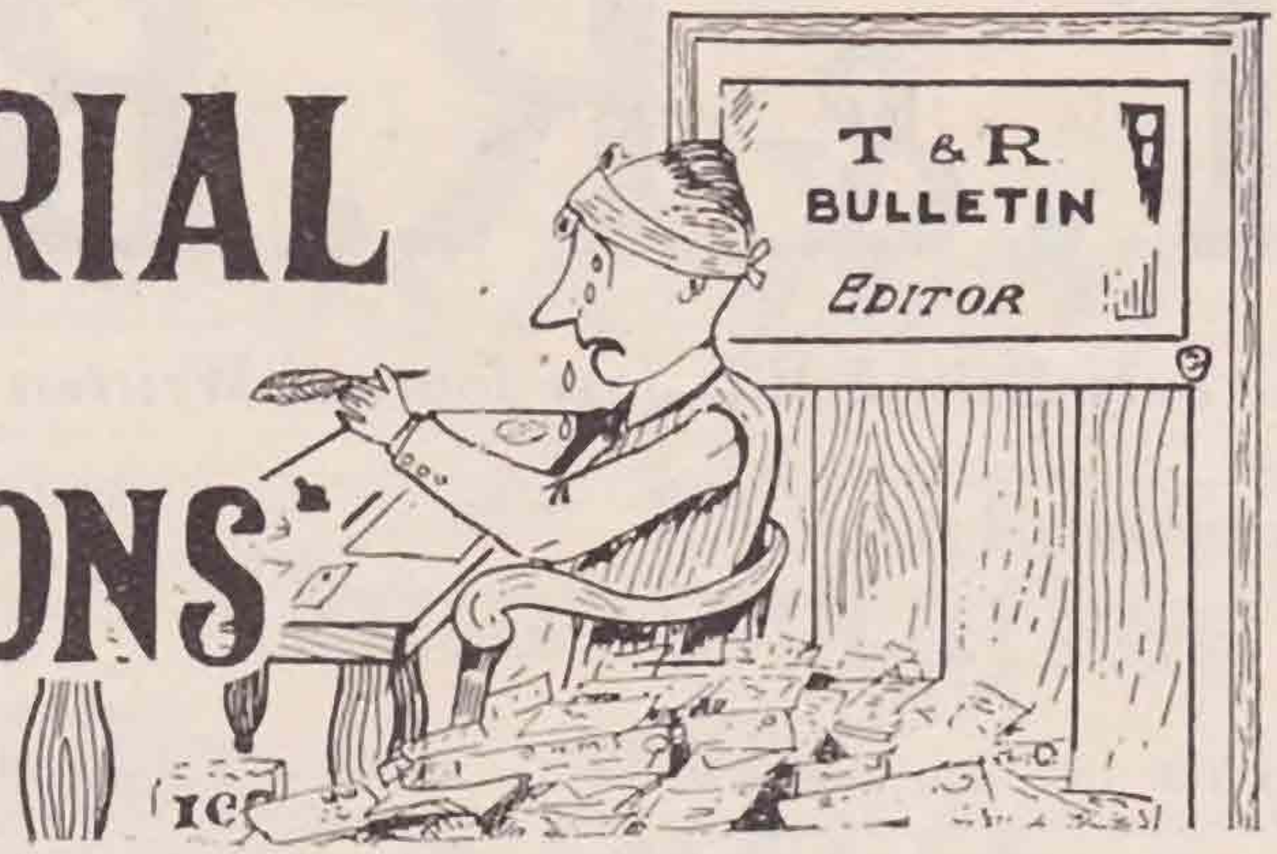
Whereas nearly every country in the world has been linked in the past with Great Britain by amateur radio, there still remains Japan, and the T. & R. Section offer a prize to the first amateur who successfully establishes communication (two-way) with a Japanese amateur.

All those members who have not yet communicated with New Zealand or Australia need not be afraid of trying on 10 watts—such communication is quite possible on a good morning, so don't be afraid of getting out of bed at 0630 and calling NZ's or A's on 45 metres. They will reply on 35-38 metres if they hear you. Two-way communication has been established by G5SI and Z2AE on 14 watts. Now then, who can beat this record?

THE SECRETARY.

*The letter referred to above is reproduced on page 17.*

# EDITORIAL EMISSIONS




OUR position with the Post Office authorities is now of a far more satisfactory nature than it has been for a long time past. Thanks to the diplomacy and untiring energy of Mr. Marcuse, we have gained concessions which we never expected. For these things we are all exceedingly grateful. As a direct result we have entered into a pact with the powers that be that we shall do everything possible to keep the ether "tidy" and useable, and that the terms of our various permits shall be strictly observed by all members at all times. Needless to say that our promise was made on behalf of many members who we know only by name, but it is confidently anticipated that nobody will let us down, and we ask all and sundry to observe ether etiquette and regulations and, above all, keep to your wavelengths.

**A Word in Your Ear.**

The BULLETIN is slowly expanding itself. If you have not already noticed this, please compare it with Nos. 1 and 2. Look through the advertisers' announcements very carefully, and, whilst you are doing so, please remember that they are paying for your BULLETIN. They are doing this in the hope that T. & R. members will be loyal to the Section and buy only from those who support them. We trust that they will not be disappointed. It is not playing the game to buy from anybody but a T. & R. advertiser. Without them there would be no BULLETIN, without the BULLETIN we should be deprived of a valuable asset. See to it that you do your bit; the goods are guaranteed and the prices are right. We are doing our bit—please do yours.

**Why?**

We have asked for members to write to us on sundry matters, but it must be confessed that results are not quite what we expected. Post Office complaints, the style and lay-out of the BULLETIN, and other things we are anxious to hear about, but you do not seem to be able to sit for a few moments and write us that solitary postcard or letter for which we ask. If you are mute or so stricken with paralysis or sleepy sickness that you are unable to honour us with just a few words, how are we to know of your difficulties, dislikes, and the rest of it? Please do give us just a little encouragement by showing at least your interest in the BULLETIN. We ask for nothing more but this.

**What is the Matter with John Bull?**

Amateur enthusiasm is not what it should be. The transmitter should be the leading light in wireless in England, just the same as he is elsewhere. Many seem to suffer from acute inertia. They have not the feeling advertised by a well-known brand of health salts. Why is it? Cannot they shake off that dull lethargic condition into which they have sunk? There are still over 800 transmitters who seem to exist in name only. They are outside the pale of real experimental work, for no research can be carried through without co-operation. Shake yourselves up you fellows who want to do something; bring some of these 800 into the Section. By so doing you will help us and yourselves. We simply must move forward now; to be stationary is the way to failure. Put your weight into it and let the G's show what they can do.

**A Pleasant Surprise!**

And now having had a thorough good grumble, let us all be friends. We have some nice things in store for you and these will come along in due course. This month, however, we hope to send to all members of the T. & R. who have paid their subscriptions (I'm nearly grumbling again!) an illuminated certificate of membership. It will look nice when framed and hung in that blank space in the den. Please push along your subscription and secure your certificate. I have purposely kept this until last. It is the *piece de resistance* of my notes, and I think that it will be sought after. Please prove that my judgment is not wrong.

## Gems from a Letter Bag.

5QV.—It has been said that amateurs show a lack of co-operation. Prominent stations, however, do find difficulty in complying with all requests at times. This station replies to all cards, but here are two "non-plussers" from recent post:—

A card from Yorkshire:—

"Hrd u wkg—and—stns OM. Crds enclosed for them. QRA? Please fowd and QSL."

No stamps on cards. Well, really. . . Certainly (?) Greatest pleasure!

Master writes:—"You must be hot stuff reception with your Rheinhartz. Sent mine away three times . . . cannot hear anything yet. Will you do it for me?"

(Sorry OM. Not a blacksmith's shop.)

# A Plea for Neatness.

By S. R. Wright, A.M.I.R.E. (2DR).

ALMOST any visitor to a ham station, who has even a small bump of observance, must have noticed that in many stations neatness is conspicuous by its absence.

The writer does not claim exemption from a beastly mess in his station at times, but it has to be borne patiently during the annual reconstruction or occasionally at other times as well.

There is no excuse, however, for a permanent upheaval, and no person, however strong willed he may be, can work and produce good work when surrounded by a motley collection of valves, batteries, tools, spare bits and the like.

Many hams will disagree with the writer when he states a really neat transmitter can be simultaneously efficient.

This is because the most unpromising "lash-up" often provides remarkable results. This is undoubtedly true in many cases, but that is no proof that such transmitters are always the best, and that in attaining neatness efficiency must be sacrificed.

In view of the recent sweeping success of the British amateur, far be it from me to talk of the Americans. Nevertheless, one cannot help admiring their very neat transmitters illustrated from time to time in QST, whilst the results obtained from them leave no doubt as to their efficiency.

It is equally easy to plan the panel or base board to suit the individual needs of the piece of apparatus under construction, and, at the same time, make the finished appearance neat and orderly. One does not get on the air as quickly, but the resulting effect on both the visitor and operator is beneficial, and conducive to good work.

This same argument applies to experimental work. If a ham possesses a room given over entirely to radio, it is possible to have a transmitting bench proper, and also an experimental bench. The former houses the regular transmitter and other necessary apparatus, whilst any experimental work, testing new circuits or apparatus is done on the latter.

If such a plan is practicable, and is followed, it will be found that things go very much more smoothly than in the case of the slap-dash method adopted by some.

Serious work is impossible on a crowded bench or table, for the confusion on the bench causes a similar state of affairs in the worker's mind.

This may sound very peculiar to those sceptically inclined, but if they were to visit the laboratories of famous people in the world of radio research, they would find what might appear a mess but which was in reality an orderly mess. This is a very different thing.

To sceptics one can only say: "Have a good clearing up, and notice the difference with an unbiased mind."

One thing is certain, that considerable numbers of amateur workers do not achieve the results from their experiments to which they are entitled by reason of their patience and tenacity, simply because of a lack of system, and system is the foundation stone of success.

# Southern Notes.

Prepared by 2LZ.

SEPTEMBER has been a good month for DX work. The Australians and New Zealanders have been coming through as well as ever. Towards the end of the month there has been greater difficulty in maintaining communication in the mornings, due to the amount of QRN they are getting out there as their summer approaches. The best time to work the Australians now is during the evening. Their signals come through well and there is practically no QRN this end, and very little their end, as it is in the mornings with them and the static has faded out when conditions are good for QSO. There has been very little doing with the Americans in the mornings, although they start coming through most evenings about 8 p.m. Communication with South America is very good at night, but they also are troubled with QRN during our mornings.

Several more British stations have come up on the 45 metre wave, and there has been quite a considerable amount of interference. This will now be reduced, as the Post Office has granted us the use of 44 to 46 metres.

One more country has been "conquered." 2LZ has been in two-way QSO with O-A4Z at Capetown, South Africa. About all that remains now is China and Japan. Who will be the first to establish communication with these countries?

All will be sorry to hear that our old friend I-DH at Mosul has closed down for good. The station has been dismantled, as the operator there has been drafted to Egypt. However, there is every possibility that Sergt. Hall will come up again when he gets to Egypt. His new call will be I-DJ.

### DX Reports.

2NM has been very active on telephony work. On several mornings he has worked with a new station, 7JB, in Tasmania. His speech has been received perfectly out there, and so it ought to be with about six 250 watters as modulators. He tells me his filament consumption is 50 amps.

7EC (Denmark) has worked Brazil I-AB and several Americans, also has been heard in Johannesburg, South Africa.

6RM reports 51 two-way QSO's, only three of which are in Europe. The rest being U.S.A., Porto Rico, Brazil, Chile, Australia, and New Zealand. He has carried out several interesting tests with NKF.

6TM has worked numerous Americans, and Ch-2LD, Zs 1AO, 1AX, 2AC, 2AE, 2XA, 4AA, 4AR, 4AS, As 2CM, 3BQ.

6LJ has worked Zs 2AC, 4AR and Bz IAB. He reports hearing U-6CGW and 7OB, and has been heard by U-6CTO. He stated he is now building "the world's best receiver," so we must look out for some DX records. (We shall be pleased to hear all about this wonderful receiver.)

2SZ has been very active: he has worked Zs 1AO, 1AX, 2AC, 2AE, 2XA, 4AA, 4AK, 4AG, 4AL, 4AR, 4AS. As 2TM, 2YI, 3BD, 3BQ, 3LM, also five South Americans and Mex-IB, WAP, WNP, NRRL. He has been heard by four American sixth district stations. He has also worked two Americans on telephony.

(*Concluded on page* 11)

# The Hertz Aerial on the Short Waves.

By C. W. Goyder, G2SZ.

IT is surprising that this type of aerial has not attracted the attention of the amateur, when one considers the number of commercial stations which use it and its many advantages. An article on this subject appeared in QST of July this year.

Last month the writer spent several weeks experimenting with various types of this aerial. Perhaps the greatest advantage is that no counterpoise or earth is necessary. This alone ought to make it popular for the many amateurs living in flats or in the many houses where wires all over the garden are not welcomed.

Secondly, coupling the aerial to the set is very simple, no third harmonics, series or parallel condensers, or tuned circuits are needed.

The length of the lead-in makes no material difference to the efficiency. Put the aerial where it is not screened, not where the lead-in is short and the aerial is screened; which is often done to keep the lead-in short.

Again, the aerial swinging makes less difference to the wave than when any ordinary circuit is used. In fact, it has been found unnecessary to use a M.O. for morse transmission.

The aerial itself is a single wire (preferably single strand enamel) 22½ metres in length. This is fed from a radio frequency feeder, which may be connected on to the aerial at any convenient spot. A quarter way along seems a very good place. A wire 22½ metres long, when fed at 45 metres wave-length, will oscillate as shown in Figure 1. An ordinary aerial and counterpoise oscillates in a similar manner. It is therefore evident that both systems are the same, but in the Hertz aerial one half acts as the aerial, the other half as counterpoise.

As the writer in QST says, the losses must be very low, "for the lead-in losses are very low; losses from surrounding trees, buildings, etc., are reduced to a minimum because the *entire radiating system* can be raised above them, and, also, there are practically no ground currents."

To feed the aerial, the circuit you are now using will do. The Hartley, Colpitts, strait circuit and M.O. all give similar results.

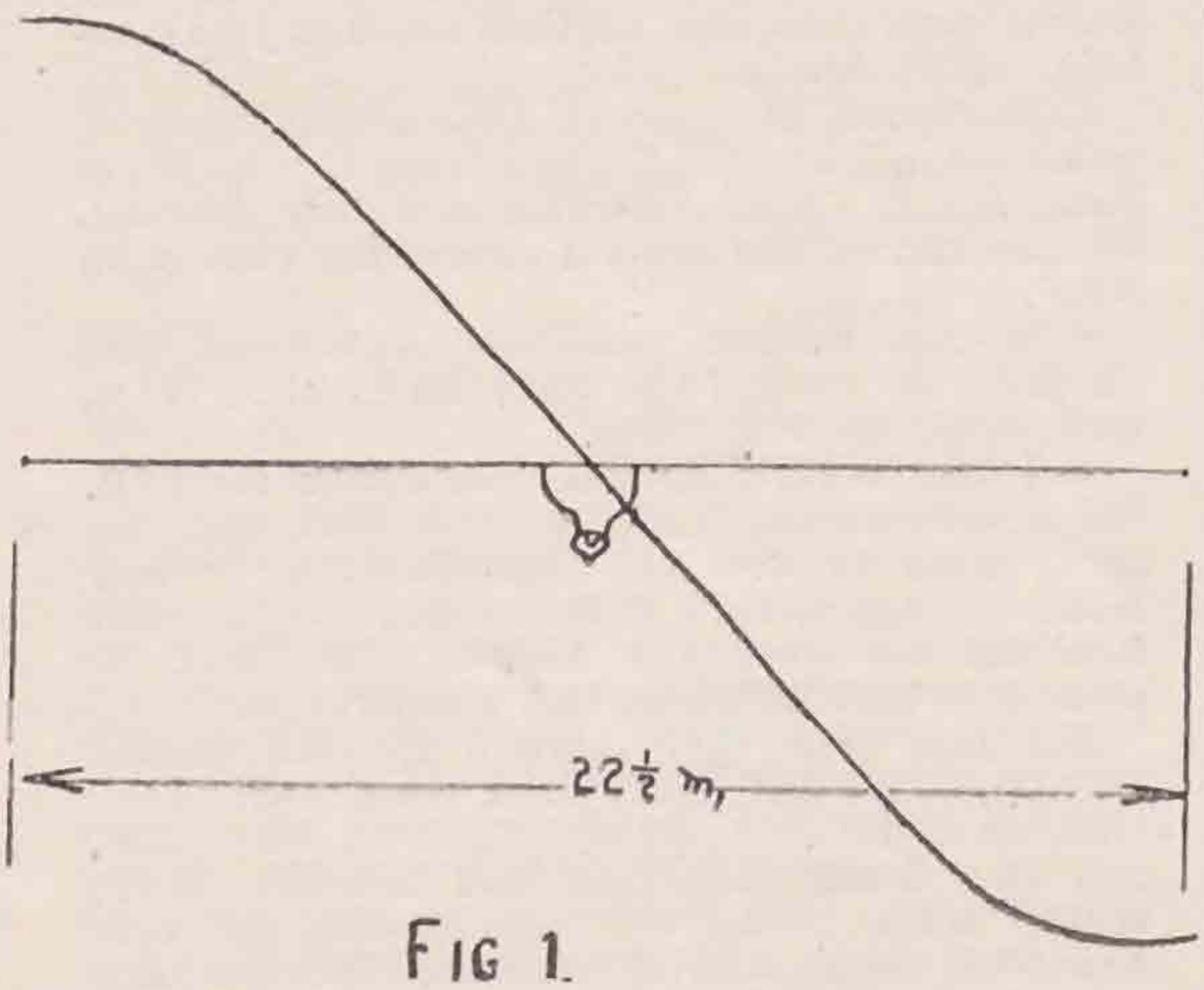



FIG 1.

One side of the nodal point may be considered as the aerial, the other as counterpoise.

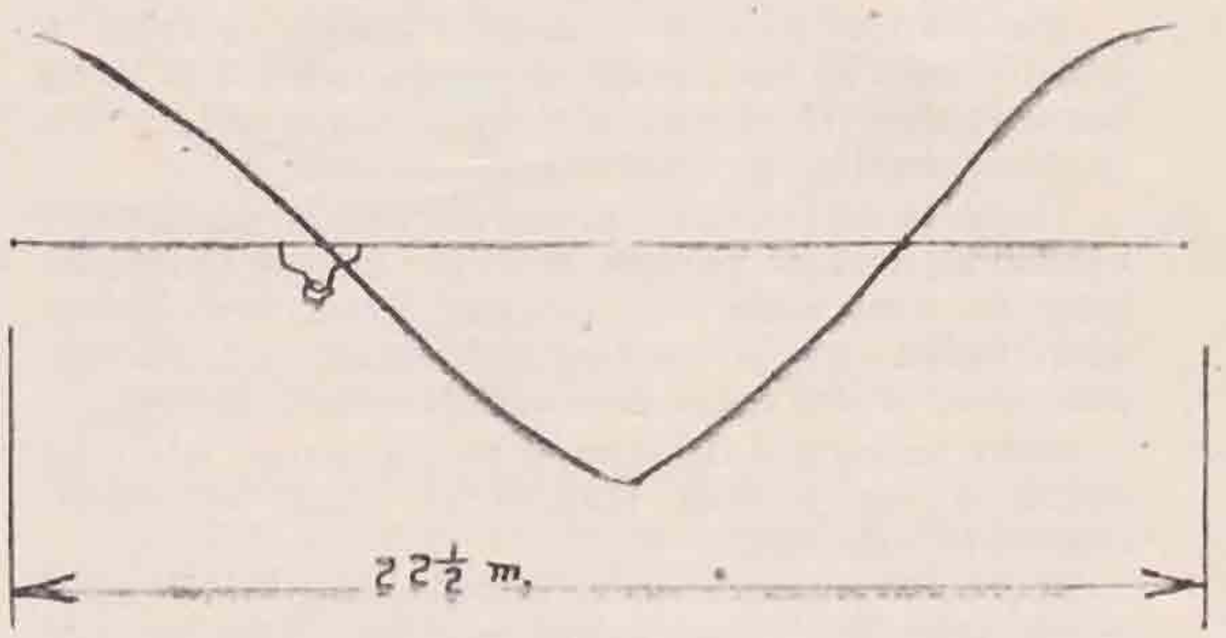



FIG 2.

For 23 metres there should be a bulb placed a quarter way from the end of the aerial, as shown.

The general method of feeding the aerial is to tap the feeder on as many turns above the earth, or lowest potential, side of the plate inductance, as gives the best radiation. An even simpler way was found. Just clip the aerial feeder on the aerial coupling coil of your inductance, and vary the coil for maximum radiation. This is the simplest thing you could possibly want. As the aerial is in resonance with the transmitter, it will absorb energy through the coil and feeder.

There is one thing to look out for—if the length of the feeder wire happens to tune to the working wave, or a harmonic, it will radiate on its own and disturb the whole system. The remedy is to measure the length of your lead-in, and if its W.L. is near the working wave, or a harmonic, put a series condenser into it. Also, if your aerial, 22½ metres long, is near any large object, the mutual capacity will load it up, so that you will find that the aerial oscillates at, say, 46 metres, instead of at 45. The obvious remedy is to cut off a few inches of wire.

I have forgotten to mention how to determine when the aerial is oscillating correctly. This is one of the novel features of this aerial. Referring to Figure 1, it is seen that there is a node at the centre. If, now, a tap is taken three inches on both sides of this point, there will be a considerable voltage drop. Connect an ordinary flashlight bulb across these two points and it will light up. When the bulb is at its brightest you will know the nodal point is at the centre, as it should be. If the wave-length is wrong, add, or cut a bit off, the aerial till it is right. If you take a piece off one end of the aerial only, do not forget to shift the bulb to keep it in the centre. The bulb lights up when you key, and is suspended up in the sky, so if you do not want policemen calling at unearthly hours in the night, inquiring what the light in the sky is, or people asking whether Mars is signalling, or whether you are trying to send light waves to Australia, *shade your bulb.*

As a matter of fact, when you have once got used to the set, it is no longer necessary to have the bulb (and a stiff neck), as, by noting the ammeter reading when the bulb is at its brightest, you can always adjust the set to this point, but do not use the ammeter only, as it will record a large current when the feeder is radiating on its own, as it should not do. Also, the ammeter current is *not* an indication of radiated power, even less than when using an ordinary aerial, for the meter may be read from Zero up, depending on how the feeder is oscillating at the point you place the meter.

Fortunately, our second licensed wave, 23 metres, is very nearly half of 45, and, therefore, if the aerial is fed at 22½ metres, it will work just as well, only it will have a full wave on it (Figure 2), instead of a half wave. If you work it at 23 metres instead of 22½, I do not believe the loss will be more than 5 per cent.

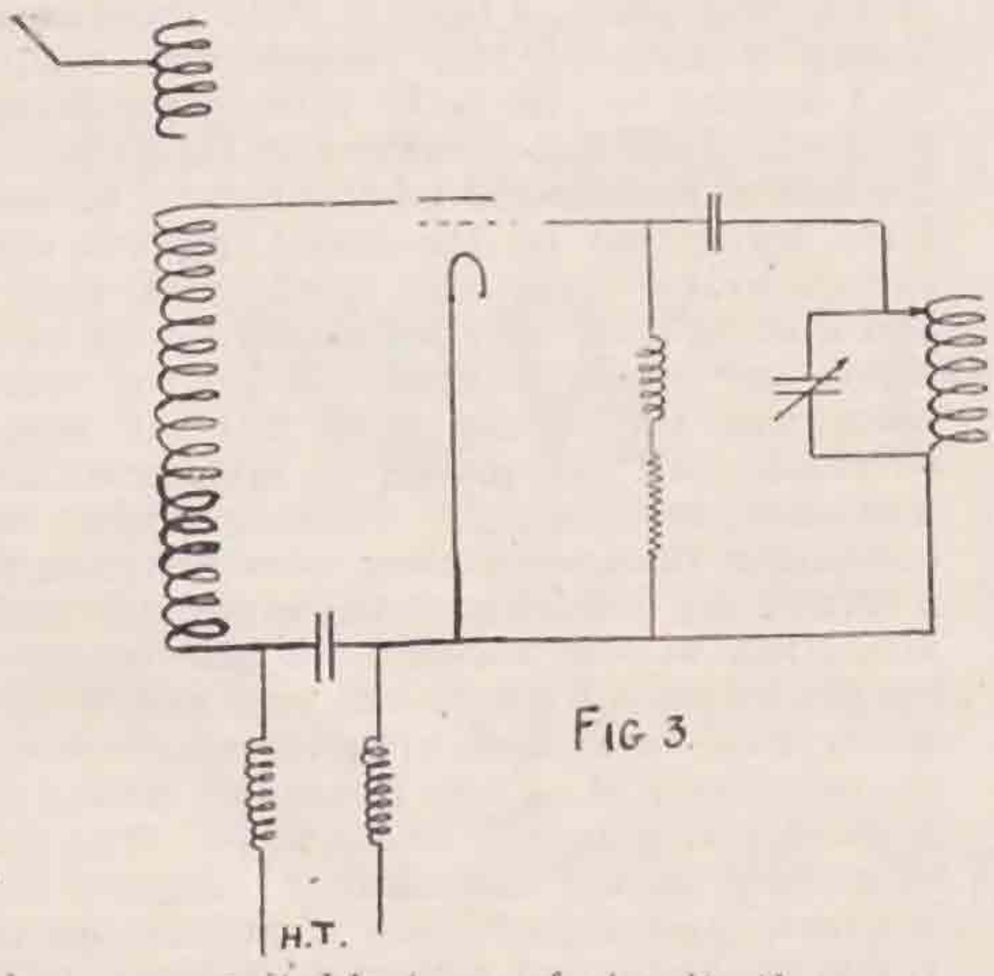



FIG 3.

This is a very suitable type of circuit, the constants and working conditions of which may be obtained from the article by Mr. Royle, 2WJ, in the first issue of this BULLETIN. The coupling coil should consist of about six turns. The position of the feeder tap makes no difference. This circuit is very useful to amateurs using a master oscillator, and it is only necessary to shift the tap to the grid coil to the drive circuit of the M.O. to change over.

With regard to results—I have worked the Macmillan Expedition five times, sending words only once on all occasions, as they said signals were so strong (R8); and the usual American, South American, New Zealand and Australian Stations, besides being heard by two people in South Africa and one in Russian Turkestan.

On the whole, I find the efficiency slightly better than a single wire, but in my case, as with Mr. Marcuse (2NM), who is also using this type of aerial, we are in a good position, not screened, so the advantages of lifting aerial and counterpoise up in the air were not felt; but Mr. Butement (6TM), who is in a difficult position, and is screened, has just fitted up a Hertz aerial, and finds it a great improvement. But whether it is an improvement or not, the simplicity of coupling and absence of counterpoise and earth ought to make it worth while trying.

**Have you been specialising? Write us an article on it.**

# Belgian Amateur Transmitters.

BELGIAN amateurs are at present working without the consent of the Government and are unlicensed. Some of the leading lights are P2 (the General Manager, Reseau Belge), K2, T2, and B7. Other stations which are "on the air" are P7, R2, E2, G6, D2, Q2, etc. B7 is Q.S.O. at 4XA, 4AG, 2AC, with only 80 watts input. The Belgian membership of the I.A.R.U. amounts to 250 members. An invaluable station to them (and possibly to ourselves) is B9, the Brussels University station, which, with 250 watts to 5 kilowatts, gives out calibration waves on 5, 10, 20, and 40 metres with a maximum error of .5 centimetres. These transmissions take place on Sunday mornings in the form of dashes, and we hope to give our readers full details as to the time of the transmissions, etc., in our next issue.

# Designing H.F. Coils.

IT is well known that at the high frequencies used in short wave transmission the "skin effect" is very marked, and for this reason copper strip is frequently used for winding inductances. This has a greater surface for a given cross-sectional area than a conductor of circular section. It should be pointed out, however, in view of illustrations that have appeared in the press, that the advantage of strip is only obtained when the coil is wound with the strip on the flat, and that if it is wound edgewise the H.F. resistance is greater than wire of the same section, and, further, both the eddy current losses and the distributed capacity are higher. This type of coil is, therefore, the very worst that could be used. If the strip is wound on the flat, however, the H.F. resistance due to copper losses is a minimum, and so is the self-capacity.

Thus, a small detail in the method of winding makes all the difference in the efficiency of the station.

MARCUS G. SCROGGIE, B.Sc., 5JX.

# Swedish SMZV.

This station, operated by Dr. Nilsson, Professor at the University of Lund, Sweden, has been carrying out low power tests with remarkable success.

Using a French R valve and an input of 0.7 watts, Dr. Nilsson has worked with many British stations, and had excellent reports of reception.

Considering the distance is approximately 1,000 miles, it is certainly astounding that signals can travel this distance even on 45 metres, and be R5 in London on O-V-I.

S. R. W.

# A £7 Hint.

By 6TM.

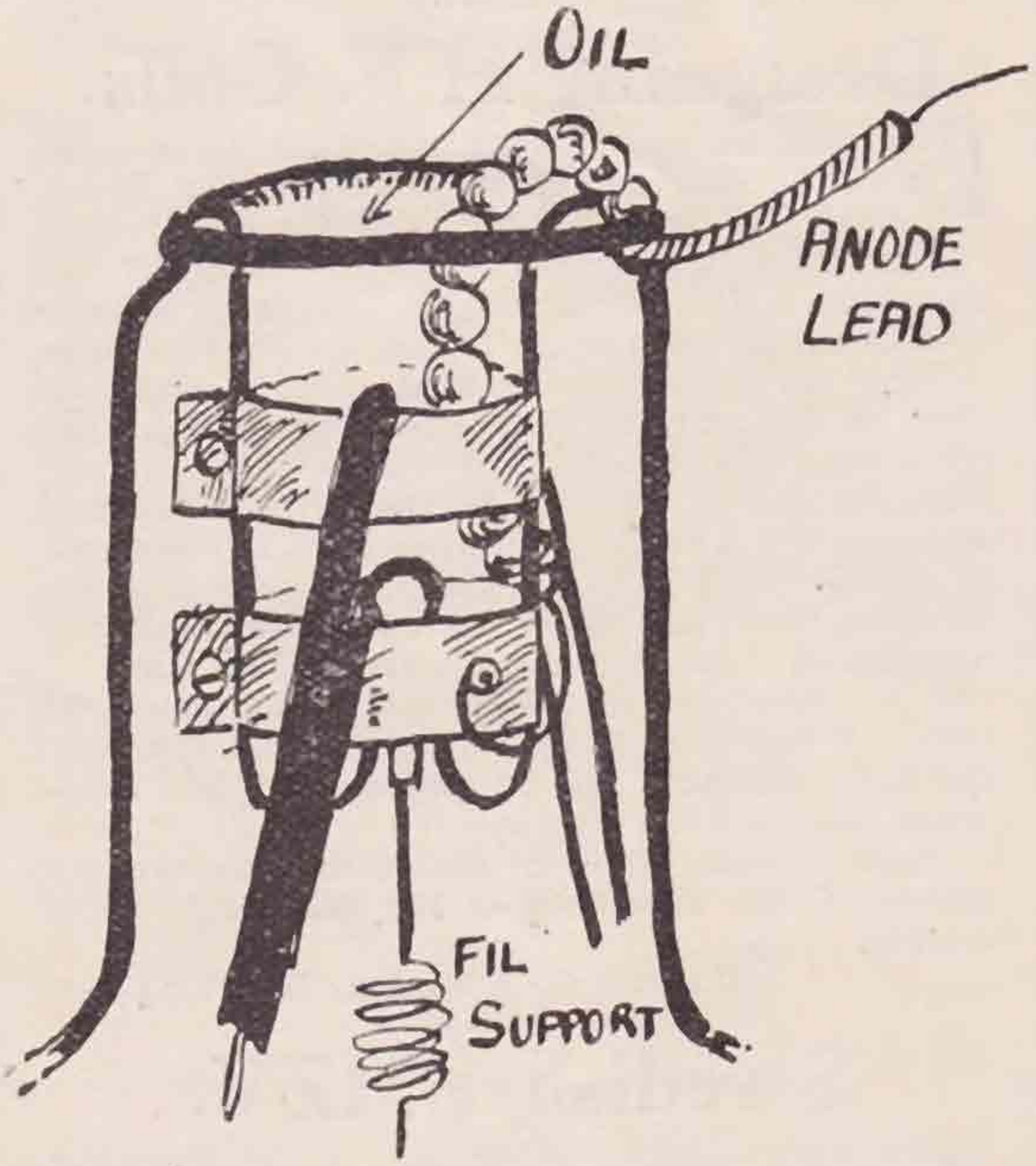
A GOOD many of us use valves designed as shown in the sketch reproduced. Most of the Marconi types are made in this manner. When a valve of this type is oscillating at the high frequencies most of us use, the strain set up across the small glass tubes supporting the filament, due to their being in the shortest path between the anode lead and supports, and the metal supporting the filament causes local heating, which, if allowed to continue, will melt this glass and cause the valve to be blown in by the atmospheric pressure.

This heating, due to dielectric losses, and perhaps due to the conduction afforded by the thin film of metal deposited on the glass during bombardment, is quite sufficient to destroy the valve. 2VW, I believe, lost two 100 watters this way, and I lost two 250 watters, so it is a real danger.

Luckily, however, a very simple dodge can obviate this trouble entirely. Mount the valve vertically and with the anode lead at the top, and fill the well completely with condenser oil.

This should remove all danger of the valve sucking in the air when heated locally.

Before closing om don't forget that the oil is in the well when next you shift the valve!




## Esperanto.

The question of giving members of the T. & R. Section facilities to take classes in Experanto recently came before the Committee of the Section. It was decided to ask, through the medium of the BULLETIN, whether members desire a meeting to be held in order to discuss this matter. Such a meeting would, of course, take place on one of our informal evenings. Postcards, please, to the Secretary.

# That Small Generator.

By 6TW

MANY amateurs like myself have the difficulty attached to their transmitters of having to make and store power for the input of their H.T. generator. It is to these that I make a few remarks, for what power we have we must use to the best advantage. And yet my remarks may be of interest to those that are taking their driving power direct from the mains.

The generator I am using at present is one of the Air Board surplus, Mackie, for propeller-driving, delivering 6 volts and 600 volts. I may say that when these generators are purchased one will find six leads, two for L.T., two for H.T. and two for field resistance, and the armature is rather on the stiff side to turn, and unless one does ease the ball-bearing plates somewhat ycu will find that a great deal of power is expended in friction. In the first place, I tried 6 volts input, and when taking 8 amperes the output was really poor. So I decided to give it 12 volts, same being taken from a car type Exide battery,and taking 6 amperes. I can now obtain 350 to 400 output on load, and after trying out on the aerial, reports were that the generator hum and ripple was very heavy, and making itself very prominent on the modulated wave, and in any way I choked it the undesirable noise was there. An item a great many may overlook, as I did myself at first, was that these machines are entirely working under different conditions than what they were designed for. So I turned my attention to the input side and to the alteration of the rocker; in the machine cited the rocker is a fixture, but very easily altered to a movable one. And after altering succeeded, on second setting of rocker, I obtained what I desired: a wonderful difference in all ways. The difference of setting in my case was 15 degrees from the original, and reports are that my harsh com. ripple is absent, but a very desirable hum is there, which greatly helps in distant tuning. Therefore we are doing justice to the machine. Also, the input is not being wasted in heating up the commutator, and we have the absence of the carbon deposit from the com. bars.

I may say, across the H.T. output there is a blocking condenser (ring type), being composed of two units in parallel in my case, one being .247 and the other .265 m.f. capacity. (This latter portion may be of interest to 2OA, for I read in one of our wireless magazines where this gentleman queries the capacity.)

The following remarks refer to a machine taking its input from the mains. The case cited was one of 230 volts input and 600 volts output. It belonged to a fellow experimenter whom I was helping to test out. No matter how this machine was choked, the harsh ripple was unbearable and could not be got away from the modulated wave. So we decided to turn our attention to the machine. The setting of the rockers were marked, and in true as when it left the works.

On movement of the input rocker we found an improvement in the running of the generator, and a difference of 20 degrees of setting from the original made the final setting. Then came the choking and soothing, which was done on the

(*Concluded on page* 11.)

# CELEBRITIES AS SEEN BY A CELEBRITY.


**1. Our energetic and well-known Secretary, "Jerry" Marcuse, as seen by "Billy" Borrett.**

**Southern Notes**—*Continued from page 5.*

5SI is doing good work on low power. He has worked Porto Rico on one-third of a watt and Z-4AK on 11 watts.

6TD has been in communication with seven New Zealanders and several Americans, power 70 watts.

2LZ has worked Zs 1AO, 1AX, 2AC, 2AE, 4AR, As 2IJ, 2LO, 3BD. Us 2BRB, 4IO, 9DWZ, WNP. Bz-1AB, also GB-I, who states he is in the south-east corner of Europe.

I shall be pleased to have reports from more of the low-power stations. The fact that they do not work the Australians and New Zealanders does not matter. Let's hear from you.

**That Small Generator**—*Continued from page 8.*

plus side of the output. The improvement was a little, but not to our satisfaction. So the negative side was tried, and a Ford coil secondary was inserted, and that did it to a wonderful degree.

Then I tested at twelve miles distance. The reception was clear and not the slightest ripple could be detected, and I understand the three-mile reports were the same.

I take it that the reason we could not soothe the generator other than by the insertion of the choke in the negative lead was that the positive side of the mains was already earthed.

(It would be interesting to know the actual facts and effects of the input to generators being earthed.)

The ripple may not really matter on the C.W., but we don't want it along with the modulated wave, and whatever system is in use, whether the set be of perfect construction or poor, it is the H.T. that is required to standard.

Well, I hope this may be of interest, and it may find some OM. in the same state as I was myself. And if it only makes you look at the commutator, you may get a surprise.

You know the old proverb: "One click received in the States is worth two that never left the aerial."

# JUST AN EXPRESSION OF FRIENDSHIP FROM CANADA.

# Hambidexterity.

By 5 YM.

THERE would seem to be an increasing number of OM's who are provided with neither DC nor AC mains at their QRA's. They have to provide the needed power from other sources and, since there is not yet available any means of bottling a lightning flash and letting it out as required as from a soda syphon, those sources are usually a battery, either primary or secondary. To most of us, the price of even a small generating station being prohibitive, to say nothing of the fag of running it, the only alternative to batteries is a hand generator.

The trials and troubles of one so situated may interest and amuse others in a similar predicament. If it does, and if it brings a tear of pity to the eyes of those lordly ones provided with AC, he who writes will have achieved his object.

Many months of sucking the juice from dry batteries of the large cell type convinced me that my spare cash could be better expended than in renewing 300-400 volts every two or three months. Even a 4-watt input seemed to milk said batteries rather more severely than they liked. Relief, after much expenditure of thought and much figuring out of possible generating plants, was sought in a hand generator.

This generator performs well and delivers nearly pure D.C. With an energetic performer at the handle, such as a schoolboy home for the holidays, it will deliver up to 30 watts and ten watts can be got from it with very little exertion.

The only trouble with a hand generator is that it is not always possible to get the help of someone willing to grind out the power. Even the most devoted of OW's may object, at times, to sitting up into the wee, sma' hours, and the children, of course, are safely in bed long before the last belated B.C.L. has packed up his distortion amplifier, and we can get on the air.

But the man who wants to transmit will transmit. He knows that it is more blessed to give than to receive, though he likes to receive a little, particularly QSA's from umpteen hundred miles. Therefore he essays to turn the handle with one hand whilst he keys with the other. This sounds more difficult than it really is. Anyone who has mastered those silly parlour tricks, like rubbing the abdomen with one hand whilst patting the top of the head with the other, will be able to master it.

But there are difficulties. One is the tendency to " turn the mangle " at a frequency more or less in resonance with the frequency of the keying. Thus, if some poor OM who does not like your fist gives you a QRS you are liable to respond with a QRP as well. This is likely to give rise to pointed recriminations, particularly if you are doing DX with an OM who is getting you a bare R3 when you are putting in your full ten watts.

The secret of success with this " Hambidexterity " would seem to lie in making the necessary anode tap, etc., adjustments for best efficiency and in not overloading your valve, or anything like it. The difference in ease of turning between putting eight watts into a ten watt valve and putting ten-watts into a thirty-watt valve is very great. At least it is so in my experience. The back loading resistance also needs more careful adjustment than it does when the generator is motor driven. Careful adjustment will give practically a smooth turn. After that the only difficulty is the before-mentioned one of keeping the speed of revolution independent of the speed of keying and not making too great a difference between the speed of the handle when going down and when coming up. Probably the best thing is to find a speed of keying that matches with a decent input and stick to it. Personally I find that about 12 words per minute go well with a handle speed that delivers eight watts. Therefore I am quite deaf to QRQ's.

There are still excellent hand generators to be obtained ex-WD at a cost of one supply of dry batteries. Even if a new one is bought the cost of a year's supply of dry batteries will cover the outlay. And once the generator is obtained there is a reasonable reserve of power if it is required.

No, I am not in the hand-generator business. Nobody, not even our Editor, will give me anything for writing this. But I may have a very excellent generator for sale one day. When I can afford a real generating plant. Meanwhile I am waiting to hear who is the first Hambidextrous one to be QSO, USA. Why not ?

## Cards for Delivery.

5MO holds cards from abroad and will forward on receipt of application and postage : 5xy, 5ma. 6ah, 6tr, 6re, 2nb, 2xy, 5cw, 5ft, 5ha, 6mp, 5ms, 5ok, 6al, 6kk, 6pg, 6rm, 6jv, 2ii, 5ig, 2vx, 2vo, 2sw, 6gh, 2ne, 2jb, 2in, 2fm, 2dr, 2bh, 2df. We hold cards for 2bao, 1irt, 6rm. Please send postage for delivery.

* * *

5MO would like to get into touch with Mr. E. J, Erith, of Sutton, and Mr. L. N. Blackburne-More, of St. John's Wood, and would like qra's of 2caa and 2ajy.

## X's.

We hope that 2BAD, now 5IL, will soon be on the air again, and many of us look forward to hearing further from him in the near future.

## QRA Section.

We have received many requests from members for a QRA Section. If anybody has any suggestions to make concerning this we shall be pleased to consider them.

## A Tuning Hint.

Try using two variable condensers (or one variable and a variable " fixed " condenser) in series, to tune your short-wave set. Reduce capacity of condenser (1) until the maximum capacity of condenser (2) takes you to, say, 42 metres, and then, considering 30 metres the minimum range, you have the 30-42 metre band *spread over* 180 *degrees* on condenser (2). For 42 metres up, where sharp tuning is not so necessary, increase the capacity of condenser (1) until the maximum wave of number (2) is the wave-length you want. This is a great improvement over the many sets I have seen, which cover the 30-120 metre band with one condenser and some patent vernier, the 30-42 metre band only occupying about 30 *degrees on the scale*—G2SZ.

# More about the Receiver

THIS is an addition to the dope on the receiver on page 2 of the first issue.

The old one-turn aerial coil seems to belong to the longer waves. On 45 metres and below it is better to tap the aerial straight on to the grid coil about a quarter of the number of turns up from the filament connection. This method gives a wonderful increase in signal strength on short waves, and is quite as easy to control as the old method.

The receiver at 6LJ is now raised above the operating table by means of valve boxes. This is done because the set oscillates very much more easily than when it is dumped straight on the table. The receiver is made in bread-board fashion, with the variable condensers mounted in front of the base-board. The coils are four inches above the board, at the back—well out of the way of everything. It was found that fine tuning could be performed by moving the log-bog (Woolworth's manufacture) to and from the condensers. It was then very obvious that the table on which the set was placed was having precisely the same effect. So the table was removed from the field of the condensers by the valve boxes, and whee!—the set was almost howling. It's a wonderful improvement. Try it!

The next point is the elimination of mush. Now mush is a nuisance, and mush will always exist as long as certain commercial stations are allowed to operate. If there is much mush it is well-nigh impossible to copy weak signals of any character, from D.C.C.W. to raw 25-cycle goat-on-the-tin-roof noise. To get rid of this mush, either tell all the commercials to QRT, or put a resistance across the secondary of the L.F. transformer, or the phones, or something. To make the resistance get a piece of paper about the size of a postage stamp and scribble all over it with a pencil, and make connection to the ends by paper clips. This shunt resistance cuts down the peak voltages due to the mush and lets the signals come through "sure FB es QSA."

6LJ.

## A Smoothing Hint.

If you are having trouble with a rough note on which condensers and chokes have no effect whatever, try putting high-frequency chokes in all H.T. and L.T. wires of the power circuit, and in the drive circuit if a master oscillator is used. The roughness may be entirely due to an H.F. leakage.—G2SZ.

FOR SALE.—A few L.F. Transformers (4 : 1) and high resistance Headphones, 8s. 6d. each both instruments, carriage paid.—Apply 5 N.H., 39, Poplar Avenue, Edgbaston, Birmingham.

FOR SALE.—Mackie 600-volt H.T. Generator, £6 6s.—Apply Box 12.

FOR SALE.—Newton Alternator, 200 watt, almost new.—Apply Box 13.

WANTED.—1,000-volt H.T. Generator or over, in good condition and low price, 200 watts.—Apply Box 21.

# Calls Heard.

B—6bd, 5ls, 2gy, 5si, 5xo, 6mu; F—8wag, 8éé, 8tk, 8fw, 8bn, 8nn, 8rlh, 8tok, 8ux, 8dtd, 8hll; H—ohb, n2pz, opm; B—g6, z2, t2, 4rs; D—7ec, 7ok; S—9ad, 9br; Sweden—smtn, smvh; I—1bs, 1no; S—ear21; U—8jq, 3bva, 1axa, 2lv, 1arh, 4xe, 1ckp, nkf, wap, wir, wqn; Z—4ar; A—2cm. Unknown: 2za, kxh, fb1, 3ad. All details given on receipt of card. Pse qrk g6oh? 45 metres. All above on 40 band.—G6OH.

All on w/ls between 35/50 metres: U—1aci, 1akb, 1anq, 1are, 1atv, 1bg, 1bzp, 1caw, 1cex, 1cki, 1cu, 1ef, 1qp, 1rr, 1xam, 1yb. 2ate, 2bee, 2cv, 2cxl, 2cv, 2gx, 2nd, 3bwj, 3hs, 3pz, 4eg, 4er, 4fj, 4km, 5ag, 6aqp, 8er, 8acu, 8jq, 8ry, 9ado, 9dwz, 9mm, 9uq, 9xn; C—2be; F—8bn, 8ct, 8dd, 8dp, 8dt, 8éé, 8gi, 8hll, 8ja, 8jc, 8moz, 8qg, 8ric, 8ssc, 8dtd, 8tok; B—z1, z7, l2, b7, s2, t2, 4bs, 4re, 4yz; S—9ad, 9br, 9wwz; I—1as, 1au, 1bb, 1bd, 1bp, 1bs, 1gn, 1rt; G—kl4, a8; Swedish—smlz, smtn, smvl, smxu, smzs; Dutch—obq, ogg, oii, okw, osv; Danish—7ec, 7vx, 7zm; Finnish—2nd, 2nx; A—2cm, 2gy, 3bd, 4za; Z—4aa, 4ak, 2nb, 1ao; South Africa—a4z; Brazil—1er; Argentine—ba1, 1pz; Sundries—agw, fw, nkf, ntt, nve, pow, 99x, wap, rerl, wiz (Sept. 13, 1925, to Cc. 4, 1925).—6BT.

tG—2jb, 2gy, 2bdq, 2za, 2to, 5wi, 5si, 5nj, 5kw, 5xo, 5sz, 5qt 6tw, 6tm, 6po; U—1nek, 1ahl, 1bz, 1axa, 1bke, 2bug, 2afn, 2cxl, 2brb, 3jw, 8gi, 8pc, 8er, 8aix; F—8éé, 8gi, 8alg, 8ppc, 8ssu, 8dp, 8ct, 8eb, 8wag, 8ssm, 8qr, 3ca; B—4rs, p7, d2, q2; I—1mt, 1ay; N—ovn, oza, okw, oms, oba, 2pz; Swedish, etc.—smtn, souu, smzs, sznm,; Miscellaneous—gfd, d7zm, v99x, aga, rifl, v4bk, pckk, ok1. (Telephony on 47x, qrkr4. 12.40 a.m., b.s.t., September 6, 1925.) All above on o-v-1. qrk mi sigs. on 45, metres pse qsl.—G. A. Jeapes, G2XV.

U—6bpg, 6cgw, 6cmd, 6css, 6ji, 7nx, 7ob, 7uj; A—2cm, 2ds 2ij, 2lo, 2me, 2yg, 2yi, 2bk, 2jw, 3bd, 3bq, 3ef, 3bm, 3ju, 3lm 5bg, 5bm, 7jb, 2bb, 2es, 2tm; Z—1ac, 1ao, 1ax, 2ac, 2ae, 2ap 2xa, 3ld, 3dt, 4aa, 4ag, 4ak, 4al, 4ar, 4as, 4av, 3ao; CH—1eg, 2ld, 9tc. BZ—1ab, 1ap, 1ac, 1af, 1a, 2sp; R—cb8, af1, af4, ab1, ba1; M—1b, bx, 1aa, 1b, 1na: BE—ber.—G6LJ, 32, Gascony Avenue, London, N.W.6. 35 to 45 Metres.

Three weeks, Sept. 14 to Oct. 15. u6awt (r5), un1sr (r6), a2ac, 2ae, 2ch, 2yl, 2yh, 3bd, 3bq, 3ef, 5bg. Z1ax, 2xa, 4ag, 4al, 4as. Have 2yh and 5bg been reported as received before? Argenti. c—rd3, gt, fb5, dh5, ga2, cb8, b2's, 1ab, 1ac, 1af, 1ax, 1bd, 1wr 2sp.—G6JO, J. Rodgers.

# Correspondence.

General Post Office,
London, E.C.1.

DEAR MR. MARCUSE,

I received your letter of October 9 about the increased hours of the broadcasting programmes, and, with all due deference to your Committee, we think that any attempt to limit the hours of those programmes would be foredoomed to failure.

We appreciate the fact that your experimental work may suffer on account of difficulties in reading faint and distant signals through broadcasting; but there seems no need for apprehension that we shall insist on experimental transmissions being discontinued during the extended broadcasting hours on account of shock excitation to neighbouring crystal receiving sets. The Post Office attitude, in correspondence with the British Broadcasting Company, has, in the past, been that, although we saw no objection to the extension of broadcasting hours, we were not prepared to impose any further restrictions on experimental work in order to secure immunity from interference with broadcast reception during the extended hours. So long as that attitude is maintained, it seems to us that the position of the experimenter is sufficiently safeguarded.

Yours sincerely,
J. W. WISSENDEN.

G. Marcuse, Esq.

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## AN APPRECIATION FROM "A COUNTRY COUSIN."

*To the Editor of* T. & R. BULLETIN.

SIR (or are we to be less formal, OM., your ruling, please, Mr. Editor*). By this morning's post I received:

(1) A card from our Secretary stating that he had received my application for one of the new permits and that it would not be necessary to send along any application for renewal of my present permit to the P.M.G.; and

(2) A letter from the P.M.G. stating that on receipt of the necessary (and not excessive) fee the permit would be forwarded.

Now, I submit that all this is in striking contrast to the correspondence and delay which we have all previously experienced, and, while far from being "disgruntled" over previous dealings with the P.M.G.'s Department, I really do think that a special word of thanks and APPRECIATION is due to 2NM for the trouble he has taken to save us trouble and to secure such valuable concessions as are contained in the terms of the new permits, I feel sure that I speak for more than myself when I say "Thanks, 2NM—thanks very, OM!

Yours hamfully,
G6JV.

October 5, 1925.

*OM is good enough for us.—ED.



## MANCHESTER WIRELESS SOCIETY.

*To the Editor of* T. & R. BULLETIN.

DEAR SIR,—Kindly note that from September 2 the testing station of the Manchester Wireless Society will transmit regularly on the following wave lengths at the times stated:—

Saturday: 6.30 to 7 p.m., G.M.T. 45 metres.
Sunday: 7 to 7.30 p.m., G.M.T. 90 metres.
Wednesday: 5 to 6 a.m., G.M.T. 25 metres.

Example: Test de G6MX, etc.
QRA, Manchester.
QRH 90 (giving wave length).
P50 (denoting imput in watts).
AA 1.5 or pnt 5 (radiation).
Pse. QSL, AR, K de G6MX, etc.

Reports should be sent to the Hon. Secretary, Mr. Y. W. P. Evans, 66, Oxford Road, Manchester.

Special tests can be arranged and members of the society are prepared to report on the reception of any transmission, from any part of the world. Stations replying to test calls are requested to transmit each call three times only, and complete their transmission with the same procedure.

Experimenters willing to co-operate in tests on 3 to 5 metres, please notify the Hon. Secretary as early as possible. The society is prepared to try any commercial apparatus in their various short wave tests, same being returned on completion, with full report.

Yours faithfully,
Y. W. P. EVANS, Hon. Secretary.
66, Oxford Road, Manchester.

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*To the Editor of* T. & R. BULLETIN.

SIR,—Much has been said and written about the C.Q. fiend to try and get him out of bad habits, but it seems to have had no effect. The other evening, while listening for DX on forty metres, a European ham started transmitting, using Raw A.C. I jotted down the time he sent his first CQ so as to put him in my log. He continued to transmit CQ, without ceasing, for *seven* minutes, and then sent his call three times.

Surely it is time something is done, for it is impossible to do good DX work with these fiends jamming everything, and transmitting on a wave unallotted to them.

The above case is rather exceptional, but there are many others who seem to think the only way to obtain good DX is to call CQ twenty times. If other hams refused to reply to these calls, it might possibly wake the fiends up a bit. Heartiest congratulations on THE BULLETIN. It is excellent. Wishing you the best of luck,

I am,
Yours sincerely, J. F. METCALFE,
The Stissel, Broadstone, Dorset. 6YJ.
September 2, 1925.

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*To the Editor of* T. & R. BULLETIN.

DEAR 2NM,—My station, i.e., 5UW, will be transmitting on 90 and 100 metres after 2230 B.S.T. most evenings during the next few months, using imput of 10 watts, Rectified A.C. Tests will be made with A.C. filament heating of oscillator and rectifiers, also on control filament during 'phone tests. Reports of reception of 5UW and 6HT will be highly appreciated.

Yours faithfully,
F. J. SINGLETON, 5UW.

**CORRESPONDENCE**—*Continued.*

*To the Editor of* T. & R. BULLETIN.

DEAR SIR,—With reference to the statement regarding B.B.C. wave-lengths made on page 10 of your September-October issue, I am afraid that you are misleading your readers in stating that they are safe in using the emissions of the B.B.C. as moderately accurate standards.

I cannot understand how officials of the British Broadcasting Company could possibly have informed you that their stations are within 1 per cent. plus or minus of their published wave-lengths, unless they alluded to the special test transmissions which have been made recently, and which were checked by the N.P.L. Dr. Robinson's figures given in the Radio Press are far more reliable than the published waves of the B.B.C., which have been inaccurate for the last year.

I have a record of measurements made on May 17, 1925, which were as follows :—

| | Published Wave. | Measured Wave. |
|---|---|---|
| Cardiff ... ... | 353 | 352 |
| London ... ... | 365 | 357.8 |
| Manchester ... | 378 | 373.3 |
| Bournemouth ... | 386 | 384.2 |
| Newcastle ... | 403 | 402.3 |
| Glasgow... ... | 422 | 421.4 |
| Belfast ... ... | 439 | 436.1 |
| Birmingham ... | 479 | 477.4 |
| Aberdeen ... | 495 | 498.3 |

You will see that London and Manchester show practically the same large discrepancy as was pointed out by Dr. Robinson.

Yours faithfully,
FRANK PHILLIPS, M.O.E.E.,
Director and Chief Engineer,
Burndept Wireless, Limited.

We have no comment to make on the above other than we do not wish to mislead our readers. Our information was given us by a responsible member of the B.B.C., and we leave the matter at that. At the same time we feel that the B.B.C. should, whenever possible, give notice of changes in wave-lengths, as inconvenience is often caused to owners of calibrated sets unless such notice is given. This, however, is a "Broadcast" matter.—ED. note.

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*To the Editor of* T. & R. BULLETIN.

DEAR SIR,—In the course of the last twelve months, and even when I have been abroad, and while my transmitter has been dismantled, I have often seen my call sign, 5KA, in the "Calls Heard" lists in wireless papers on both sides of the Atlantic.

Finally, I have had a letter from the Postmaster-General saying that a Government station is accusing me of having worked on the unlicensed wave-length of 83 metres at a time when, actually, my station was completely dismantled.

Curiously enough, no QSL cards ever reach me in answer to these "pirate" transmissions, but if any members of the T. & R. Section—to which I belong—can help me to hunt down the offender, I shall be most grateful; his conduct speaks for itself.

I sign myself, with my address,
GUY C. BEDDINGTON (5KA),
The Beeches, Penn, Bucks.

# Northern Notes.

Prepared by 2DR.

The G.P.O. Stationery Department has been very active in the North during the past month. Hams are being bewildered with letters arraigning them for all manner of crimes which they have never perpetrated. Perhaps the most amusing accusation made is contained in a letter asking a certain ham what he means "by sending on a wave length of 45 metres *approximately*!"

Judging by other letters received it is apparent that the G.P.O. wavemeter is "approximately" calibrated!

5US states that his new address is J. Croysdale, B.Sc., 40, The Grove, Ilkley. He is at present rebuilding, but expects to be "on the air" on 45 and 23 metres towards the end of September, and would welcome reports.

5IK has been closed down for the summer, but is opening up on 45 metres this month. Reports welcomed, all QSL cards answered.

2XY is going abroad, and is not likely to be active until October.

6KB (Wigan) has been doing much work in coal mines, which shows his enthusiasm for the job. Hi! These experiments are at present at a standstill owing to an argument with the Board of Trade. He is reconstructing his transmitter and installing a new transformer and rectifier with a view to experiments in DX telephony during the winter.

6LF (Wigan) has been heard on the Continent using 100 volts on the plate of a dull emitter receiving valve, and is continuing these low power tests. Reports please!

2RA is off the ether at the moment. He complains that manufacturers have failed to place a flash lamp battery on the market capable of feeding a 50 watter! He is looking for a water-wheel to drive a Newton alternator. Model engineers, please note.

2QB and 2QV spend most early mornings searching for each other. As soon as they get into touch, someone's accumulator gives up the ghost.

5TC and 5KC, well known in Bolton, seem to have followed the old soldier's example and "faded away."

The former has acquired a car, and, rumour has it, spends most of his time walking home! 5KC has installed an alternator driven by a 1 H.P. motor, but his bricklaying is not sound, and the results have roused the ire both of his household and neighbours. DX is, therefore, somewhat curtailed.

Halifax amateurs seem to be doing nothing at all in the DX department. Reports from this district would be welcome.

5SZ is still busy reconstructing and eliminating AC ham from a new transformer. He expects to be QSO again shortly.

2IH and 2VO have done nothing of note this month. The former is getting excellent results from a Newton alternator, and as he was dissatisfied with an apparent aerial current of 0.4 amps. on 45 metres, moved his ammeter three feet up the lead-in. It now says 1 amp. steady. Hi!!

**NORTHERN NOTES**—*Continued.*

There is a surprising lack of information available from the North this month, and yet complaints are received that Northern hams do not get credit for work done. It is no use complaining when reports are not sent in.

Therefore, if you want credit where credit is due, fellows, let me have your reports not later than the tenth of the month. A postcard will do if you have no time for a letter.

Apologies are due to 5SZ (Morecambe) for stating that he had not worked many Yanks lately. As a matter of fact, he has worked 52 U.S.A. stations during the last six months, including two-way daylight working with Georgia. Considering the power used (35 to 46 watts), and the districts worked (1-2-3-4-8 and 9th), I think 5SZ is to be congratulated. An elaborate series of tests have been carried out at this station to produce the best aerial system for 45 metres, and the final result is a large-sized twin aerial slung between masts, one 75ft. and the other 50ft. A short single wire counterpoise is used.

2IH has had hard luck this month. As previously reported, this tenastic transmitter (Hi!! Ed.) has worked Brazil on a T-15 and 37 watts, very successfully, but has failed to produce a disturbance in the U.S.A. ether.

Some days ago a test call was being made after a few adjustments to the transmitter, and the first reply was a U.S.A. station. A rapid change-over was made, with the immediate result that the belt driving the Newton alternator came off for the first time in five months. As the power plant is situated outside the house, before 2IH had time to get going again, the Yank was busy elsewhere. Hard luck, OM.!

2VO has not been very active this month, as business has made considerable demands on his spare time. (Hang the business, O.M.)

2DR is still labouring away at his new home, but by the time these lines are in print he will be brass pounding once more after a three months' spell. The new Mortley Sprague generator is the goods, and delivers up the watts, and then some in fine style.

5SI heard U.S.A. 25/7/24. UIPL, 8 watts, also on 0.75 watts and 0.62 watts. This test repeated with UICMX on 2/8/25, same powers. An M.L. converter and 0/30 valve used! On 22/8/25 he worked N.Z. 2AE on 11¼ watts. Also called by N.Z. 1AX same morning, but did not work him.

## Some Gifts Appreciated.

Colonel E. F. Wenger (2VG) has very kindly presented the sum of £5 5s. to the T. & R. BULLETIN fund. Mr. J. F. Noden (6TW) has also kindly sent us £1 1s. for a similar purpose. These gifts are very useful and greatly appreciated, and the Committee wishes to express its indebtitude to these two members for their thoughtfulness.

The Committee also desires to thank Mr. Gerald Marcuse (2NM), our secretary, for his gift of a tea to our members at the opening meeting of the session which took place on October 9, when Mr. Bevan Swift gave a very enjoyable discourse on alternating current.

## Play the Game.

If you wish to help us, buy wireless goods only from our advertisers. They can supply everything you need, and in many cases a discount will be given to T. & R. members. It is up to *you* to see that the BULLETIN has come to stay.

## Catalogues, etc.

Messrs. N. V. Webber, whose advertisement appears on page 10, have sent us an excellent illustrated catalogue. Copies of this may be had on application to the firm.

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The T. & R. BULLETIN is published by amateurs for amateurs. The T. & R. Section of the Radio Society of Great Britain is the body recognised by the Postmaster-General as being representative of the aims and objects of the experimenter. Through its agency great concessions have been obtained in the past for the transmitting amateur, and it exists to watch your interests and to assist in the banding together of those interested in the transmitting side of radio work.

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| 0/150 | 9.7 | 4.4 | 1500/2500 | 24,000 |
| 0/250 | 11.5 | 6.2 | 2000/3500 | 11,000 |
| 0/500 | 19 | 5.1 | 2500/5000 | 10,000 |

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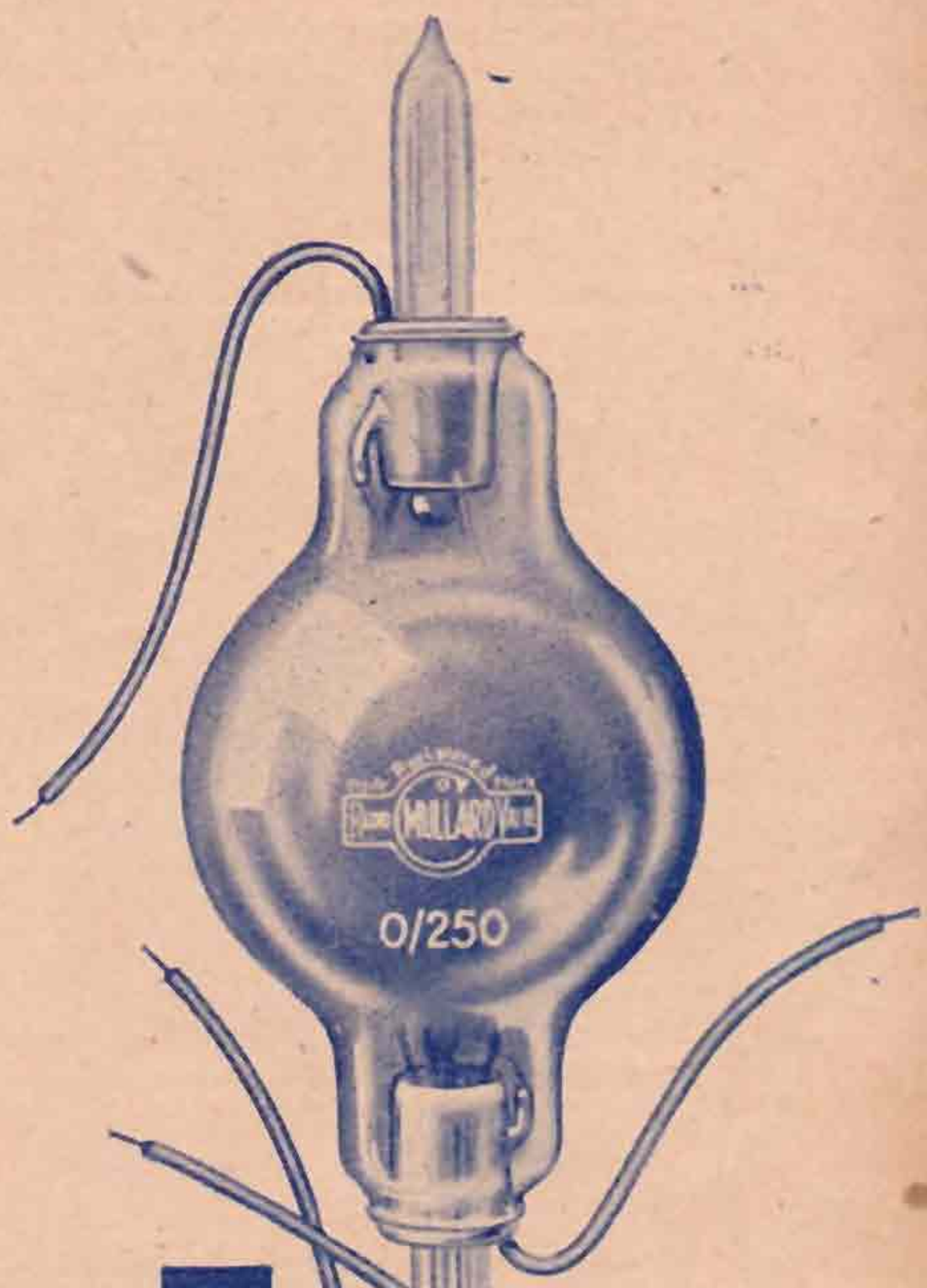


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Printed by Loxley Brothers Ltd., 50, Southwark Bridge Road, S.E.1, and Published by the Transmitter and Relay Section of the Radio Society of Great Britain, 53, Victoria Street, Westminster, S.W.1.