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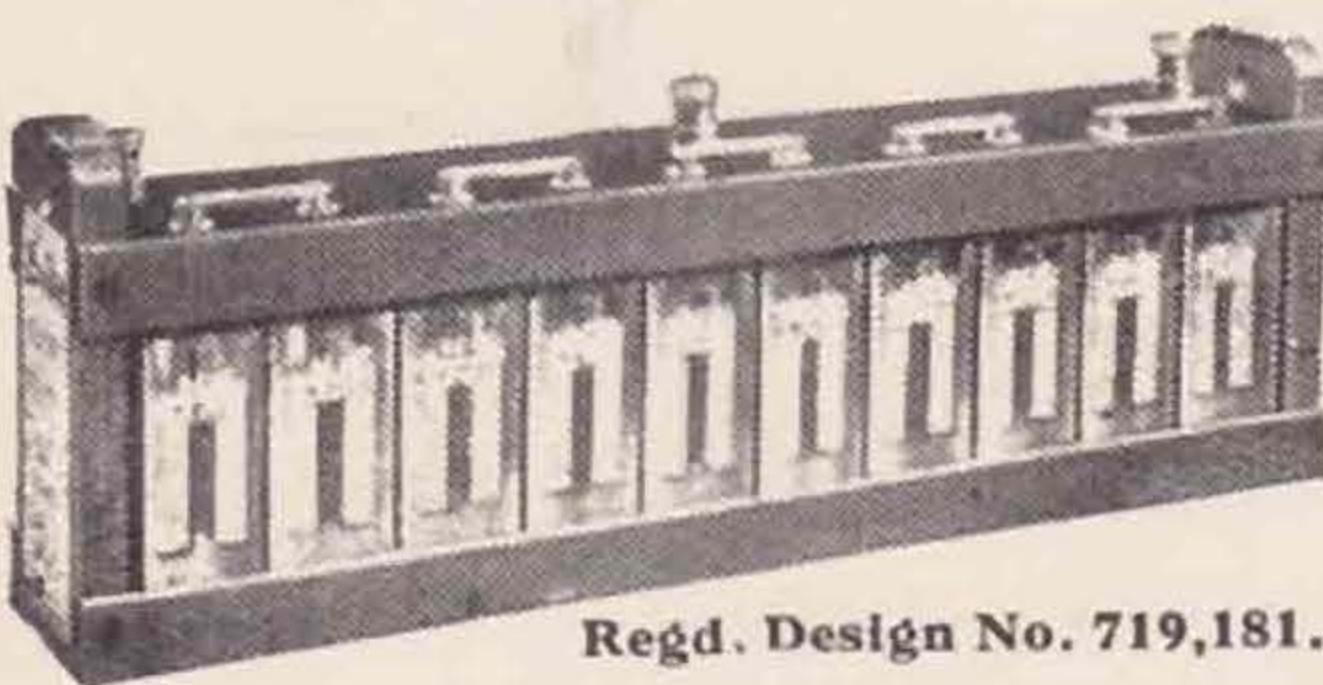
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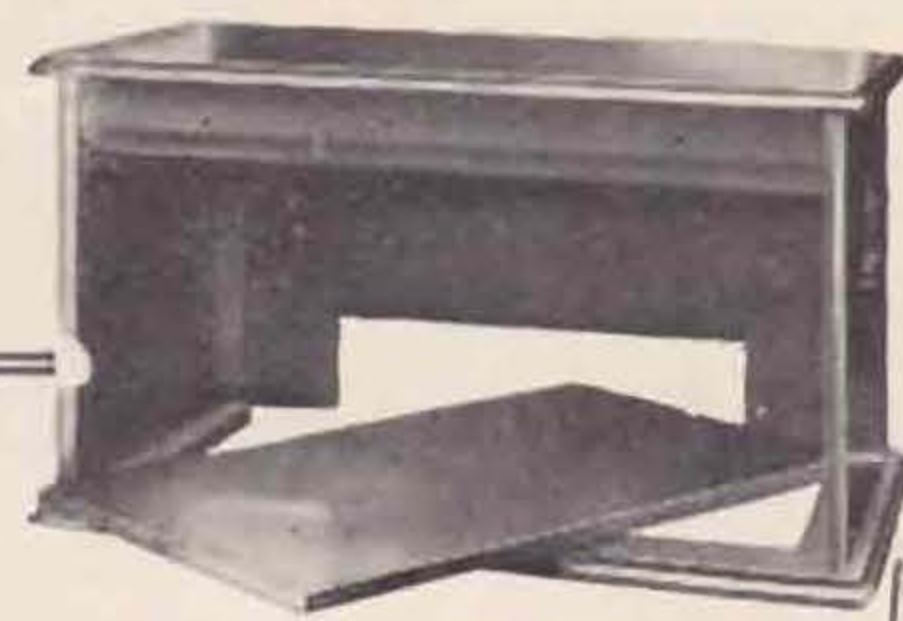
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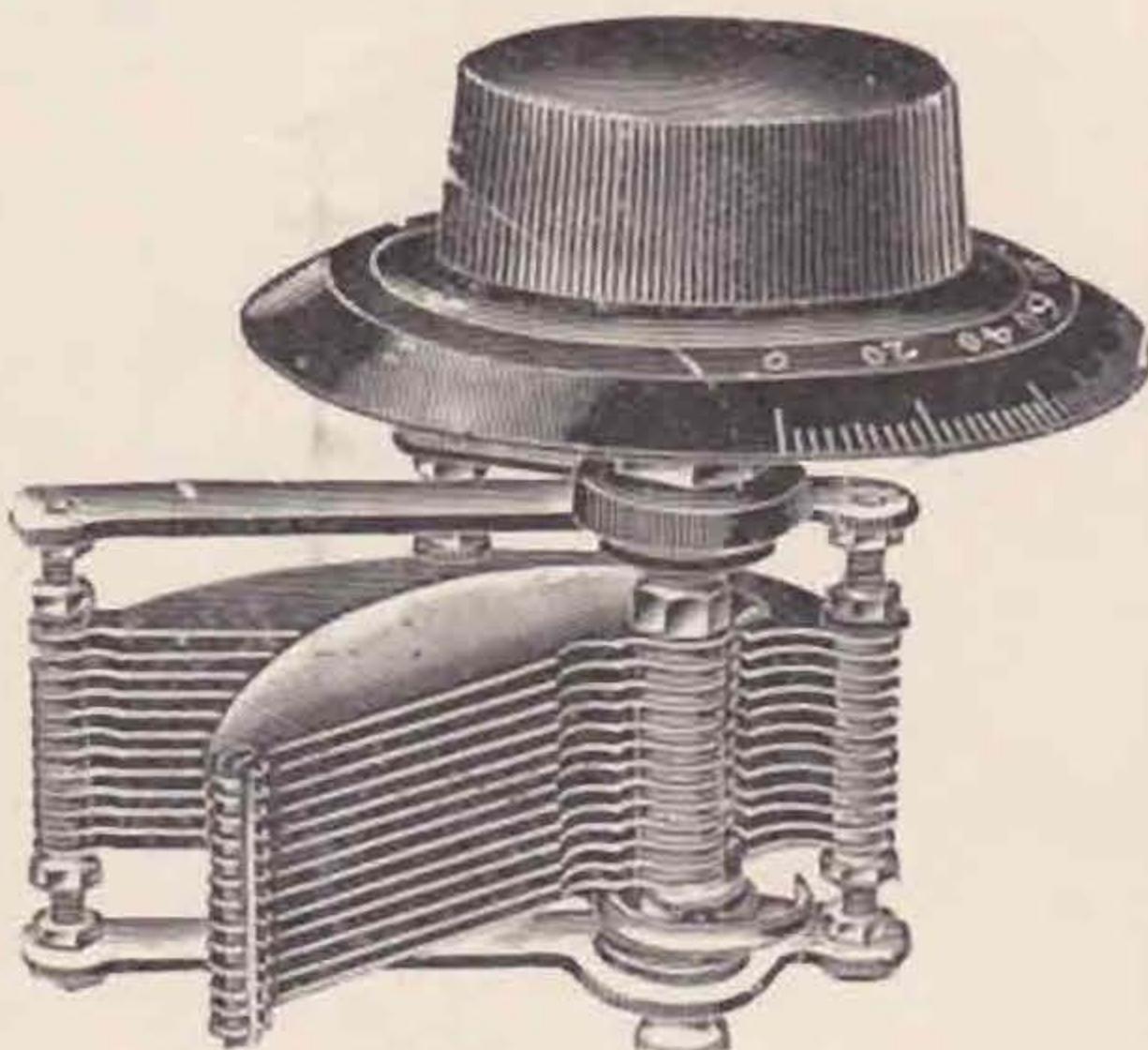
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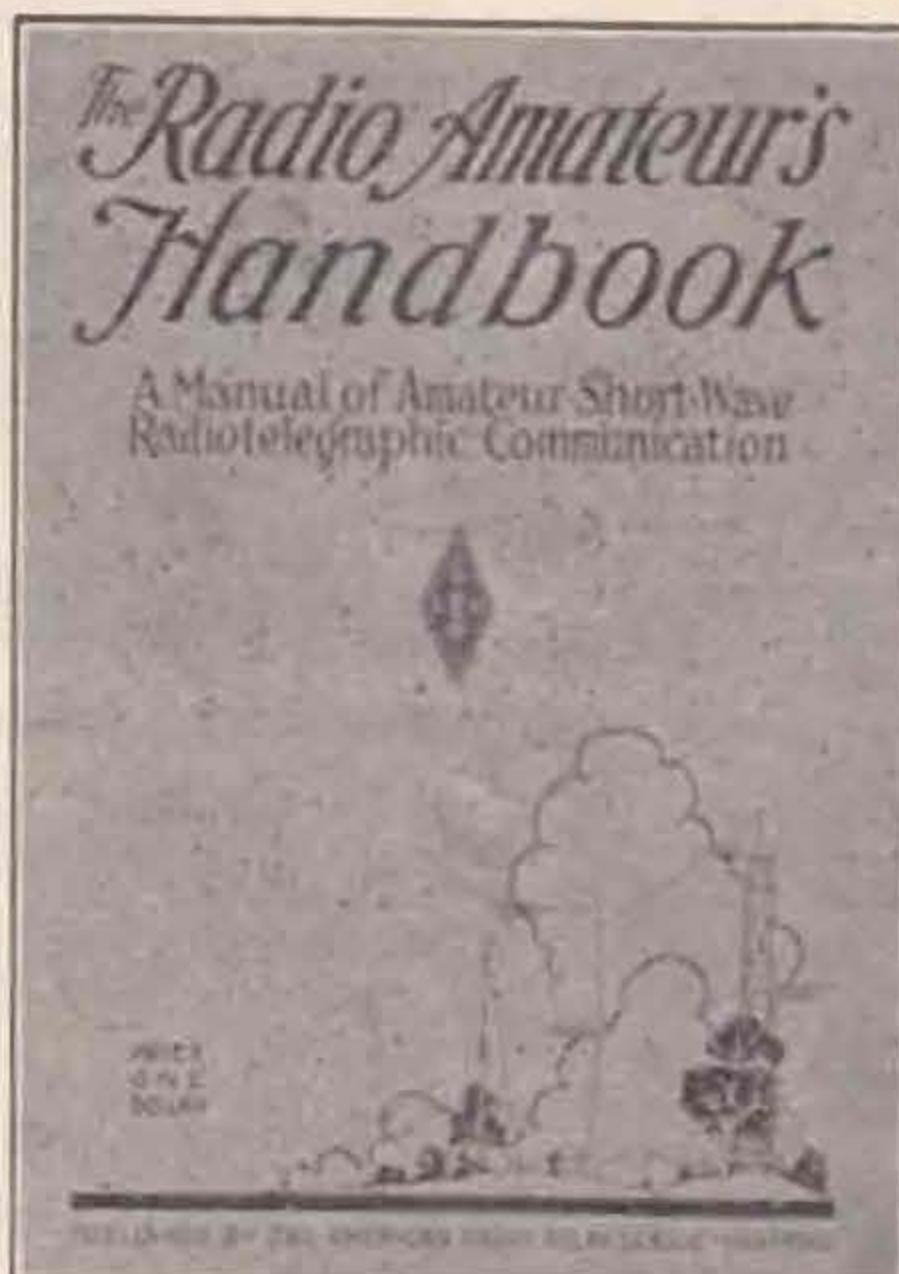
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THIS SECTION of the Radio Society of Great Britain is a virile and progressive body of amateur radio experimenters banded together for promotion of knowledge and brotherhood of those interested in the Radio Art. It exists also with the object of the advancement of the Art, the representation of the amateur in legislative matters, and for the disciplined use of the ether in so far as amateur experimenters are concerned.

The Section is governed by a Committee which is elected annually in accordance with rules approved by a Convention held at the Institute of Electrical Engineers, London, in September, 1926, and the Constitution is democratic in character.

The policy of the Section is to accept to its Membership any person or persons who are able to satisfy the Committee that they are interested in Radio Art, or who in their opinion are persons whose Membership is desirable in the interests of the Amateur Experimenter.

The "Bulletin" is published by amateurs for amateurs. The Section is the body recognised by the British Postmaster-General as being representative of the aims and objects of the experimenter. Through its agency great concessions have been obtained in the matter of licences in the past. We have members in every corner of the earth, and we welcome inquiries from prospective Members at all times. A bona fide interest in experimental Radio work is the only essential qualification.

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Devoted to the Interests of the Radio Amateur Experimenter.

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



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T & R



BULLETIN.

The only British Wireless Journal Written and Published by Amateurs

MAY, 1927.

Vol. 2. No. 11.

EDITORIAL

What is Done at Headquarters.

MANY members have from time to time expressed curiosity as to what is being done at Headquarters. Just as many have displayed some ignorance of the vast amount of work which is being done, for they appear to be unreasonably " nettled " if they do not receive a reply to communications almost " by return of post." In some quarters there is undoubtedly an impression that there is one man standing by for the sole purpose of replying to their correspondence. Now the present paid staff at 53, Victoria Street consists of a secretary and a junior. Upon these two devolves the many duties attendant upon catering for the needs of over 2,000 members. The collection of subscriptions, the circularising of members regarding forthcoming meetings, bookkeeping, arrangement of lectures, hiring of halls and other routine matters keep them very fully occupied. When members fail to pay up subscriptions to date, their duties are almost doubled, and the accounts need very careful watching on this score. There is a tremendous amount of correspondence which also needs attention, the morning's mail often covering such subjects as QSL cards, new QRA's, BULLETIN matters, membership applications, correspondence regarding interference with broadcast, licence problems, orders for books, and a host of other matters. It is obvious that two pairs of hands cannot handle all these matters, so that voluntary workers deal with a large quantity of the correspondence. Each official on what might be termed the Honorary Headquarters Staff has his mail sent on from Victoria Street later in the day, and often receives this the next morning. The members who tackle these matters are Mr. Marcuse (licence and general T. & R. matters), Mr. Bevan Swift (matters of policy, etc.), Mr. Arthur Hambling (advertisement and BULLETIN accounts), Mr. King (QSL section), Mr. G. F. Gregory (sales generally), and Mr. J. A. J. Cooper (BULLETIN Editorial). Some idea of the magnitude of the work might be gathered from the fact that the Editor sends out between 30 and 40 letters per week, whilst Mr. Hambling is always busy with inquiries for adver-

tising space, accounts, etc., and Mr. Gregory has quite a fair amount of business on hand with his sales, which we are gratified to note. Mr. Marcuse finds plenty to do with licence problems, and the good work done by the QSL Section is already well known. We must not forget the patience and tact which has to be exercised by our Chairman, Mr. Bevan Swift, especially in connection with the recently effected fusion, and another person who is " pulling his weight " to a considerable extent is Mr. C. A. Jamblin with the QRA Section, which requires very careful supervision.

Other Matters.

Other things which will now interest T. & R. members to a greater extent are the representatives on the British Electrical Standards Association Committee, the Broadcast Listeners' Advisory Committee, and the Wireless Dealers' Scheme which the Society has in hand. All these matters claim a certain amount of attention from the Council.

It will be seen from the foregoing that a great amount of activity is apparent on the T. & R. side of the Society, for when the publication of the BULLETIN month by month is considered, together with the work entailed in running its associated Sections, it is apparent that there is no slackness on the part of this Section. In addition to this we have in preparation a Year Book for 1928, which we think will beat all records for Year Books; it will be a veritable gold mine of information, and nothing like it has ever been published before. In this connection we welcome ideas from all members, and also contributions, such as tables, facts and formula, a great deal of which material has already been collected, and is in the hands of the printers. The book will eventually be sold at 2s. 6d. to members only, the price to the general public being 3s. 6d.

We could go on writing about the million and one little jobs which we have on hand for many hundreds of words, but it is thought that we have said enough to show that we are not asleep, and that we fully realise our responsibilities to members. Remember also that we have to carry on right through the year, winter and summer alike, and that it is almost impossible at times to snatch even an hour's leisure. May we ask you not to forget us in the matter of subscriptions, articles, new members and the like? If you will help us in this the encouragement which we gain thereby will be well worth while.

Solar Eclipse Tests.

An opportunity for every member to do useful research work.

A total eclipse of the sun takes place on June 29, 1927, and we have arranged to carry out tests on short waves in conjunction with the Board of Scientific and Industrial Research (Radio Research Board). The experiments which we propose are as follows:—

Certain stations will be appointed to transmit on certain wavelengths (23, 46, 44, 90 and 100 metres). The three wave-lengths first mentioned will be used for C.W. morse signals, but the other two will be modulated carrier waves for measurement purposes. The C.W. morse signals will be a series of code words known only to the station transmitting and to headquarters.

The programme will be arranged to take place for five days, June 27, 28, 29, 30 and July 1, and is as follows:—

5.40 a.m., B.S.T., Transmitters start up.

6.46 a.m., B.S.T., Transmitters close down.

Receiving stations taking part should set their receivers at the beginning of the test each day, and they should not be touched for the remainder of the sitting. Listeners should note any unusual phenomenon which occurs; such phenomena might take the form of increasing strength, fading, atmospherics of unusual intensity, and the like. Such happenings should be plotted on a log sheet against the time of the occurrence to the nearest five seconds. The B.B.C. will transmit a time signal from Greenwich every quarter of an hour (dot seconds) for two and a half hours daily during the five days, and members should avail themselves of these.

Further details of stations transmitting will be published in the June issue of the BULLETIN, and it is hoped that all stations other than these are requested to refrain from transmitting during the period of the tests, and their services on the reception side will be extremely useful.

Mr. E. H. Robinson (2VW) has kindly undertaken the collection and tabulation of the log sheets prepared by members during the tests. These experiments are expected to produce much invaluable data as to the height of the Heaviside layer and other matters, so it behoves every serious experimenter to do his best to enter the tests.

Volunteer transmitters are wanted as follows: 44 metres (in a line between Spalding and Bristol); 23 metres (as far North of Scotland as possible).

Coming!!!

A Test for Receivers.

Last month we referred to some tests to be arranged for receivers only in July next. Here are some of the preliminary arrangements regarding same.

The test will take place on the week beginning July 10, and continue each night throughout same. Arrangements are being made with a station in various parts of the world to take over an evening each. On that night, the station selected will begin transmitting at 22.00 G.M.T., and send out the following message every 15 minutes until 24.00. The message will contain a test word which will be repeated six times in each message. On the following night another station somewhere else will

carry out a similar schedule with another test word. The whole of the transmissions will be effected on wavelengths between 38 and 46 metres.

The competition is open to all R.S.G.B. (including T. & R.) members, and the station which receives the whole or the greatest portion of the test words correctly will receive an award.

The test words each consist of ten letters each, not constituting a regular word, and a sealed list of the words will be deposited with the president of the Society before the test. First card received containing all correct words, or nearest, will take the award. The decision of the Committee to be final in making the award.

The above test ought to afford intense interest, as all can take part, and it will serve to show how many of us can fulfil our boasts of our wonderful reception.

Latest betting from the course—10 to 1 against the field. H. B. S.

A Power Transformer.

By H. BEVAN SWIFT, A.M.I.E.E. (G2TI).

THE design of the alternating static transformer is largely governed by the purpose for which it is required. For instance, a transformer intended to supply a 24-hour day lighting load would have to be designed for the utmost efficiency with the smallest possible no-load losses. At the same time it would have to be arranged so that its winding could withstand the continuous application of current without the temperature of any part rising beyond a safe value.

The transformer used by the amateur to meet his needs for H.T. purposes has to accommodate itself to very different circumstances. It has only to supply an intermittent load, and can consequently be much more heavily rated in respect to its windings. Furthermore, very high efficiency is not usually looked for, and this can be sacrificed if saving can be effected in prime cost, without, however, influencing its regulating and normal performance.

The transformer designer usually is limited by the temperature rise which governs the size of the finished article. Again, he has to choose between ordinary air cooling or he may elect to immerse the complete transformer in oil, when the windings may carry considerably more current than in the former case. In large power transformers oil cooling is almost universally used and frequently assisted by circulating pipes which convey the hot oil at the top to the lower portion through outside radiation pipes. Sometimes, even, cold water is caused to circulate through pipes immersed in the oil for the purpose of removing the heat.

However, it seems almost unnecessary for the amateur to consider special means of cooling, although he should always place his air-cooled transformer where any heat generated can get freely away.

The design for transmitting purposes has one or two features not usually found on ordinary transformers. These include the use of the centre tap and the addition of a further secondary winding for filament lighting. It is generally necessary to provide extra insulation, particularly at the ends of the secondary winding, to guard against the effects of high voltage kicks due to the condensers

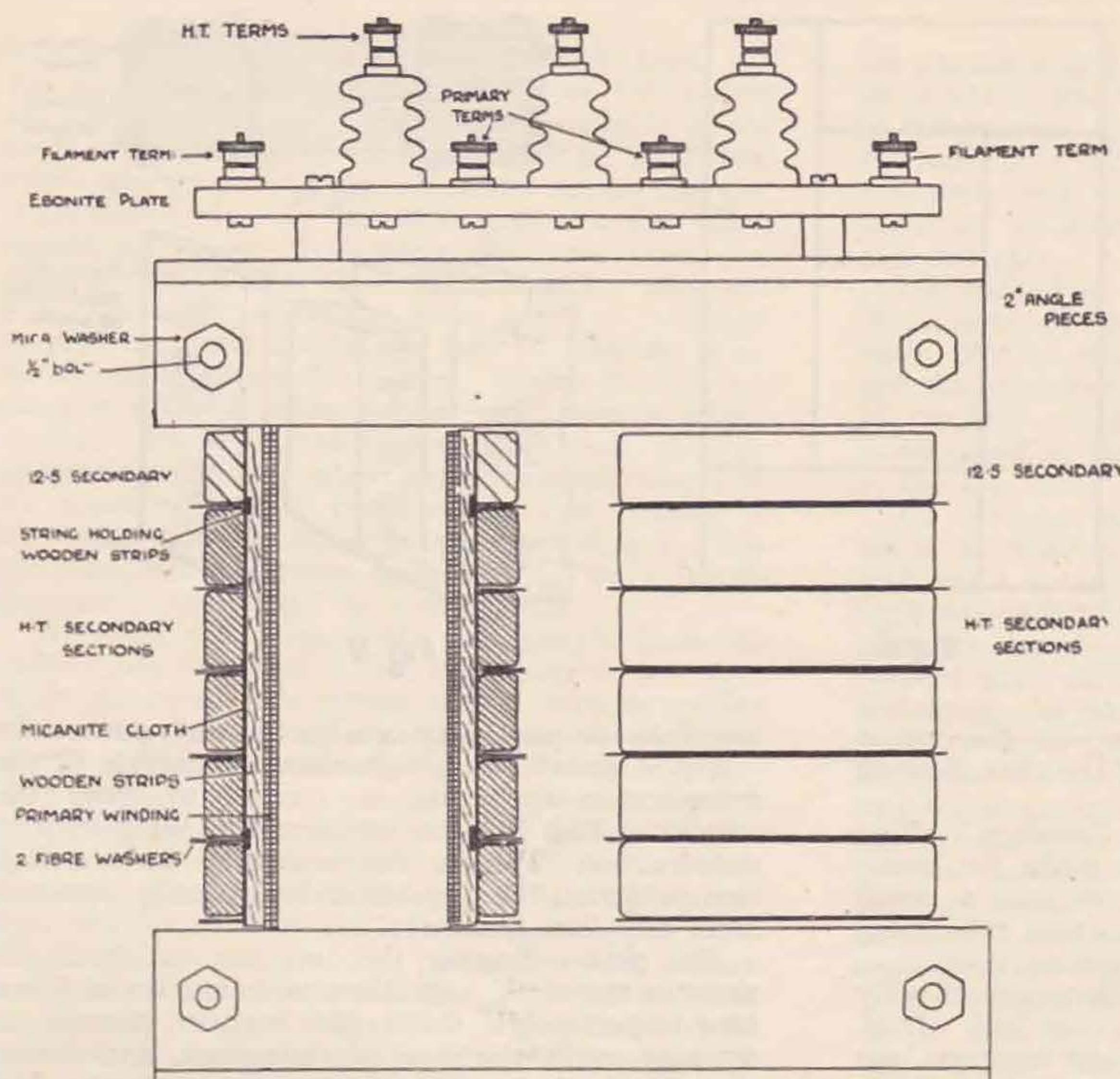


Fig 1

used and other unusual phenomena not associated with a steady load.

It is my purpose in this article to describe a typical transformer of a design suitable for amateur use in such a manner that any of my readers can vary the details to suit his own particular requirements.

The first thing to be decided is the output. This I have taken as 100 watts supply to the smoothing circuit, so that the secondary capacity has to be twice this, viz., 200 watts. Voltage 1,000 volts either side of the centre tap, or 2,000 volts across the whole secondary winding. I am also furnishing a small secondary for filament lighting at 12.5 volts in two halves, each for 5 amps., so that there are three secondary windings in all, one at 2,000 volts and two at 12.5 volts.

For the primary we are governed by the domestic supply voltage, and as 200 volts is a very usual figure, I have adopted this with the usual frequency of 50 cycles per second.

We must first decide how many watts will be taken from the mains when the secondary windings are fully loaded. This will enable us to find the primary current. Secondary No. 1 is 200 watts, Nos. 2 and 3 ($12.5 \times 5 = 62.5$) 125 watts, total 325 watts. We next assume that our finished transformer will have an efficiency of 90 per cent., so that the total input watts will be about 357 watts.

Neglecting for the moment the question of power factor—which, incidentally, is usually fairly high in a rectifying and smoothing circuit owing to the liberal use of condensers to counterbalance the

inductances—we may divide our total watts by the supply voltage, when we find that the primary current will be approximately 1.78 amps.

The wire for the primary winding will, therefore, have to be of a suitable section to carry this current, and as the primary is the innermost winding, so that its heat is not easily dissipated, we shall be liberal in our selection by deciding upon No. 18 wire (0.048 inch diameter). This wire, insulated with double cotton covering, lies about 16 turns to the inch.

For the high voltage secondary we must choose a wire to carry 100 milliamperes. A suitable size for this will be No. 26 gauge.

For the filament secondaries, which will be carrying current more continuously than the high voltage winding, we will select No. 16 wire for the 5 amps.

For the number of turns to be used we apply the well-known formula :

$$T = \frac{E \times 10^8}{4.44 \times f \times F}$$

Here T is the number of turns in the winding in question, primary or secondary. E the supply voltage. 10^8 or 100,000,000, a factor used to bring the practical value in volts to the absolute units of the C.G.S. system. The constant 4.44 is compounded of two factors, *i.e.*, 1.11, which is the ratio of the root mean square to the arithmetical mean value, a feature of alternating current working which we need not enter into here, and 4 because there are four rises or falls in each cycle of alternating current. f is the frequency of the supply. F is the total magnetic flux or lines of force.

The last-named factor is the only one which is now unknown to us, and it is soon settled when we decide what section of iron core we shall use.

Those who study the above formula will observe that we have the choice of varying the proportions of iron and copper composing the transformer and arriving at the same result. Therefore, we may increase the amount of iron, or, in other words, increase the magnetic flux, and decrease the copper or number of turns used in the windings, or *vice versa*. As copper is dearer than iron, the former plan is the more logical to adopt, but here we are governed by circumstances. If we increase the iron too much the voltage between adjacent turns becomes high, inviting breakdown, while the losses in the iron core (which I will refer to later) will be somewhat high. Again, the building up of the core is the part which usually gives the amateur the most trouble, so we will keep the iron section down.

I have selected for this design a section of laminated iron 2×2 inches, or 4 square inches, the

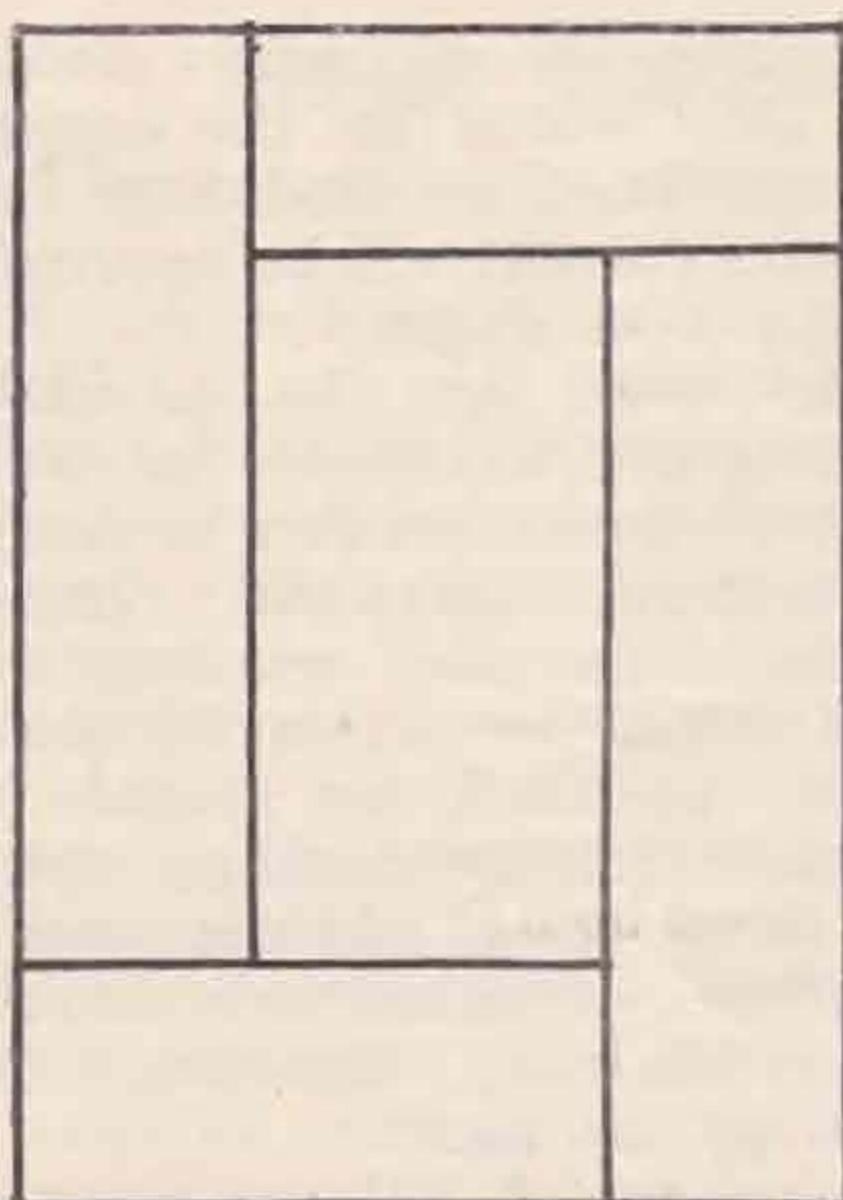


Fig. II

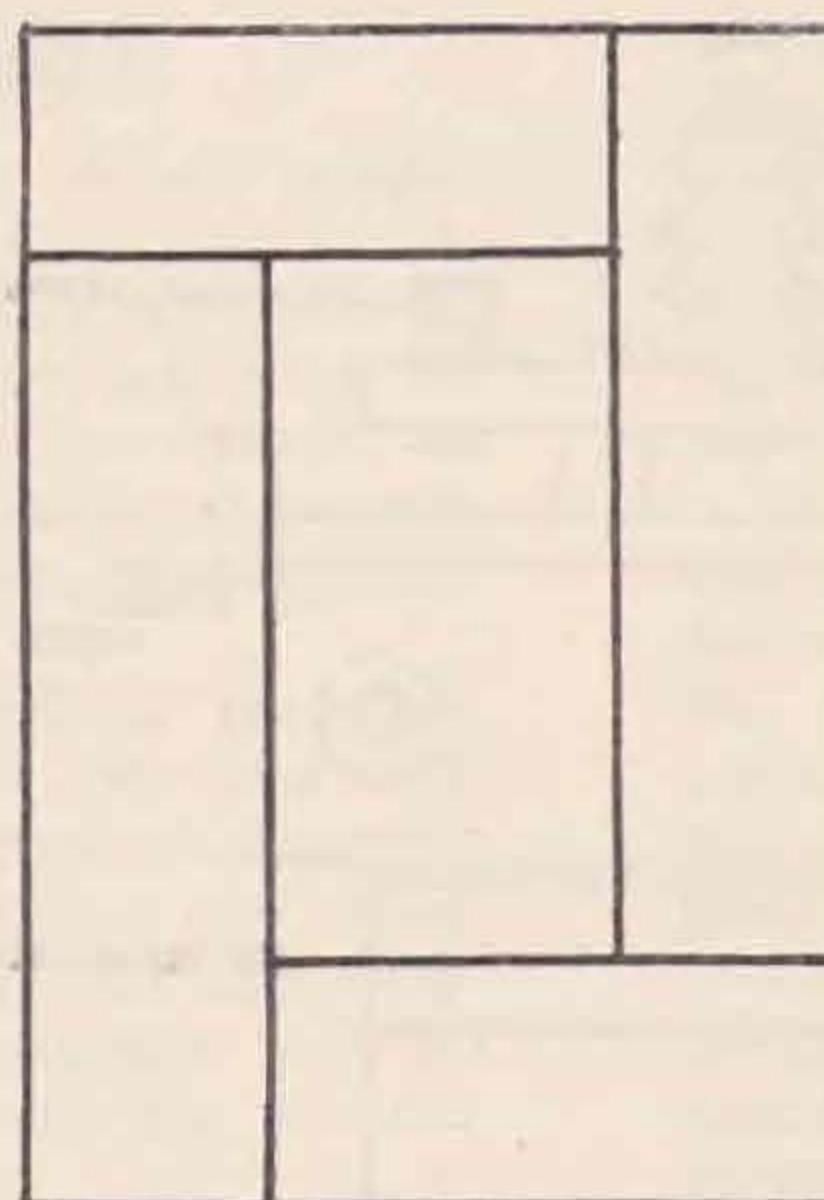


Fig. III

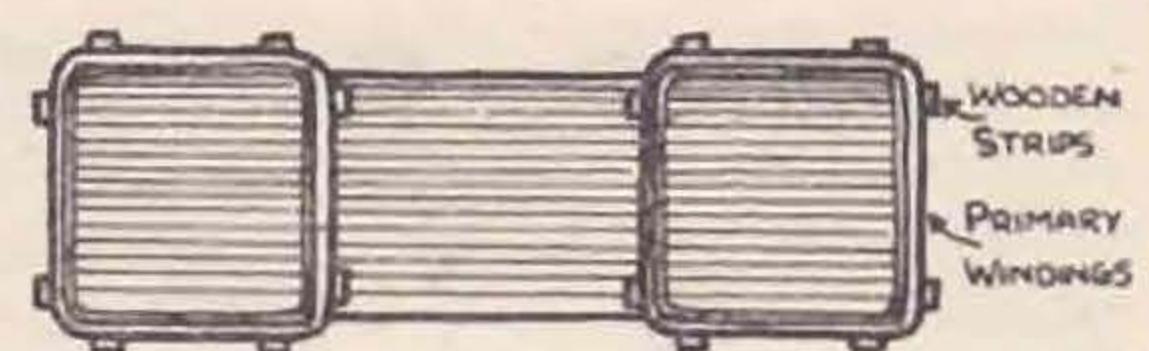


Fig. IV

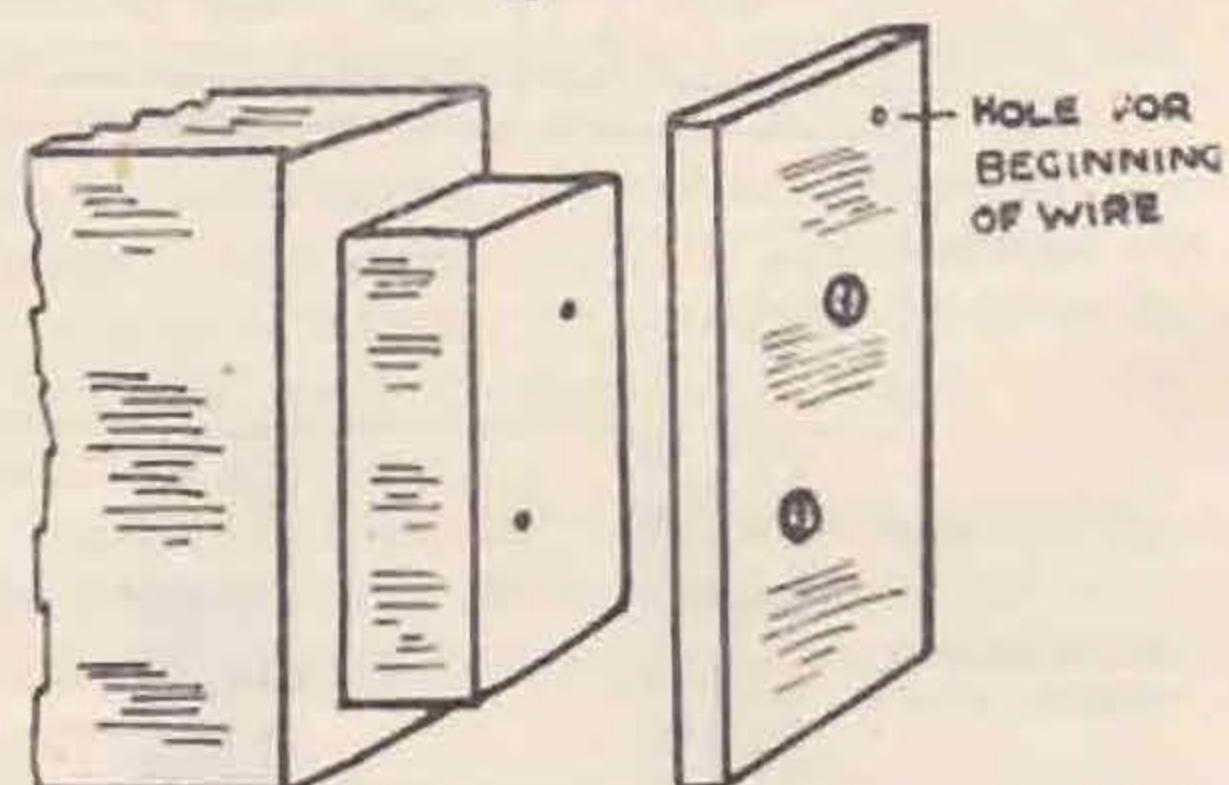


Fig. V

transformer being of the core type with the iron in the form of a rectangular ring, the flux flowing round the whole.

The iron used is that known as "stalloy." This is a special brand of iron sheet made for transformers and similar purposes. It has a small percentage of silicon in its composition, which has the effect of increasing its electrical resistance, thus preventing materially the formation of eddy currents in the plates and consequent loss. It is, however, not essential and plain soft charcoal iron sheet can be used, but the loss due to eddy currents will be higher. The iron should be about No. 29 gauge thick, and preferably obtained with one side papered.

With iron of this type, it is safe to allow a flux density of 60,000 lines per square inch, so that F will equal—

$$F = 4 \times 60,000 = 240,000.$$

We can now calculate the turns for the primary winding, using the formula first given and filling in the values as follows:—

$$T = \frac{200 \times 100,000,000}{4.44 \times 50 \times 240,000} = 376 \text{ turns.}$$

As the high voltage secondary has a voltage of 2,000, we need not work out the turns again, but simply multiply by the ratio of the primary and secondary voltage, which is 10, giving 3,760 turns.

For the 12.5-volt windings we find, using the same formula again, that we require 24 turns each.

The next thing to settle is the length of the side limbs and the dimensions of the centre opening or window, as it is called. Here we are governed by the space which will be occupied by the wire, already fixed. We may wind our wire in many layers and keep our transformer low and squat, or we may put on few layers and make the limbs high. Extremes in either direction have their disadvantages. In the first case the piled-up layers will engender heating, while there will be a tendency for the flux to leak across from the end limbs. In the second case there will be a long magnetic circuit and also a certain amount of leakage between the side limbs.

We will, therefore, select a medium course and take the advantage of sectional winding for the secondaries, which distributes the voltage and

prevents the proximity of adjacent high potentials.

Fig. I shows the design chosen, one side of the transformer appearing in section to show the interior. This has the advantage of simplicity in construction without the necessity for castings and patterns, the angle iron being easily obtained from any iron merchant.

The plates forming the core are cut from the sheet in two sizes, both 2 ins. wide and 8 and 5 ins. long respectively. Cut in this manner, there is no wastage as in the case of stampings, and consequently the iron core will not be expensive. The design also avoids the drilling of the plates for the clamping bolts, which is another advantage. The cutting up of the sheet into 2-in. strips is not an easy job for the amateur, and he is strongly advised to procure the pieces ready cut. If there is any difficulty the sheet should be cut upon a guillotine, which produces straight clean edges and does not buckle the plates. Stalloy can be bought with one side coated with thin tissue paper, and this is preferable. Otherwise the strips should be shellac-varnished upon each side.

It is important to remember that the paper or other insulation takes up a definite amount of space, and in order that there shall be a thickness of 2 ins. we must make the number of plates sufficient that this figure multiplied by the thickness of the stalloy used equals 2 ins., or mathematically—

$$\frac{2}{\text{thickness each plate}} = \text{number of plates}$$

It is also necessary to see that the plates are flat. Frequently when the sheet is cut up with somewhat blunt dies or shears the edges get bent over, producing a burr or rounded edge, which prevents the plates coming close together and tending to make the transformer noisy in operation by producing hum.

Fig. 2 shows the method of placing the first four plates, the divisions between them being as shown. The next four plates are laid on top of them in the manner shown in Fig. 3, each alternate layer of plates being arranged so that the joints overlap in the manner shown. In building up the core, however, we must leave out one set of end plates so that the coils may be placed in position. We,

therefore, use only three plates in each layer for the time being. When the whole of the plates are assembled we can clamp the lower side in its angle irons and screw up the bolts to hold the whole together. Between the outer plates and the angle iron a piece of varnished paper or thin fibre should be placed to insulate the core from the clamp. Notice also that the holes for this are $\frac{1}{8}$ in. diameter, while the bolts are $\frac{1}{2}$ in. This is to give clearance round the bolt to insulate it as far as possible from the clamp. Under the nut we place a mica or fibre washer and then a metal washer. These precautions against loss due to circulating currents may appear superfluous, but we must remember that we do not possess a hydraulic press or other means of closing up the laminations, and there is bound to be a small amount of stray field in consequence.

We must now prepare the two upright limbs to receive the windings. The first thing to be done is to go over each corner of the outside plates with a file to remove any sharpness or roughness which might cut through the insulation in time. The insulation itself consists of three complete wrappings of fibre paper, cut into a strip 6 ins. wide and carefully dried and varnished before being put on. The strip should be wound tightly on and tied round temporarily with bare copper wire. When the varnish is dry the paper will adhere and the wire may be removed. Another material which may be used and which is superior for the purpose is micanite cloth. The fibre paper is, however, quite suitable, if quite dry, and of sufficient thickness to prevent the iron cutting through.

The primary winding is 376 turns No. 18 wire, and, as there is half upon each upright limb, we have to provide 188 turns upon each. This we place on each limb in two layers of 94 turns each. Great care should be taken to wind the wire evenly and squarely to the vertical axis of the iron core. We shall find that the 94 turns make a winding 6 ins. wide, just filling the 6-in. window. When one layer is complete it should be varnished with shellac varnish. Pieces of tape should be laid along each of the four sides of the limbs, and when the winding is complete the ends of each piece should be brought together and tied. This serves to keep the winding in place and prevent the end turns slipping out of position. The whole winding, when complete, should be well shellac-varnished, and, if the weather is damp, or if the wire has been in a damp situation before used, the whole should be warmed before varnishing to expel any moisture which may be in the cotton.

It is important to see that we wind each coil in the same direction. We now join the two lower or beginning turns of the winding in such a manner that the wire forms the letter S in passing from one coil to the other, including the first turn. The two upper or outer ends are brought upwards for subsequent connection to the primary terminals.

We now cut 16 strips of hard wood 3-16ths in. thick, 6 ins. long, and $\frac{1}{4}$ in. wide. Each strip has a narrow notch across its $\frac{1}{4}$ -in. face on one side about 1 in. from each end. The notch should be 3-16ths in. wide and 1-16th in. deep. These strips are now placed two upon each side of the primary winding upon each limb near the edge in the manner shown in Fig. 4. A rubber band is useful to keep the strips in place. We next tie them in position

by passing 3 or 4 turns of string (cotton for preference) round the whole 8 strips in two bands lying in the grooves, so that it does not protrude beyond the surface of the strips. These strips are to keep the secondary coils away from the primary and allow an air space between them for heat to rise and dissipate.

The secondary winding is of the sectional type. It consists of six former-wound coils upon each limb, five of which constitute the H.T. winding and the remaining one each of the filament windings. In the H.T. winding we will remember there were 3,760 turns, so that there will be 376 turns in each of the ten coils.

To construct each of these former-wound coils, we must make a square form as shown in Fig. 5. This has a square centre portion with the width of each side slightly greater than the primary winding, plus the wooden strips, say $2\frac{1}{4}$ ins. The sharp corners must all be rounded off to prevent them damaging the wire, and there should be a slight taper towards the end to facilitate the removal of the wound coil. Seven-eighths of an inch from the end we screw on wooden strips 1 in. high in the manner shown in the illustration to form the edge to wind against. The other edge is formed by a piece of wood 4 ins. square, $\frac{1}{4}$ in. thick. This is detachable and fixed to the end of the former by three or four wood screws.

The winding is best accomplished in a lathe, but can be done quite well by hand where this tool is not available, the only care being necessary is to see that the turns lie close together and are evenly wound. The beginning of the wire is brought out through a small hole bored in the end plate. Before beginning to wind, we must place a strip of tape upon each of the four sides. This not only serves to help to remove the completed coil, but, by tying the ends up, keeps the coil together.

The wire should be carefully dried before winding. The reel containing the wire can be placed in a warm oven for a short time to do this.

We now begin to wind, taking great care to count each turn as it is put on. Where a lathe is used a speed counter can be used for this purpose. It will be found that No. 26 double cotton wire lies about 50 to the inch, so that in the $\frac{1}{4}$ in. space there will be about 40 turns, and the whole coil of 375 turns will make up approximately 10 layers. As each layer is laid it is varnished before the next is put on. When the coil is complete, tie up the tapes and take off the end plate of the former, removing the whole coil. It can then receive a further coating of shellac varnish. The coil is then taped up all over, using white cotton tape. It is then slightly heated and the whole dipped into shellac varnish. It should then be baked dry and placed aside until the whole ten are finished. Be careful to mark the beginning and end of each coil so that no mistake is made in subsequent connections.

The two filament coils, each of 24 turns of No. 16 wire, are wound upon the same former and taped up in similar manner.

Before placing the secondary winding in position upon the limbs it will be necessary to place a shield of micanite paper or fibre sheet over the wood strips upon the primary. We must then cut some washers or squares in fibre sheet or mica, each

(Continued on page 10)

Notes on 20-Metre Work.

By G5HS.

THE number of stations taking an interest in 20-metre work is increasing very rapidly at the present moment, so a few notes on some of the effects noticed during several months' work with a 100-watt 23-metre transmitter may be of interest. The first station worked was NKF and the second was C3FC-9AI, of Toronto, with whom a daily schedule at 18.00 G.M.T. was arranged. During the next 23 days we were able to work across 15 times, including a good spell of eight consecutive days and a bad one lasting six days. Then we experienced a series of prolonged bad periods and were forced to reduce our schedule to week-ends only.

Referring to my log I find that my work on 16 Sundays resulted in 50 transatlantic QSO's, including a series of five Sundays when only one or no station was worked, followed by a period of three consecutive Sundays when seven stations were worked each day. These results show that while under good conditions these waves prove excellent for long-distance work, consistent working is very difficult owing to the high percentage of days when hopelessly bad conditions prevail. One point observed during these tests was that while on some days it is possible to work across the Atlantic as early as 13.00 G.M.T., signals do not generally reach their maximum strength until 1½ hours after sunset in England. On some evenings signals then fade out after about two hours, but on others they continue at good strength until it is dark all the way from England to the eastern districts of the U.S.A. This is a most unexpected result, and it was noted that when the band of darkness just reached the U.S.A. there was a sudden increase in signal strength. One night it was found easy to work across at 22.45 G.M.T. and U.S.A. 20-metre signals were at good strength when I closed down at 24.00 G.M.T. When daylight extends the whole way, long period fading is common, U.S.A. signals often fading completely out for as long as half an hour. Another remarkable point is that when the signals from a certain district of America are of good strength the conditions are often unfavourable for the reception of British signals in that district. This was demonstrated well during my tests with 3FC and the 6th and 7th districts of U.S.A.

On the day I worked 6ZAT he reported my signals as R5, while his signals were only R3. I have since called him when his signals were a good R5, but without effect. One Sunday I was informed that 7EK was answering a test call of mine, but he was quite inaudible. Next Sunday he was received at R5, calling me to schedule, but could not receive me. On the next Sunday his signals were only R3, but on replying he reported my signals as R2. Only two other stations were heard that day, and although they were on the East Coast, their signals were weaker than those of 7EK.

In the case of 3FC there was usually a difference of one degree in the signal strength at each end. On those days he received me R6, his signals being

R5 and *vice versa*. The advantage of crystal control on 20 metres is rather doubtful. Weak D.C. signals are far harder to read than R.A.C. signals of the same strength, while even strong C.C. signals are hard to read unless the receiving aerial is quite steady. This was the case when I worked a C.C. station when my aerial was swinging in a gale, my R.A.C. signals being quite steady at his station.

A standard two-coil receiver is used earthed to the D.C. mains and with H.F. chokes in the phone leads. A D.E.V. valve is used as detector and it is found that if the intervalve transformer has a rather low impedance the microphonic effects, usually so troublesome with this type of valve, are lessened; while by using a transformer ratio of 10 to 1 the amplification is not appreciably reduced.

A series-fed reversed feed back transmitter is employed with the coils several feet apart and with their axes at right angles to one another. The plate coil is made of $\frac{1}{4}$ in. copper tube mounted on two horizontal glass tubes. This form of construction gives a rigid coil with the minimum of dielectric support; and the self-capacity of the coil is sufficiently great to allow of its use without any added parallel capacity, without imposing undue strains on the valve seals.

A single wave Hertz aerial is used with a heavy current in the single wire feeder which joins the aerial about one-sixth of the way along.



SOME MEMBERS OF THE COVENTRY TRANSMITTERS' SOCIETY.

SHORT WAVES!



WHAT WOULD THE BEES SAY IF THEY HAD
GONE LIKE THIS

Book Reviews.

THE ELEMENTS OF RADIO-COMMUNICATION. By O. F. Brown, M.A., B.Sc., Member of Council, Radio Society of Great Britain. Published by Oxford University Press. Price 10s. 6d. net. 216 pages.

This book, as its name implies, is essentially a book for the beginner or student, but nevertheless the experienced experimenter will profit in reading through its pages, for it makes an excellent refresher for those whose experiments have been confined to specialised work and who desire a means of readily acquiring reference to some specific theory of radio communication.

The foreword, by Sir Henry Jackson, is the key to the whole of the contents, and the last paragraph should commend the book quite definitely to all members. "As one who has no mathematical abilities, but has been closely connected with radio work since its original inception, I can confidently recommend this book to those who wish to get a clear understanding of this useful and fascinating art." No further words are necessary to describe the book: it is the type of book that will be welcomed by the amateur with open arms. It is that somewhat unique publication, a book written by a professional suitable for the amateur, and written in such a way that it is readable and understandable.

THE SHORT WAVE HANDBOOK. By Ernest H. Robinson (5YM), Member T. & R. Section. Edited by Bernard E. Jones. Cassell & Co. Price 2s. 6d. 140 pages and numerous illustrations.

This is the first British short wave handbook, and it is fitting that it should have been written by a T. & R. member and published by one of the pioneer publishers of amateur wireless in this country. Mr. Robinson is well known to all London members, to whom he has given several interesting talks at the Institute of Electrical Engineers at various times. He has studied and experimented with short waves for many years, and was one of the first to endeavour to assist in some pioneer 5-metre experiments a year or so ago. He gives in his handbook the results of many months of patient research on short waves, and gives it from an amateur's point of view. Needless to say, it contains a wealth of information, including a history of the short wave which goes back rather further than the histories which we have seen in the past. The book provides a good grounding both for receivers and transmitters on short waves, and is well worth the modest sum charged for it.

5YG KICKS.

He says Y.L.'s have changed my plans,
For weeks I have not donned the "cans,"
It's bound to interfere, of course,
Upset my heart, and spoil my mose.

He says I am a broken reed,
His 2nd op. has gone to seed,
Instead of "tweet-tweet" in our "alley,"
I take some nice "bird" to a "Palais."

Alas! OMS, there's trouble pending,
When I go back, he'll "cuss" my sending.
He'll rave, and say that I am stupid,
And lay the blame on Mister Cupid.

CUTHBERT A. BROWN.

Strays.

BRS64 reports that there are only about four Mexican stations on the air:—

ICAGI and BGI are now working together under call sign N13AG. QRA is Laufasveg 53, Regkjavik, Iceland.

NUINK is asking for reports of reception.

NUIAYK are also anxious for reception or QSO's.

NUIOV has not heard this side of the pond yet, and wants to QSO G's. His QRH is 42.3 metres.

It is reported that 2XAF on 32.79 metres is being interfered with by British and Continental amateur stations. Will all stations kindly watch their step when on this wavelength or anywhere near it, as certain experimental work from a reception point of view is being carried out on the station in this country.

The Radio Manufacturers' Association are offering a prize of £50, with a second prize of £25 and a third prize of £10, with fourth, fifth, and sixth prizes of £5 each, in an open poster competition in connection with the exhibition to be held at Olympia from September 24 to October 1, 1927. Particulars may be obtained from the Association at Astor House, Aldwych, W.C.2.

NU-1AJM states, via G6YQ, that the following G's were heard by him at Leominster, Mass., during February, on 23 metres:—2OD, 2KF, 5HS, 5BY, 5MQ, and 6YQ.

1AJM wants schedules with G stations on this wave. Any offers?

FRENCH SECTION OF THE INTERNATIONAL AMATEUR RADIO UNION.

The "Reseau des Emetteurs Francais," which numbers now the majority of the amateur transmitters of our country, has undertaken the reorganisation of all its departments with the object of affording further advantages to its members.

Twenty-four sections in France and the Colonies have been formed in order to facilitate the relations of amateurs with them, and with the Central Headquarters.

The REF has entered into an agreement with its official organ, the "Journal des 8," to secure correspondence on all subjects concerning short waves received from its members, as well as a free QSL relay service for its members.

This service will function from henceforth in the following manner:—

The dispatch (free for the members of the Reseau) of QSL cards is carried out by a special service, which periodically addresses the QSL's for foreigners in conjunction with the National Sections of the different countries. The dispatch of cards received by the service for French amateurs is carried out by the forwarding of a stamped addressed envelope which must be sent to the QSL service by those wishing to avail themselves of it.

The address of the above service is: Larcher, B.P., 11, Boulogne-Billancourt (Seine).

An emblem has been designed.

Arrangements have already been made for reunions to be held at the headquarters of the various sections, and courses in Morse have already started.

The REF puts itself at the entire disposal of amateurs requiring information relative to transmission and reception on short waves.

Thanks to all these arrangements, specially designed to be of help to an amateur in the arrangement of correspondence and the choice of his section heads, the REF offers to amateur transmitters and to all future transmitters advantages of particular interest as much from the technical point of view as from that friendly relations between the "8's" and foreign amateurs.

As the REF is the French Section of the I.A.R.U., it is in close liaison with all amateurs of foreign countries.

The President of Honour is M. J. Lefebvre 8 GL.

The Presidents are Messrs. Leon Deloy, 8AB, and Pierre Louis, 8BF.

The Vice-Presidents are Messrs. Levassor, 8JN, and Le Blanc 8DE.

All correspondence should be addressed to the Secretaries:—R. Audureau, 8 C.A. 29, Rue Bretagne, Laval (Mayenne); R. Martin 8 DI 63, Bd de la Republique, Nimes (Gard).

A Power Transformer.—Continued from page 7.

being the finished dimensions of the secondary coil and having a centre hole to fit over the primary winding and shield. Having placed one of these over each limb, we pass on one coil, taking care that the winding is in similar direction upon each. Then another two washers and another coil, and so on, finally placing the filament coils at the top.

The beginning of each coil is joined to the end of the next by bringing the inner end out between the two washers, with the lower ends joined together like the primary. As we make this latter joint we connect another wire of, say, 1-18 electric light wire to form the centre tap and to rise to the terminal plate.

When all the coils are on we can place the top limb of the iron core in position, putting the plates in one by one. Be careful to see that each is in correct position, one end of each plate sandwiching in the rising laminations of the side limbs. Finally, the upper angle plates are placed in position and bolted up tight.

The terminal plate is a piece of ebonite $\frac{3}{8}$ in. thick and 9 ins. long by 5 ins. wide. The terminals are arranged upon it as shown in Fig. 6. The plate is fixed by four set screws to the flat sides of the angle irons, small bushes $\frac{1}{8}$ in. thick serving to raise the plate and provide space for the terminal nuts underneath. The terminals should be of a good pattern. The three for the high tension should be raised up on fluted porcelain posts to avoid leakage due to creeping should moisture collect upon the ebonite plate due to condensation. Suitable

posts can be obtained from any manufacturer of china insulators. A cover should be provided over the terminal plate to keep off dust, but is not essential. If

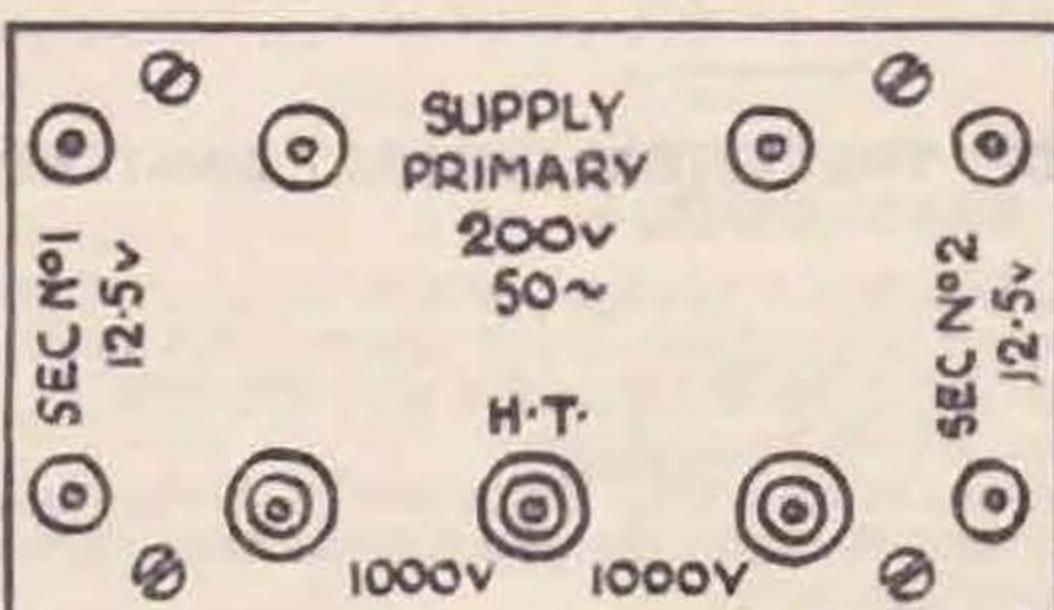


Fig 6

desired a centre tap can be brought out for each of the filament coils at the twelfth turn. This will, of course, mean three terminals on each side.

The whole of the iron work should be now painted and the terminal plate engraved or marked to denote the terminals. Holes can be drilled in the lower angle pieces if it is desired to fix the transformer to the floor or a base.

The losses in a transformer are of two kinds, those in the iron, and the copper losses. The former is due to eddy currents and hysteresis. With thin laminated iron plates, well insulated from each other, the eddy current loss will be small. The hysteresis loss will depend upon the frequency of supply. Using stalloy of commercial quality, the loss at 50 cycles will work out about 75 watts per pound of iron, so that we have only to weigh up the whole of the laminations when cut to compute the approximate iron loss.

The copper loss is simply the watts lost in heat in the wire, or simply the C^2R losses in the whole of the windings. We, therefore, have to ascertain the resistance of the windings, which can be done either with a bridge or by a voltmeter across the winding, knowing the correct current flowing.

Radio Trade Notes.

We have been informed by the Marconiphone Company, Ltd., that the firm now lists their gramophone amplifier separate from their gramophone "pick-up" apparatus, the price of the former being £8 1s., including royalty, and the price of the latter £5, the 70 to 1 input transformer being listed at £2.

We have also received a somewhat novel poster which illustrates the adaptability of the KL1 valve to a self-contained broadcast receiver. The poster is in two colours, and shows the K1 receiver, the wiring and lay-out of the set being in graphical form. The poster should appeal to all trade members, and assist in "business getting" to a great extent. It is now available for distribution to the trade from the Marconiphone Company.

R.S.G.B. and A.R.R.L. Reciprocal Arrangements.

Regarding the arrangements between ourselves and the A.R.R.L., whereby we collect subscriptions of British members of that League, cheques in respect of these payments should be made payable to Mr. J. A. J. Cooper and not to the R.S.G.B.

By arrangement with Headquarters, Mr. Cooper forwards these subscriptions to A.R.R.L. without payment through R.S.G.B. accounts so as to avoid delay.

Stray.

The R.E.F. Convention will take place in Paris on May 22.

Reports on Research.

Instructions for Contributors.

These Notes have now begun to assume great proportions and owing to the large number of stations involved, they take up a considerable amount of space in the BULLETIN. Moreover many members do not appreciate that Area Managers have plenty of work on hand and that if they rendered concise and pointed reports much time would be saved.

The following rules have therefore been prepared in order to assist both Area Managers and reporting members:

- (1) State total stations worked.
- (2) Give details of localities, i.e., whether G's, Z's, G.I.'s, U's, etc.
- (3) State power used.
- (4) State source of power supply, whether home-made A.C., D.C., Dry Batteries, etc.
- (5) Best D.X. for month and brief detail of report by the station worked.
- (6) Any remarks relative to your station, to be brief and not more than 30 words.
- (7) If you write your Area or District Manager and expect a reply, write on separate sheet of paper and enclose a stamped addressed envelope for the reply.
- (8) Your report must reach your Manager by the date mentioned at the head of his Notes from now onward.
- (9) Avoid the use of abbreviations and wrongly-spelled words.
- (10) Area Managers should submit their reports to Headquarters by the 16th of the month preceding publication.

If it is apparent from the Manager's report that any member has not observed these rules or should a Manager report that a member is not observing them, the Editor reserves the right to delete the paragraph referring to his station.

SOUTH-WEST DISTRICT.

Area Manager, 20P.

May I take this opportunity of thanking those who so kindly and thoughtfully sent me letters of sympathy on the loss of my father. I find that the time which I had previously given to area matters is now very sadly curtailed, but I am pleased to announce that for the next couple of months the notes will be prepared and written by Mr. H. Dean Poulton (6UG), whose call is familiar to

all of you. I am deeply grateful to him for his co-operation and help.

Area Notes by 6UG.

I have been asked by the area manager to carry on for the time being and appeal to all members in this area to assist me by sending reports regularly and promptly. Reports can be sent either to 2OP or to my QRA, H. Dean Poulton (G6UG), 18, Albion Street, Cheltenham.

G5BK, a new member, is now very active on 45 and 23. He badly wants QSO's on 23, and says that there is not much doing on that band. 6JK, of Weston-super-Mare, is now active on 45 and is QSO fone GGI and GW, with a power of 10 watts D.C. generator. 6PT reports that he is not doing much owing to the power supply company changing over to A.C.: he will soon start again with increased power. 6XI reports working various G's with power of 1.5 watts and is fixing a Hertz; he also reports a pirate transmitter near Winchester. 5VL reports working E.A., G's, E.F., E.I. (2), E.T. and four N.U. stations with powers up to 45 watts from rotary convertor. 5FS is very QRW with removal of QRA and other duties; he states that the Bristol Society will be having field days with the portable station, 6VN. 6UG has been working fone on 45 during week-ends and erecting a 23 transmitter for the A.R.R.L. tests. A great many stations in this area have again failed to report. Now then, OM's, let me have a good report next month to reach me by the 10th. I shall be pleased to fix up schedules with members desiring tests with stations in this area, specially on the 23 band, in view of the forthcoming A.R.R.L. test.

QRA Section.

WILL new members please note that cards for countries, where a QSL service is in operation, should be sent direct, and not to this Section. A complete list of such countries, with the addresses of the forwarding agents, was published in the February BULLETIN. Members can obtain this and other back numbers from Headquarters, price 7d. post free.

The Dutch I.A.R.U. has appointed an official correspondent for Great Britain and the Irish Free State. His task is to collect all amateur radio news from this country for publication in Dutch amateur radio magazines.

When any special tests are to be carried out here, or any other event of importance is coming along, if particulars are forwarded to him they will be published throughout Holland.

Here is the QRA:—

J. H. KOEN, ENROO4,
73 bis, Frederick Hendrikstraat,
Utrecht,
Holland.

The Dutch correspondent for Brazil is:—

C. C. VERBEEK, ENRO3O,
30, Tolsteegsingel,
Utrecht,
Holland.

When cards are sent to this Section for forwarding the stamps should be enclosed loose and not stuck on the cards.

QRA's FOUND.

AE1BK.—Experimental Station, Royal Siamese Navy, Bangkok, Siam. (Inf. YDCR, T. & R.).

JKZB.—Y. Imaoka, Post Box 5, Kawasaki, near Tokio, Japan. (Inf. YDCR, T. & R.).

ARCX.—Norwegian Whaler "Nilson Alonso," in Antarctic Sea. (Inf. YDCR, T. & R.).

Y7VX.—R. Jolliffe, Frocester, Govinna, Ceylon. (Inf. YDCR, T. & R.).

TFHV.—Dr. Vopler, Akurcori, Iceland. (Inf. EB4FT and Miss Dunn, T. & R.).

I1DG.—W. Saigroni, via Alessandrina, 113, Rome. (Inf. A. F. Elton-Bott, T. & R.).

NRCTO.—Box 115, Cartago, Costa Rica. (Inf. G5KU, 2AFG).

SVAYRE.—R. D. O. Ayre, Apartade 288, Caracas, Venezuela. (Inf. A. S. Williamson, T. & R.).

HK5.—Hong Kong Radio Society, Harbour Dept., Hong Kong. (Inf. H. A. Rock, T. & R.).

S7NB.—K. E. Tarsala, Hapelaiteen 5, Kuopio (Suomi), Finland.

C1AD.—Mackay, Newcastle, N.B., Canada. (Inf. G5YM).

OEGP.—G. Priechenried, Zehetnergasse 20, Vienna XIII. (Inf. T. A. Iserbyt, T. & R.).

OA3W.—C. Rieder, Burnham Road, Sea Point, Capetown, South Africa. (Inf. C. R. Ponting, T. & R.).

A5BY.—D. R. Whitburn, G.P.O. Box 920, Adelaide, Australia. (Inf. G5XY).

A5JA.—P. J. Brewer, 21, Douglas Street, Parkside, S. Australia. (Inf. G5XY).

A2MS.—3, Viedaved St., Hamilton, N.S.Wales. (Inf. G5KU).

ENPB2.—J. Akkerstaff, 9, Papenstraat, Deventer, Holland. (Inf. J. H. Koen, ENROO2).

U98X.—R. Colvin, Radio Room, "U.S.S. Worden," c/o Postmaster, New York City.

Y2KT.—Lieut. F. Rodman, c/o Lloyds Bank, Ltd., Homby Road, Bombay, India.

NE8JC.—Collins, St. John's, Newfoundland. Transmitting nightly 44-46 ms. at midnight G.M.T.; asks G's to look out for him.

REN8.—H. Soula, Garibaldi 1089, Tandil Bas, Argentine. (Inf. F. G. Pratt, T. & R.).

SWS.—"S.S. Chelatross" (Swedish). (Inf. Miss Dunn, T. & R.).

TNN.—"S.S. Eduardo" (Spanish). (Inf. Miss Dunn, T. & R.).

PCJJ.—Philips Radio Laboratory, Eindhoven, Holland. (Inf. J. Hollingsworth, T. & R.).

QRA's.

G.

2CX.—J. D. Chisholm, 27, Gresham Road, London, S.W.9.

2SC.—D. G. Scott, Cleve Hall, Champion Hill, Denmark Hill, London, S.E.5.

5BV.—Hugh N. Ryan, 24, Woodhayes Road, Wimbledon Common, London, S.W. (Corrected address.)

5JL.—G. R. Roth, 95, Waterloo Crescent, Halifax.

5KH.—Now licensed in the name of H. D. Cohen, 144, West Hill, Putney, London, S.W.15.

5PL.—J. A. Philpot, 21, Casino Avenue, Herne Hill, London, S.E.24.

5VY.—T. Vickery, 274, Mount Pleasant Road, London, N.17.

5XR.—H. G. Marshall, 15, Grove Road, Portland, Dorset. (Inf. G6YZ).

6HW.—c/o L. A. Lafone, The Grove, Harrow-on-the-Hill, Middlesex.

6IO.—T. Woodhouse, 31, Trecco Road, Peckham Rye, London, S.E.15.

6JK.—S. Keith Jopp, 15, Lothbury Road, Oxford.

6WW.—A. E. Walker, Glen Burn, Ashleigh Road, Leicester.

6ZB.—Capt. W. V. G. Fuge, Royal Signals, R.A.M.C. Mess, Crookham, Aldershot.

2AFL.—C. J. H. Joyce, 9, Campbell Street, London, W.2.

2APW.—A. D. Narraway, The School House, Dorrington, near Shrewsbury.

2BAC.—E. R. Salt, 82, Dalling Road, Hammersmith, London, W.6.

2BLX.—J. W. Tyrrell, 14, Boundary Road, Ramsgate.

2BNG.—E. R. Martin, Castlemount, Worksop, Notts.

2BOC.—J. Soten, 55, Grendon Road, Polesworth, Tamworth.

2BOX.—W. H. Maddison, 155, Holmleigh Road, Stamford Hill, London, N.16.

2BWX.—F. A. George, 40, Bell Street, Edgware Road, London, N.W.1.

2BWZ.—H. Harding, Treve Radio Service, Ebbw Vale, Mon.

2BZB.—A. R. Austin, 18, Carlton Terrace, Swansea.

CHANGE OF QRA.

2BWR.—Now "St. Margarets," 49, Woodstock Road, Carshalton, Surrey.

G5FQ.—Now 11, Gerrard Road, Harrow.

G5FS.—Now 155, Bishop Road, Westbury Park, Bristol.

G6JS.—Now Garnock House, Grangetown R.S.O., Yorks.

G6YU.—Now "Abbeydore," Wyken Avenue, Wyken, Coventry.

CHANGE OF CALL SIGN.

YDCR now Y2KX.

QRA's WANTED.

G5BC, AB1, EUR7DF, AQ1HH, AR0M, SK9AA.

I also have here stamped communications for the following stations, but no QRA's!!!:—G2BL, 2BIP, 2BJR, 2BV, 2BZG, 2GM, 2WX, 2ZF, 5AL, 5BQ, 5PG, 5WG, 5YU, 5YV, 6AZ, 6DL, M1AMS, NX1NX.

OFFICIAL DANISH AMATEURS (at 12/3/27).

(By courtesy of J. STEFFENSEN, D7JS).

D.

7AA.—F. M. Knuth, Marcus, Leusgreve, Bandholm, Laland.

7AB.—F. O. J. A. Flensburg, Boghandlermedhjaelper, Harhoff-salle 15, Ringsted.

7AF.—H. C. S. Nielsen, Mekaniker, 25 Vendersgade, Copenhagen, 4K.

7AH.—J. C. A. Christensen, Oudenaacentralens Transformator-station, Aarhus.

7AI.—A. Lykstoft, 37, Julius Blomsgade, Copenhagen.

7AJ.—A. J. Jensen, Kontorelev, Enghavevej 5, Aalborg.

7AT.—A. Lykstoft, 37, Julius Blomsgade, Copenhagen, L.

7AX.—A. C. Eskildsen, "Bella Vista," Rungsted.

7BD.—J. Grane, Ulvemosevej 12, Rungsted.

7BJ.—B. Joergensen, Brandesalle 8, Copenhagen, 4V.

7BX.—E. J. Schioedte, 77, Bredsgade, Copenhagen, K.

7BZ.—C. F. Banditz, Erikshus, Ringkoebing.

7CF.—C. Fode, Westerbrogade 41, Copenhagen, 2B.

7CH.—C. Hoegholm, 8 Dr Abildgaardsalle, Copenhagen.

7CM.—E. C. Madsen, 6 Vestergade, Nyborg.

7CZ.—E. A. Tubbs, Tordenskjoldsgade 23, Copenhagen.

7DM.—P. E. Jepsen, 10 Voernedamsvej, Copenhagen, F.

7EW.—H. Rafn, 8 Blystsvej, Copenhagen, 2F.

7FJ.—A. J. Faurhoej, 5 Humlebaekgade, Copenhagen, 2L.

7FM.—F. C. R. von der Maase, Skolelev, 40 Classensgade, Koebenhavn, 2.

7FP.—F. Philip, 12, Berggreensgade, Strand.

7GL.—G. Langholt, Willemoesgade 16, Copenhagen.

7HJ.—H. Joergensen, Tvaergade 14, Aarhus.
 7HR.—C. F. H. Rahe, Vardegaade 7, Copenhagen, 10E.
 7JF.—J. Fode, Dosseringen 32, Copenhagen, N.
 7JO.—J. Finsen, Thorshaven, Faroe Islands.
 7JS (QSL Section).—J. Steffensen, Ehlersvej 8, Hellerup, Copenhagen.
 7JW.—J. W. Krause-Thomsen, 18 Jens Baggesensgade, Korsoer, Copenhagen.
 7LK.—J. L. Kyster, Vesteralle 7, Aarhus.
 7LO.—K. Lund, 40 Smallegade, Copenhagen, F.
 7MC.—M. C. Christensen, Radiotekniker, Silkeborg.
 7MT.—E. Poulsen, 6 Virginiatej, Copenhagen, F.
 7NC.—N. C. Nielsen, Kongensgade 38, Odense.
 7NI.—N. Jacobsen, 29 Bredgade, Copenhagen, K.
 7NR.—J. Nissen Rahn, 15 Bispegaade, Haderslev.
 7NS.—C. V. Schioedtz, Hessensgade 39, Copenhagen, S.
 7SN.—K. R. Norre, Rosenlundsgade 13, Aalborg.
 7SR.—Hans A/S. Schourup, Vestergade 8, Aarhus.
 7TS.—Aarhus Tekniske Skole, Aarhus.
 7VJ.—V. K. Joergensen, Frederikssundsgade 199, 1BRH.
 7WA.—W. Christensen, 124 Aagade, Copenhagen, N.
 7XF.—E. Hyllested, 97 Strandvej Hellerup, Copenhagen.
 7XU.—H. G. D. Norgaard, 33 Livjaergade, Copenhagen.
 7XY.—H. Norgaard, 33 Livjaergade, Copenhagen.
 7XO.—J. O. Nielsen, Vesteralle 18, Aarhus.
 7ZG.—H. T. Petersen, "Fribø," Oestergade, nr. Sundby.
 7ZM.—G. Bramslev, 6 Roarsvej, Roskilde.

G6BT,
 QRA Section R.S.G.B.,
 82, York Road,
 Bury,
 Suffolk.

QSL Section.

Monthly Report.

I have good news this month, as follows:—Any cards, any country, may now be sent in for distribution.

Members are asked to note that, while postage is free to France, Belgium, Holland, Spain and Germany, when sending cards for other countries, it is left to them to enclose a stamp, say 2d., to help defray this extra post.

Another word about envelopes. It seems incredible to me that those chaps who seem to be on the air the most are the worst offenders with their supplies. Once again, please keep me supplied with your stamped addressed envelopes, and don't forget to put your call sign in the top left-hand corner; there are several instances where there has not even been any call sign on the front at all!

Imagine my consequent job, looking right through the log-book to find out what "Bill Smith's" call sign is!

All cards in the list below, which have been claimed up to date of issue, are cancelled.

More envelopes, please. TNX.
 2AXO, 2ABA, 2AP, 2AGC, 5AL, 2BAC, 2BOX, 2BXM, 2BY, 2BLM, 2BS, 2BWT, 2BYN, 2BK, 5BZ, 5B3, 5BQ, 5BC, 5BX, 2CC, 2CX, 5CY, 5CA, 2DX, 5DG, 5DK, 5DP, 6DM, 6DS, 6DX, 6FR, 2GY, 2GF, 5GQ, 5GS, 5GH, 6GS, 6GH, 6GD, 6GF, 2HQ, 2HW, 5HA, 6HF, 6HS, 6HC, 2JC, 5JA, 6JK, 2KF, 2KZ, 5KT, 6KU, 6KZ, 5LX, 5LS, 2MW, 2MA, 5MP, 5MU, 2NJ, 5NW, 5NX, 6NF, 6NG, 6OR, 6OH, 2QV, 2QZ, 2QM, 5QB, 5QZ, 6QH, 6QL, 2PP, 2PG, 5PM, 5PG, 6PG, 2RR, 5RD, 6RF, 6SI, 2SH, 5SK, 5SZ, 5TH, 6TZ, 6TG, 6TD, 6TU, 6TC, 2UN, 5UC, 6UX, 6UV, 6US, 6UP, 2VG, 2VQ, 5VL, 6VP, 6VJ, 5WH, 5WL, 5WO, 6WA, 2WR, 2YD, 5YU, 5YS, 6YU, 6YW, 6YK, 5ZY. BRS: 85, 78, 9, 80, 13, 73, 22, 6, 41.

London Area.

By G. A. EXETER (G6YK).

We are still very far from getting to that position which the Area should be, as the number of stations reporting are only a small percentage of those that could. I should like every active member in the Area to try and help to place us on top in the reports for these columns, because, as the "Headquarters Area," we should *lead the way* and not take a lower place, as we are at present.

More especially do I request those more prominent men—the very ones who should show how—to report to me each month. Strangely enough, not a single station associated with Headquarters Staff has reported to date. Why is this? Some of you have had more to do with the formation of the Section, and its subsequent affairs, than practically any station that reports regularly. I have no reason to suppose that you have lost interest—indeed, quite the reverse—but surely you must know that the rest of us are keenly interested in your work? Please, then, just make a practice of sending in a report to me each month, even if you have done nothing, so that we know that you are still "in the game."

The Southern Division has been allotted to Mr. C. H. Targett (6PG), of 21, High Street, Dartford, and in future all stations in a southerly direction should report to him by the 10th of each month. This makes the Area complete in Divisions and Divisional Managers,

and next month we are publishing exact details of the localities covered by each Division.

All stations in West London and others not sure of their Managers, please report direct to me. Now remember to drop that card as previously requested, and, by the way, send a report to keep it company!!!

REPORTS.

One or two stations sent in their reports too late for inclusion in last month's issue, so they are included herewith.

2LJ-2LK is the call-sign of the 23rd London Armoured Car Company, Sharpshooters, and is now working on 45-8 m. Xtal control, most week-ends C.W. & Tel, and would appreciate reports. BRS63 has found conditions very good, and has logged over 450 Yanks during the last month, including several 7th Dist. men. Ex 2BYN is now on the air, using the call of 6HP, and has been QSO 130 stations in the month, amongst which were LA1P and LA1W. This was their first G contact. He is getting various reports on his QSB, and would like to know if anyone has heard him with a pure D.C. note? and if someone will help him to eliminate key-clicks!!!

6HU has now obtained a 45 m. permit, and has worked Germany and France on 4 watts. He reports receiving conditions very poor. 6TA is using 50 watts of Rec. A.C., and has worked 1, 2, 3, 4 and 8th dists. U.S.A., average report R5-6, and has also had reports from British Guiana and India. 5GU has had 53 QSO's during the month, working most Europe during dalite, with two new countries S and FM. Input 10 watts. 5RZ is still carrying on his sched with NUIGA, and is also trying to QSO him on 22-7 m. at midnight. 6WN is settling down on 45 m., but has only worked locals, as he has no "foreign" permit. Some work has also been done on 180 m. 2NH reports 30 stations worked, his best QSO being Z4AA, which is his first Z contact. To him also goes the distinction of being the first European to QSO South Africa on 23 m., working OA5X. (FB!! OM.) 2AJC reports receiving conditions very poor. He wants to arrange scheds with GI and GC stns. He also says that NUIUE and NU2ABY are very keen to get reports from G stns. 2CX is a new addition to the "gang," having just been licensed. He is using a .06 D.E. valve with an input of 3-8 watts, and has been QSO most of Europe. He wants to know if anyone can give him any dope on using an LS5 or DFA6 with dry batt H.T. BRS25 has found conditions fair for reception except for Z's and A's. He has logged 380 stns, including TFHV at Iceland, and also X8FMB, who was in Beirut Harbour. 5TD has had a bag of 80 stns, amongst which was S2BS, who reported him R4 on 3 watts. F8UT said his QSB sounded like "a big Mosquito"!!! He heard a stn calling CQ de MARS, and wants to know if this is a record or a "leg-pull"! Several stations did not report.

Northern Division.

By 6CL.

6KS reports during March 25 QSO's with 3 watts input. Best DX was AIICW, strength R7. 2BXC anticipates obtaining his radiating licence very shortly. He says that SHBZL is anxious to QSO on 44 metres with any G station. QRA Demerara B.G. 6PN and 6BJ have been testing a push-pull circuit on 45 m., input 10 watts, best DX Sweden. 2CB is using 2 to 3 watts from dry batteries, working SMWF. He is rebuilding. 6CL has been absent from his QRA during March, but is now on the air again with 1 watt input from 100-volt a.c. QSO has been made with SM, K, B, F, GW and N with power. Experiments to eliminate key-clicks have yielded little success.

Will all North London hams report to me by 10th of each month. It will help if you drop a line, giving particulars of your station, and your present operations.

Eastern Division.

By 6LB.

6LB is still QRT, as he cannot get the Armstrong to perk, so is reverting to the Hartley. He has just acquired 230 volts A.C. mains, and hopes to QRO shortly. 6LL has found the Armstrong F.B., and is on both 45 and 150 metres. Using 10 watts, he is putting out on the higher QRH the most QSA signal possible, while on 45 m. he has QSO'd several Yanks. (Now 6LB, what about getting some dope from him for your perker? ?—6YK.) 5UP is also using the same circuit, and 30 watts of "mangle." He has been QSO 20 U's, and has been heard by YDCR. 6TX uses a twin feed Hertz, and has had a fine report of R6 telephony from Sweden on 3 to 5 watts. He also has the new A.C. mains, and is running a generator from them. 6UT has just received his first report from U.S.A. He is now attempting to QSO on 6 watts. 6KA is settled in a shack, and should soon be doing well. 5TR, while not busy on the "BULL," is carrying out experiments with several types of aerials. 5ZG is rumoured to have packed up for the summer, but we hope that this is not true. 2VS has been dividing his time between 150 and 45 metres, and has been listening on the longer waves for a change. He says he gets QSA sigs from 2LO!!!! 5AR is now on Xtal control, and is putting out a very fine signal. 2KT is about again, after a long and tedious illness, and all the "gang" wish him a speedy return to full health. During his enforced idleness he spent a lot of time testing on 45 m. during dalite, and had a good many QSO's with European stns, on one occasion getting an R3 report when the aerial was accidentally earthed. When the aerial was connected the sigs went up to R9!!!!

Will all East London hams report to me by the 10th of each month at the latest. Tks, OM's.

Channel Islands Notes.

By G2ZC.

March has brought us a welcome strengthening up of signals. During December, January and February no really strong signals were noticed, but this month, all districts seem to be coming in well, and many R9's have been noticed. The "star turn" of the month is I1AU (call used by I1AU when on QRP), who was QSO with Jersey using D.C. 3 watts, and came in R4. Southern stations have been elusive until this month. With their strengthening, it will be interesting to note if conditions will be the same as last year, i.e., as Northern became weak, Southern became strong, and *vice versa*?

Now, you hams on the mainland, I presume you read about us, just as we read about you, in District Notes? Look back at the March BULLETIN and see our "watch" hours, and please make use of them. It is no use our sitting and waiting for nothing, but if we can be of use, we will do our best. Even if you have not QSR matter, but you want to experiment, instead of calling a test, call us here, and we'll report for you. Both 2ZC and 6HZ are collecting data on directional blindspotting, so your test would be valuable, if either of these stations are on the air on watch. We are doing our part of the arrangement—will you do yours, as valuable time is lost if we keep our watch schedules and no one makes use of them?

G6PU is doing good work, as will be seen in his report, and is to be congratulated.

If he only knew it, OM Exeter (London) might be suffering from swelled head, as three of us here use the transmitter he described in *Wireless World* last October, and queries as to our circuit come from all over the place, owing to the O.K. results it gives. The latest recruit is in Yugo-Slavia. It is not so much the circuit, which is a good one, of course, but the lay-out of it, as described.

Through such queries friendships arise, and so the good work of "that Ham feeling" is spread, not forgetting the T. & R. becoming better known, and what it stands for.

Perhaps the fastest operator on the air just now is EB4CK, and, what is more, his spacing is perfect. He is the nearest approach to automatic one could wish, and his English is perfect. I pass on the information for Hams who wish to test their reading speed.

Is it not about time "fone merchants" restricted themselves to working during certain hours over the week-ends, especially on short waves? What do the majority of Hams think?

RESEARCH REPORTS.

G6PU reports general conditions for DX as not being good, and, on the whole, fading being very prevalent. Thirty-five U.S.A. stations have now been worked, 25 of which were during the last month, and included districts 1, 2, 3, 4, and 8. The majority of stations worked were 3rd District. Canadian districts 1 and 2 were also worked. FOA5Z was heard calling on three occasions, but all that could be raised from him was G6P?, though FOA5Z gave his QRA and said QSS and QRN were bad. A station was worked in Bordeaux with .76 of a watt (crystal controlled), who reported signals easily readable.

G2ZC, owing to sickness, has been little on the air, but has been QSO with several European countries on QRP. As nearly every report now states QSB "FB stedi D.C.", he is now content. On 24th inst. he noticed a curious phenomenon, within half an hour two Paris stations were worked with power and tuning untouched. During the first QSO, QSS and QRN set in, and both stations reported this with R3 signals. The second QSO followed immediately after, when no QSS or QRN were noticed at either end, and signal strength was a steady R6 at each station.

G5GW is still at sea, and has no transmitting reports. (His late R.N. examination results were FB, and we send his 73's from the C.I.—22C.)

G6HZ and G6OX have not reported, and, what is more, there is no excuse, as I reminded them both. It won't do, OM's, and see to it next month.

French Notes.

By EF8PY.

The "big boy" I spoke of in the last "BULL." has had the chance to QSO many times the station NRCTO, a new one in Costa-Rica.

8FY, who finds dead spots in England for his signals, advises me that he would be glad to receive reports from Northern England and British Dominions concerning his transmissions on 44, 32 and 22 metres.

8QRT is going to be overflowed by a continuous stream of Australian QSL's; one of them gives him as R5 on 0-V-0, and the strongest European he has ever heard.

SFT (Aronssohn, 2 bis Rue Joseph-Deville, Colombes, Seine) makes some very interesting tests on a vertical Lévy aerial. The two op's get R7 reports from U.S.A. They use the call 8FTJ for their low-power tests.

8CL will soon make the Antipodes explode when they are to hear his new power transmitter.

SYOR is overwhelmed by American traffic, and one wonders when he can go to sleep! He has been in touch with NUFACX and NUFOL. He keeps a schedule all Sundays with NUFVH. FM8JO has been heard by NUFLR and NUFOL.

In the Dominions, ARSLHA is doing good work. The home of AF1B (old FI8QQ) has been visited by the stork; best of luck to all, OB!

8PM has left the bug for honeymooning.

4BM, with no more than 5 watts (38 mA on 130 volts), has been in touch with NU1ATG, R5 and NU1KK, R4. His last bit of DX is AQ1MDZ (Williams, Mosul, Iraq), who gave him an R8 report!

8MSM, a newcomer, uses 80 volts on a Mesny, with an indoor aerial; he has had reports of R5 in Holland.

I must signal the excellent 'phone work of 8AH, 8BX and 8YZ on 180 metres, 8ABC on 80 metres, 8JZ and 8WY on 44. The latter uses a new device of magnetic microphone.

The R.E.F. makes experiments on 5 metres. The best, *and official*, DX has been made by Prof. Mesny, who held a QSO between Southern France and Corsica. Other amateurs have covered several tens of kilometres on terra firma.

In the June issue of the "BULL." I shall relate the experiments of 8DU (a priest) of sending and receiving apparatus in the deep of a coal mine; those are due on April 12 and 13; waves from 5 to 40 metres. PSE to all having heard of 8REF (special call for tests) QSL; a special QSL card waits for them.

Dutch Notes.

Prepared by EnOCX.

In spite of the unfavourable conditions under which we Dutch hams are still experimenting, many of us have reached very nice results last month.

EnOFW reports working North Africa, got his signals reported R6 with an input of about 4.5 watts. He is using Hertzant.

EnPCG2 worked Hungarian WAA with an input of only 3 watts raw A.C. (Oh boy! don't use such rotten G.S.C.!) His signals were reported R4.

EnODG worked SMWF. He tells a young lady is pushing the key over there. Beware of Y.L.-itis, OM!

EnOPT also worked WAA with 0.7 watt. His signals being reported R2-3 pure D.C. VY STDI.

EnOCO is still trying out several circuits.

EnOCX is continuing experiments with indoor aerials for transmission. He is working distances up to 500 miles with ease. Average reception strength R4. Pure D.C. VY STDI. Input only 5 watts. He has arranged a schedule with G6HP. What British hams will come in touch with this station? EnOCX will not answer European stations when those stations are working with raw A.C.

Belgian Notes.

By EB4FT.

Now they can get licences, the Belgian hams are doing good work. All calls given by the Post Office shall be of the order 4AA to 4 ZZ. The maximum authorised input is 100 watts.

4QQ works regularly the U.S.A. with 440 volts D.C. from the mains. His signals are quoted there from R4 to R5.

4CB, of Ostend, though he is very cursed by the coastal station and ships (*these sparks!*), is QSO many NU's, and hope it will do more good on 20 metres where he is has dropped.

4FT has established the first QSO Belgium-Alaska in working WWDO; he has also worked in a single day NJ2PZ, OZ2BX, OPIAU and NITFHV.

4AU has got down to the 20-metres band, and keeps a regular schedule on this QRH with SC2LD, of Santiago. Besides, his signals on 20 are particularly QSA.

4CK, with a 10 watts input and a Lévy aerial, brings noise in U.S.A. when he likes. He keeps a schedule, too, with the SS. SFV, now near the Cabo Verde Islands, where he gets R7-8 reports.

4UU has been copied 30 feet away from the 'phones by NULAGS.

4FU has got to U.S.A. for his second QSO.

4ZZ, 4WW and 4AX deserve a special mention, with inputs never exceeding 100 watts. Their results are comparable with those of EF8JN and EF8YOR. Look for it! 4WW has been in touch with sixty U.S.A. (from which ten on 20 metres), four OZ, four OA, three SB, plus FOA5Z, AIDCR (R8), AI2KW, SU, NJ2PZ (R8), NR, AF1B (R7), FKKTC (R8), and a regular schedule, never missed, with the whaler AQE in the South Seas, now bound home via Pacific, Panama and New York, where she is expected on April 23. The signals emanating from these three amateurs of Liege, who are QSP'ing all DX are R9 at AQE's!

4AX is the first EB to have been QSO with South Africa on 20 metres.

Danish Notes.

By ED7MT.

7BX has cracked his L.S. 119 bottle and is now working on 0.4 watts with a dull emitter receiving valve. He is very rarely on the air now as he is very busy on the Royal Polytechnical Institute.

7EW is QRW for the same reason as 7BX, and is still little on the air. He has received a report on R4 from AIDCR, using 10 watts, F.B.! (He will QRO to 40 watts, not to 70, as noted in last BULLETIN.)

7MT have now passed his radio examination O.K. and will now

work regular schedules again. He has received a report from Georgetown in British Guiana on R3, using 14 watts. As he worked DCR this month he tried the little eighth M. fan, and the wonder happened. DCR came back with "rokfb, OM" (my power was 6.4 watts. Hi!). He hopes to be on the air with crystal control in May.

7NI has not in the past time done any work of interest, but he has just put up a new aerial, a voltage-feed Hertz. All reports will be very much appreciated.

Irish Notes.

By 5NJ.

5MO has been working during week-ends only of late, and a start has been made on 23 metres. The following countries have been worked on this wavelength, F.B.D. SM, and it is hoped to do some DX shortly.

5WD has now got A.C. installed satisfactorily as power supply, and appears to have got the note well smoothed. Most stations worked report the note as "DC." As yet, however, no transformer is in use, the H.T. at present being the mains, suitably rectified, and giving an input of from 5 to 6 watts. During the month two more new countries were worked—Russia and Yugoslavia—signals being reported R5 in both cases.

6JA has had trouble with a section of the armature of his hand generator burning out. He is getting out very satisfactorily all the same, and is now QSO with practically all Europe. Three R9 reports have been received from London and an R7 report OJZ. He cannot, however, work at all during broadcasting on account of BCL's, but this will be fined up shortly. (A method has been found by the R.T.U. of completely curing this trouble, OM.)

2AFD is still doing excellent reception work, though has nothing startling to report this month. New countries have, however, been logged, and it is hoped to obtain the outside permit in a few months.

6MU has had an active month, and has been working at times on 23 metres odd. On this wave about six U.S.A. stations, one Canadian, and NBHIK have been worked. On the 32 metre band the following have been worked: A3WM, Z2BX, A12KX. BZ's: 1AC, 1BR, 1AW, 2AX, 2AK, and also 2AK of Uruguay, while on 44.5 metres many U.S.A. stations and BZ1AC have been worked. Further experiments on crystal control are now taking place, and meantime the schedule with India continues to go along excellently.

5NJ has not been so active as usual on account of time being very limited. Stations worked on 75 watts include OA6N (several times), A7CW (on schedule), DCR (now 2KX), A3AM, Z4AA, etc. A current fed Hertz antenna is now in use, but judgment will be reserved until further tests have been made. An R5 report has arrived from AM3AB, Johore, Malaya.

5ZY is still awaiting delivery of a crystal before commencing regular work.

I have much pleasure in welcoming 5HV "to the air." The station has just commenced work, and with an input of half a watt is R6 in South Devon—a good beginning! Reports would be much appreciated, the QRA being W. H. Martin, M.A., B.Sc., 20, Myrtlefield Park, Belfast.

Irish Free State Notes.

From GW1LB.

Only two stations have reported this month. This won't do, OM's, and we really must try to make a better show in future. A "nil" report is better than none; it, at any rate, shows that you are alive!

First, I want to correct an unfortunate error in my Notes in the April BULLETIN, where the station referred to at the beginning of the Notes should be 18B, and not 11B, as printed.

14B has installed a hand generator and appears to have successfully mastered the difficult art of keying with one hand and turning the generator with the other. He has been QSO most of Europe, strength R5 to 6, and his bag for one week-end included amongst others, Italy, Austria and Finland. He is at present running a schedule for fading tests with a listener who is on a cruise in the Mediterranean.

14C has been busy with examinations and only got on the air, for the first time this year, in the middle of March. He is temporarily hampered by building operations, but is building a new MO transmitter, and is daily expecting delivery of a Mackie generator. With his old transmitter, he has been QSO many European countries, including Hungary and Czecho-Slovakia, and, of course, many G's.

18B has not reported. (How about it, OM?) I hear, however, that he has had trouble with his hand generator.

11B has not been keeping late hours recently, and has only had European QSO's on 5 watts. Last week he received a card from British Guiana reporting his signals R4 when he was working a U station on an input of 9 watts. His C.C. transmitter is now working satisfactorily, using a PM6 in the oscillator and a DFA8 in the amplifier. H.T. for the oscillator is derived from dry cells, leaving the whole of the M.L. converter output available for the amplifier.

Now, GW hams, PLEASE DON'T FORGET REPORTS BY THE 10TH OF NEXT MONTH!

Scottish Area Notes.

(By 5YG).

I do not know whether it is that the new method of reporting the month's work has scared some of the stations, but the fact remains that, apart from the reports furnished by No. 1 District, reports are notable chiefly by their absence (to use an "Irishism"). Nos. 2 and 3 Districts have furnished one or two reports respectively from radiating stations, while No. 4 District has produced nil. Comment is superfluous.

I have to acknowledge the pleasure of a visit from 2BPE.

No. 1 District.

(By 2WL).

2FV.—Six QSO's comprising G. and Gc.—Best DX: Midlands, yielding a report of "R6, and sigs very easy to read." Power: 8 watts input from 250-volt D.C. mains. Rebuilding transmitter in more substantial form now. Receiver now OK. Still working on 12ft. single wire aerial and counterpoise (tuned to fundamental). Calibrated wavemeter for 6MS. Work interrupted owing to arc welders next door working night and day.

2MG.—Once more back in "the game" after an absence of years. Presently occupied in rebuilding and dispersal of cobwebs. Station now almost complete, and expected to be in full operation by end of April.

2WL.—Local QSO's only, with a power of 1 watt derived from H.T. accumulators. Experimenting with crystal control on 45 meters. Up against H.T. problem, no mains, and accumulator charging a difficulty. Would welcome any suggestions. Lending a hand with 5YG's new gear.

5YG.—Now established at new QRA. Busy erecting transmitter and two "sticks." Motor generator installed and doing its "stuff" well. No more 25-cycle A.C. mains, thanks!

6MS.—42 QSO's, including D, N, B, SM, etc. Best DX: R6 from "B," "DC very FB." Power derived from home made H.T. accumulators, charging via lead-aluminium rectifier from 25-cycle A.C. mains. Local stations report R4, while distant stations report R5-6. Finds counterpoise better than earth for cutting out interference on BCL waves, also yields better reports.

6NX.—100 QSO's comprising G, Gc, GI, GW, SM, D, LA, B, F, N, EA, TP, K, and L. Best DX: TPNT who reported R7 with pure D.C. note. Power: 10 watts derived from D.C. mains. A new single-wire aerial has been erected composed of 7/18 enamel-covered wire, which appears to give superior results to that hitherto in use.

2AVZ has got started on his transmitter, and hopes before long to join the ranks of the "radiators."

2BPE has lodged his application for permission to use radiating gear, and will no doubt be in operation as a full-fledged "ham" before the next issue of the BULLETIN.

2BQN reports temporarily enforced inaction owing to pressure of business.

No. 2 District.

(By 6IZ).

6IZ.—19 QSO's, comprising G, Gc, GI, GW, F, B, S, SM, K, CS and I. Best DX: IIWW (Naples), who reported "R6 with good DC note." This contact took place on March 29, 1927, at 00.01 GMT. Power: 4 to 5 watts from 220-volt D.C. mains. Very little done owing to pressure of business. Single wire earth and aerial were again replaced by twin-feed Hertz, and first call produced QSO with S.7NB (QRB 1,200 miles), who reported R5. Conditions good during month.

BRS60 has lodged his application for a transmitting licence, but pending its issue continues to assist 6IZ.

The following stations did not report: 2VX, 6VO, 6GQ.

No. 3 District.

(By BRS6).

5JD has done no radio work in March.

6KO.—90 QSO's, including, among others, Roumania, SFV (off Cape Verde Islands), 12 NU's (1, 2 and 3 Districts), 3NC's (1st and 8th Districts) and Madeira. Best DX: U.S.A. yielding an R6 report. The above on 45 metres with a power of 10 watts derived from a hand generator. Tried centre-feed Hertz, but not successful, now back to old type with counterpoise. Immediately QSO NC. Find "D.C. steady" excellent for DX. Conditions good at beginning of month, but stiff later.

BRS6 rigged up a Reinartz to specification by 6KO, and with it in four nights logged 220 stations (four continents, 28 stations) the greatest QRB being that of SC.2AS. He reports conditions good, and that South American and Canadian stations come in much better than the NU's.

BRS71 has been in London; has only had two nights "listening," during which three continents, 18 countries were logged. (Tx for crd Om—5YG).

The following stations did not report: 2BB, 5NW, 5WT, 6YQ.

No. 4 District.

No reports.

Northern Notes.

Area Manager: S. R. WRIGHT, 2DR.

Reports to Collectors by the 8th of each month.

STAR STATION FOR MARCH.

6YQ, Geo. A. Massey, Esq., Prestatyn, N. Wales.

(See details in Cheshire Section).

For the third consecutive time I have to congratulate 6YQ on his excellent work. Conditions have only been fit to work U.S.A. during the first few days of the month, so most totals are down this month.

May I impress on every member of the Northern Area the absolute necessity for sending in reports as per the instructions given on page 12 of the April BULLETIN. You chaps have no idea what work it is wading through fifty or sixty lengthy reports, some mixed with remarks, queries and observations.

The various collectors should render down reports where necessary. I cannot possibly deal with piles of matter without a semblance of law and order! Apply the knife, OM's.

Main facts are: Number of QSO's, power, wave, best DX.

Conditions for DX this month good until March 8; bad afterwards. Only high power has been able to pierce the veil during the latter half of the month, and 5XY seems to have pierced it rather well. Phew!

Yorkshire.

Reports to 2DR.

6TY has had 47 QSO's on 10 watts. Best DX "SKU" (Swedish vessel of W. African Coast) and EC1KX. Has yet to work an NU on 10 watts, although he has worked NC and SB long ago.

5KZ QSO's 30. Input 16 watts. Best DX NU4WJ in daylight at this end, to wit 08.00 G.M.T. This station has now worked all continents except Australia F.B.

6DR has been QRT with 'flu. Reports bad conditions and little real DX. Best QSO's with s.s. "Hanoë" off Madeira and Roumania, both on 6 watts. SMUF was worked down to 0.02 watts (20 volts at 1 m.a.), which is cutting it fine, OM!

BRS26 reports new countries heard, Roumania, Syria, and Venezuela on 40 band, and South Africa, Newfoundland and Jamaica on the 20 band. He finds NU's come in well on 20 metres up to 00.00 G.M.T. every night.

6IA has made a comeback to the fold. Hi! Has been QRW business. Will be on the air during the month.

2YU has a good total of 98 QSO's on 6 watts. Best DX EAR38 and 2 EC's. You could jump the "pond" if you set about it, OM!

6JS has joined the Tykes from Scotland. Welcome, OM. Hope to have a report from you next month.

6OO has been trying crystal control, but has had no luck. 20 NU's have been worked on 7 to 10 watts, and NU2CVJ was worked on 5 watts. A 23 metre transmitter will be going here shortly. A report from British Guiana of R4 on 1 valve is F.B.

5US and 6BR are busy on 5 metre work, and say they have heard signals on this wave. Hope to hear more of this later, OM's. 6BR is installing a new R.A.C. unit.

5SZ has nothing to report, having done little or no work this month.

2DR has been working on 24 watts dry batteries all month. Some interesting QSO's have been carried out with MU's, of which 8 have been worked. The usual continentals have also been QSO.

Cheshire and N. Wales.

Reports to 6TW.

6YQ is again the best QRP station, but his report is so involved and lengthy, I'm hanged if I can sort it out. Have mercy, OM, please, and for Heaven's sake read the instructions in the April BULLETIN, pages 12 and 15.

Apparently 40 NU'S (all districts except 5, 6 and 7) were worked in five consecutive nights, including 15 in one night. The power employed was 5.5 watts. In spite of your lengthy report, OM, congratulations! Sorry to cut you down in your prime, but space is money.

2SO, after two months' testing on QRP on 45, states that with a maximum of 6.6 watts the reliable range is 2,500 miles. Best DX, Nijni Novgorod and SKU at Darak, Africa. Now experimenting with a C.F. Hertz.

2BOW is a newcomer. Welcome! Is experimenting on crystal control, and is also very busy with receiving schedules with Y2JY (east) and NU9DR (west).

2MF is QRW re-building. Has done good work on 180 with 4 watts input.

5PO is working under bad conditions. Will anyone with experience of erecting "ether shakers" in "diggings" please oblige 5PO with a few ideas? 6TW's suggestion is ribald! What about a tuned grid tuned plate with a C.F. Hertz indoor, half round picture rail and half on floor. They work well, although it sounds silly.

6TW has done better on 45 phone this month. "Renounced space-wound H.F. chokes for ever," he says. Usual 180 metre work at week-ends.

Northumberland, Cumberland, Westmorland and Durham.

Reports to 2AIZ.

6FG has been trying a "sync," but cannot smooth it. Now going for crystal control. No DX to report.

6QT thinks his aerial is faulty, and experiments are being made in this direction. Best DX, EI1IDL. Usual Europeans, and the power only 3 watts at most. F.B.

6YV is employing 50 watts on 23 metres very usefully. Has been R4 with A5X and R7 with several NU's. Aerial experiments are being undertaken here.

BRS68 reports a fair bag of NU's during early March, but has been laid up with a fractured skull. Hope you are O.K. again, OM.

Mr. J. G. Carlson has had good reception on all bands, and reports NU's, 1CAW and 1BUX as being the most consistent U.S.A. stations heard.

2AIZ has nothing to report.

Lancashire and Isle of Man.

Reports to 5XY.

5MS in three weeks worked 120 stations, including 27 NU's and 4 NC's. Power and wavelength not stated.

5XD worked EC and Majorca. He is trying grid-control phone shortly. Power and wavelength not stated.

2AUH is a new T. & R. man. Therefore welcome, OM. Beg, borrow or steal a copy of the April BULLETIN and read about sending in reports of stations heard.

5BH is held up for parts for his transmitter, and hopes to be on the air before these notes are in print.

6MI has not been on at all this month. Removals have been more interesting, perchance!

5KL looks like claiming a low-power DX record, having worked NC1DM on 0.925 watt. On normal power has worked 1, 2, 3, 8 U.S.A. districts and North Africa.

5XY, as usual, takes the high-power bun this month. His bag is 33 NU's, including one 7 and two 9 districts. Also Chili, Argentine, South Africa, India, Australia, Costa Rica (C.T.O.), Jamaica and Borneo. Atta boy! Anywhere else? The Costa Rica and Jamaica stations stated that it was their first G QSO.

5JW had a visit from 5XY, and the circuit was altered from Hartley to tuned grid/tuned plate. This was a great success, but since 5JW has blown everything in the smoothing department and is now QRP.

2QV reports poor month for DX, but is on the air.

Notts, Derby and Lincoln.

Reports to 5CD.

5BD is on QRP with 9 watts dry cells, but reports good DX. He is having a "washing machine" shortly. Glass arms to you, OM. Best DX, K4UL and SMUF.

5OD is now on 45 with 2.5 watts, and is getting down to it nicely. Best DX, CS2YD.

5CD has nothing of note, but is trying to get a 45 metre licence. 2AHP has nothing to report.

2AUR is working on 45 metres with artificial aerial, but is awaiting a full permit. Reports good reception DX.

BRS34 has logged 171 stations, 48 NU, 1NC, 7SB, 2SU, 1SC, 1AR. The following stations did not report:—2IX, 2VQ, 5DM, 5KW, 5QT, 2BLG, 2BZT. Hi!

A Correction.

6YQ's total for last month was 51, not 61, as stated in the April BULLETIN, comprising 40 NU's, NC3JL, and Jamaica. The wavelength was given as 25 metres, whereas 23 is the correct figure. Misprints, OM. Sorry!

Mid-Britain Notes.

Prepared by G6JV.

The Proposed Mid-Britain Conventionette.

Further to my remarks of last month 2XV tells me that he finds it will not be possible to make the necessary arrangements for the date provisionally mentioned. Subject, therefore, to sufficient members signifying their wish to attend the Conventionette, it has been decided to put the date forward to Bank Holiday, August 1.

The date for informing 2XV regarding attendance is similarly extended to May 31, and Mr. Jeapes asks that all members in Mid-Britain will send him a card saying "Yes" or "No." This is, I think, not much to ask, and will greatly help us in reaching a decision as to the popularity or otherwise of the proposal. It should be mentioned, perhaps, that the idea is not to provide a formal business meeting, but to furnish Mid-Britons with an opportunity of meeting each other and of confirming friendships contracted via the air and pages of the BULLETIN. At the same time it is hoped that many useful suggestions may be made for the improvement of the organisation and for the benefit of members generally in our area. So please write your card to 2XV now and state how many friends you are bringing, and whether OM's or YL's. Do it this very moment before you forget.

The month's reports:—

Shropshire (reports to 5SI).

5SI is polishing up the transmitter again after a long silence. He has started on the generator and finds that nothing more than a

clean-up has halved the input-amps.—a moral from which many of us might profit.

6TD reports a period of activity, schedules being kept and tests carried out with Australia, N.Z., Brazil and U.S.A. Rather more details of specific tests and conclusions reached would be welcomed. But this applies to all reports, though more specially to stations whose inputs are sufficient to enable reliable schedules and contacts to be made and kept.

Leicestershire (reports to G6WW).

I am pleased to welcome a new sub-area representative in the person of A. E. Walker, G6WW, "Glen Burn," Ashleigh Road, Leicester. Will Leicestershire members please note his QRA and report to him by 7th day of month latest?

6GF has started work on 45 m. using 4 watts.

2RO carries out regular telephony tests on 165 m.

6WW has been testing aerials, and after comparative tests with some twenty types, has settled down to a half wave horizontal type with lecher wire current feed. Using this and an input of 10 watts he has worked the first four districts U.S.A. and all over Southern Europe. He reports that his signals do not appear to reach Northern Europe. (An opportunity for research here, OM!—6JV.) He uses crystal control occasionally, but remarks that a self-excited set enables better opportunity of dodging the rather terrible QRM now existing on the 45-m. band. (This is one reason why several stations have left C.C. alone, OM!—6JV.)

Cambridgeshire (report to G2XV).

My first few lines must be absorbed in correcting a mistake which occurred in my notes in the March "BULL."—the QRA of 5RT given therein is incorrect, and should have read "Dorchester," Mile End Road, Colchester, Essex, please note the correction.

2DB reports two QSO's with U.S.A. on 9 watts, being all he has done this month owing to rectifier troubles. He finds that valves "blow" and chemical rectifiers "boil," so is now trying to solve the problem. (What about a "sync," OM?)

5YX is undoubtedly a startling success. During March he has QSO U.S.A. 35 times, which includes 16 QSO's on 23 metres with only 10 watts input, the best report being "R5 dont QS2"; in fact, 5YX finds QSO on 23 easier than on 45 hi hi !!

5YK sends a very brief report to the effect that he has QSO another "Z" on 45 metres with 25 watts input, using a DET1 valve, and has also worked a few Yanks on 23 metres with 30 watts input, using a T50 valve.

5JO reports that he is now well settled down in a new room with his 170-metre outfit, and although his best DX is only 6WI at Colchester, he looks forward to reports from a greater distance shortly. (QSL to him, OM's!).

2XV has only put in a short time on the game this month, owing to moving to another house, but has succeeded in working one Yank and one Brazil on 32 metres, also Italian 1AY on 23 metres, who reported signals R8 and steady.

Mr. Carter, of Cambridge, has been devoting his time to the construction of a really "posh" short-wave receiver, and he certainly has turned out a beauty. DX stations simply roll in with a roar. What about some "dope" about it for the "BULL," OM? ? ! ! !

Inter-station visits: 5YK to 5GQ, 5KU, 5AD, 5YX, 2XV, BRS36 to 5YX, 5YK, 5YX to 5YK, 2DB, 2XV, 2DB to 5YK, 5YX. 2HK has not reported, but has been heard "on the air."

Huntingdonshire (report to 2XV).

2BAX has paid a visit to 5YX and made the acquaintance of his 23-metre outfit, returning full of new ideas. He has also persuaded 6CJ to send me a report, which I am handing along OM, but please bear in mind your reports should go to 2LZ. I also understand that another "artificial" man has cropped up in the area, namely, 2BIM. Let's hear from you, OM.

Northampton (reports to BRS30).

Mr. Shaw has been rebuilding his receiver. He and BRS30 are busy trying to persuade a 5-metre receiver to oscillate. (Try the tuned grid, tuned plate circuit, OM's. This always works, though tuning and regeneration are much interlocked, of course.—6JV.)

Warwick (reports to 2BPI).

BRS29 sends the following news:—

"FOA5X is now transmitting on 17.95 metres, and wishes to co-operate with GS. He and other South Africans are investigating fading after sundown."

BRS30 and BRS10 report much improved conditions generally, and 2BCA reports the same on the 20-m. band.

6CI has worked FM and U.S.A.

2BMW is busy working for exams., and has little time for DX at present.

2BLM and 2BPI have bought new motor cycles (In nice time for the Conventionette!), and have been looking up neighbouring "Hams."

BRS60 and 2BKY are new members who are warmly welcomed. 6YD, 5SK, 5PX have not reported.

Worcestershire (reports to 6AT).

6AT has put up a current-fed Hertz and raised his first Yank R5 with 8 watts input. A further contact was made the following

night. Fone is also being used on 45 m., and reports indicate good modulation.

6MW is asked to report next month, pse.

Staffordshire (reports to 5UW).

2KK reports very little doing during the past month. He has run a schedule with NU1BHM during early evenings. He has carried out satisfactory QRP tests with 3 watt input.

2VG has not reported. We understand that he has seldom been on the air during last month.

2WN has some really very fine DX for extreme QRP of half a watt, having worked 19 countries in Europe, the most notable being Spain, Italy, Sweden and Denmark all in one week.

5NU has not reported, but we hope he will next month.

6BH reports very QRW with business, but expects to be on the air a good deal, as he has now completed rebuilding.

5CW has not reported.

6OH has not reported, but we know he has been transmitting. How about a report next month?

2TN has not reported, but 5UW visited his station, which is very fine, and learns that 2TN is arranging a schedule with the States, and is rebuilding. Please report next month.

Wolverhampton (April 11).

2OQ reports working the States upon two occasions during the last month, but has been very QRW for much DX.

2RR has joined the T. & R. He has started up on 45 metres (fone and CW), and hopes to have a DX report for next month. 2RR has not abandoned fone on 150—200-metre band.

2YV has joined the Wolverhampton Society, and hopes to start up on 45 metres immediately. Hearty welcome, OM.

5AF has also joined the T. & R., and will, of course, wonder how it was he did not do so sooner. Let us have your reports.

5LK has also started up again with fone on short waves, and is carrying out some interesting tests with 6HT and 5UW relative to A.C. filament heating for fone work.

5UW has had a very busy time recruiting for the T. & R., but has some DX to report, having QSO'd Argentine SA. DE3, SB. 1AW, KUMT motor ship when off South Africa, and has run a schedule with SFV, Swedish motor ship, throughout its voyage from the Equator to Rio de Janeiro. Has also QSO'd 18 Yanks in 1, 2, 3, 4 and 8 Districts. 5UW is running a thrice weekly schedule with SB. 1AW, and will be pleased to QSR for T. & R. members for that station.

6HT has been QRT for the major part of the month, but is active again now.

5PR has been operating at 6HT, but hopes to have his own station in operation very shortly.

6PB has also joined the T. & R., and will eventually apply for 45-metre band. Report please every month.

6UZ has joined the Wolverhampton Society, and has already visited us. 6UZ has no outstanding DX to report, as he has been troubled with Gen Hum, and also been very QRW in preparation for his wedding. Very best of luck from all of us.

6MZ, 2AAD, 2AWJ have not reported.

Norfolk.

6JV is pleased with his full-wave aerial system on 32 metres. During the month he has worked several Brazilians and Uruguay with reports up to R7. The States have been worked several times also. He has worked North and South America inside the same quarter of an hour, which seems to disprove certain popular superstitions, which, however, were launched some time ago, and may quite possibly be generally regarded as already exploded. Canada is also included among the month's DX. In fact, everything was going quite nicely—until his "toob" went soft!—Cuss it!! By the way, don't forget that P.C. to 2XV about the Conventionette. You hadn't written it after all—now had you?

Calls Heard.

New Scheme to encourage World-Wide Interest.

Contributors Please Note.

For some time past we have considered the question as to how the usefulness of "Calls Heard" can be enhanced. The number of lists submitted has increased so considerably that we have been compelled to make the following decision:—

1. In future no Calls Heard emanating from "G" stations or which have their origin with members residing in the British Isles will be published.

2. Instead, our Calls Heard columns are open to Foreign amateurs only or those in the Dominions.

3. Those British members or members resident in the British Isles who have lists of Calls Heard which they desire to be published will render amateurs a service by communicating them to members abroad saying what they wish. A number of contributors to Calls Heard who handle such lists will be found in back numbers of the BULLETIN. Select the Q.R.A. which is best for your list and send it to that member.

4. In return we ask Foreign members or others who receive Calls Heard from our members to exchange their lists of "G" Calls Heard with them for publication in the BULLETIN. No Calls Heard received direct from the source of origin will be published.

5. All Calls Heard should be headed with name, station and Q.R.A. and nothing else should appear on the sheet except the Calls Heard which should be in BLOCK capitals and numbers and arranged under the various International Prefixes.

6. We will publish the Q.R.A. of any member resident abroad who can get British lists published.

A—2bq. B—4ar, p7. Bz—1ac, 1a, 1ak, sq4, 2ao. C—2uo, 3au, 8aw, 8ar. Belgian Congo—f2. Spain—ear8, ear26, ear18, ear48. Java—and, anf. F—8kz, 8uga, 8aro, 8fbh, 8qrt, 8cz, 8dx, 8fu, 8fy, 8gz. FA—8rgs, 8ap, FM—ain, 8vx. G—5pz, 2ke, 5sz, 6ta, 6vp, 5qv, 6xs, 5hx, 2lj, 6dr, 5gq, 5us. GW—18b, 14b. I—1gw, 1ce, 1dm. Iceland—ag1. Jamaica—nj2pz. K—4abg, 2do, 4au, 4abr, 4sar, 4xy, 4gd. N—0yy. Austria—jz, gp. P—1aj, 1af. Panama—1bez. Argentine Range—1au. Russia—crl. Siberia—1a19. Roumania—er8ih. S—2bs. smxu, smsh, smrv. Singapore—2se. Poland—pai, 2xa. U.S.A.—1ga, 1ajx, 1ckp, 1cnp, 1adm, 1vl, 1vz, 1end, 1cre, 1mc, 1gr, 1ql, 1apv, 1cj, 1lc, 1ao, 1yb, 1brx, 1vc, 1bol, 1abm, 1ka, 1amu, 1ojo, 1bfx, 1asf, 1aox, 1agt, 1om, 1aem, 1bez, 1uw, 1lu, 1cra, 1rf, 1als, 1ic, 1as, 1akm, 1bom, 1jz, 1lx, 1xo, 1abn, 1nk, 1xm, 1clv, 1lmr, 1zk, 1cf, 1bho, 1aga, 1aif, 1kk, 1aaf, 1in, 1cnl, 1wz, 1bcb, 1dee, 1aur, 1akr, 1bbm, 1dr, 2dh, 2agn, 2cyx, 2fo, 2ahm, 1akq, 2wj, 2arm, 2md, 2ayj, 2beo, 2uk, 2cew, 2aue, 2au, 2ge, 2dy, 2ctf, 2ay, 2bbb, 2amv, 2ahm, 2mb, 2awq, 2akz, 2awu, 2rs, 2kx, 2hy, 2cbg, 2bir, 2abq, 2atk, 2azk, 2mk, 2aas, 2ait, 2bxu, 2aga, 2ue, 2da, 2dy, 2tb, 2ak, 2apv, 2cs, 2vi, 2ctf, 2bhw, 2xaj, 2amj, 2kdr, 2bsj, 2cst, 2nl, 2acu, 2ccd, 2dg, 2bo, 2bem, 2aul, 2avr, 2arv, 2cbi, 2adw, 3qw, 3bwt, 3kr, 3asl, 3av, 3sj, 3rq, 3aha, 3jo, 3akq, 3po, 3pf, 3ef, 3bwl, 3no, 3cel, 3ckl, 3ld, 3add, 3vqj, 3cdv, 3bhv, 3qw, 3avm, 3cc, 3vi, 3rf, 3auv, 3ce, 4bl, 4by, 4if, 4ak, 4qb, 4aa, 4iz, 4vn, 4si, 4io, 4vk, 4ro, 4tk, 4tu, 4ob, 4av, 4qy, 4vx, 4hx, 4ne, 5kc, 5wrl, 8ex, 8ajm, 8vrc, 8avj, 8rh, 8vd, 8bau, 8bzt, 8pl, 8cnh, 8avd, 8ejm, 8cyi, 8kc, 8ve, 8ilf, 8drj, 8bh, 8gz, 8dsy, 8vx, 8aly, 8cjl, 8dei, 8avl, 8cc, 8al, 8lg, 9exc, 9cia, 9xi, 9xe, 9nv. Uruguay—2ak. India—der. YS—7kk, 7dd, 7xo. Various—gezc, vf9c, uq5az, agb, agc, wiz, suc, wlk, pcr, pcm, ptt, ocdj, agb1, gbl—0-V-2 Reinartz.—By BRS 64, R. G. R. LYON, 3U, High Street, Aberystwyth, Wales (January 1 to February 21, 1927).

By KC2A—2cb, 2db, 2it, 2kz, 2rg, 2rh, 2sw, 2vt, 5by, 5dh, 5uk, 5yk, 5za, 6br, 6ci, 6iy, 6lr, 6qb, 6tg, 6vp, 6wg, 6yq, 6yv, 6zm. By KC2B—2nh, 2ao, 2is, 2oq, 2rg, 5by, 5hx, 5nw, 5ul, 5yk, 6da, 6dr, 6br, 6nx, 6tg, 6za. By KC2K—2xy, 5ls, 5oc, 5uw, 6uz. By KC2N—2it, 5by, 5mq, 5xy, 6ko, 6td, 6yv, 6za. By KC2R—5ad, 5uy. By KC2U—2db, 2rg, 5by, 6bd, 6cl, 6js, 6lr, 6nx, 6tx, 6vp—G calls heard (February). Extracted from *Latvian Radio* by G6BT.

G—2od, 2lz, 2rg, 2ao, 2nh, 5by, 5xy, 5lf, 6ci, 6uz, 6yv, 2oq, 2gy, 2jy, 2qm, 2sh, 2cc, 2sw, 5mu, 5jw, 5up, 5lb, 5wq, 5ma, 5ad, 5uw, 5tz ('phone), 5vl, 6yd, 6qh, 6da, 6vp, 5yx. GC—6ko, 2sr. GI—2it, 5nj, 5wd, 6mu ('phone), 6qd. GW—18b. F—8ba. U.S.A.—1aa, 2amj, 2apd, 2cvj, 6clj, 9abr, 9xi.—N.B.—DCR now works on 33 metres as well as 40 metres.—Calls heard by AI-DCR, Cambridge Barracks, Rawalpindi, India, up to March 9 (via GI-6MU).

A—2y1, B—1ar,* a2, b1, g7, h5, w1, z2, bnsk1, bz1az, chna0, D—7xu, DY—1ay, EAR6, 44, F—888,* 2 jmx, 8abc, 8akf, 8cp, 8cr, 8faz, 8fr,* 8ft, 8fy, 8gdb, 8gwe, 8gz*, 8jnc, 8jrk, 8kf, 8kz, 8ll, 8lr, 8nb, 8nl, 8qrt, 8ro, 8ry, 8sst, 8tsp, 8udi, 8ut, 8vvd, 8wnb, 8zb, FM—8mb, 8pmr, 8st, G—2ak, 2ao*, 2ay, 2bh,* 2bm, * 2cs, 2dx, 2gf*, 2gy, 2hq, 2jp*, 2kt*, 2lj, 2mn,* 2nh,* 2od, 2oq,* 2rg, 2vg,* 2wn,* 2xo,* 2xv,* 2xy,* 2yu, 2yx, 5ad*, 5ar, 5au, 5ax*, 5bk*, 5by*, 5dc*, 5fo*? 5hk*, 5kh*, 5kz, 5li*, 5ls*, 5mf, 5qy*, 5rd*, 5ru, 5sk, 5so, 5sz*, 5tr*, 5tz*, 5ul*, 5us*, 4uw*, 5vl, 5wq, 5wv, 5wy, 5xd, 5xn*, 5xo*, 5yx, 5yz*, 5zg*, 6ah*, 6ai*, 6bd*, 6bn*, 6br*, 6bt*,

9bw, 6da*, 6dr*, 6fa*, 6ft, 6fz*, 6ia*, 6ka*, 6kk*, 6ll*, 6lr, 6nf, 6oh*, 6ou*, 6pa*, 6pg, 6pr*, 6pu*, 6qb*, 6qo*, 6tg*, 6ug*, 6uz*, 6vj, 6vp*, 6wk*, 6xh, 6yg*, 6za, GC—2wl, 5nw, 6ko*, 6nx, GI—5zy*, 6ja, 6mu*, 6qd*, GW—11b, 3ag, 3wa, H—9tu, K—4abf, 4dka, 4hl, 4ld, 4uhu*, 4wm, 4xu, 4xy, p8, w9, z8, L—3xx, LA—1r, nokh, onm, opm, owm, pcf, O—66n, P—1aj, R—1aj, 1ua, S—2co, SS—2se, tllit, 1b, tpax, U—1aap, 1agn, 1ah?, 1ahv, 1bkz, 3acm, 4dd, Yder, 1bh?, Z—4aa, Various—gfa, gha, age, 2x, fl. Pse

PSE QSL OM's, TNX!—T. H. STREETER, Jun. (BRS-42), Schoolhouse, Alfold, nr. Billingshurst, Sussex, England. From Jan. 20 to Feb. 20.

*Indicates fone.

From February 17 to 26, and between 07.45 to 09.30 and 21.20 to 22.30 only. On 30-50 metres.—Eapr, eapy, ears, ear38, eas2, B—sbr, D—7lo, 7mt, 7zg. FM—8ay, 8rit, 8vx. I—1di, 1dr, 1rt. EJ—7dd, 7xo, ES—2co. S—7nb, smuk, smuv, smsh, skt. ET—1kcz. NE—8rg. NI—3ag. NU—1aba, 1abn, 1aj, 1aur, 1avl, 1bux, 1cmf, 1ql, 1ren, 1wp, 2agn, 2cvj, 2dg, 2or, 2tp, 2iz, 3abl, 3ahl, 3cgs, 3rf, 4dba, 4iz, 6keo, 7bd, 9wh, SB—2ab. A—1as. Sunds—6ea4ed, cnj, gup, mmmmm.—Selected by GZZC.

2cc, 2it, 2jp, 2kg, 2nh, 2nm, 2rg, 2sw, 2xy, 5ad, 5ba, 5by, 5dh, 5hx, 5ku, 5nw, 5oa, 5rh, 5uw, 5ya, 5yx, 6bp, 6fa, 6lr, 6hz, 6rv, 6vp, 6yo, 6yv, 6wv.—U1AGS, 36, Yale Avenue, Wakefield, Mass, U.S.A.

February 7 to 16 (inclusive), between 08.00 and 09.30 and 20.00 and 22.00 only. 30-50 metres.—U—1air, 1axx, 1cmx, 1cnp, 1kk, 1qre, 1rf, 2adh, 2agq, 2bur, 2cur, 2ak, 2dh, 2dg, 2nz, 2or, 3cc, 3qkl, 3te, 4ak, 6bd, 6agr, 8lb, 8li, 8ox, 8xe, 9eev, xnu9bx. U—ea4fa, ea4tea, eleetiau. N—opm, oly, olx, owr. ear48, earc2. YS—7xx. EA—1uvz. EC—1rv, tbpl. K—4abf, 4au, 4cl, 4hl, 4ld, 4ls, 4xc, 4xu. FA—8rit. C—1coa, 1ar, 3wab. I—1ck, 1ia. SB—1a. Smuk, sad, sku. F—8bu, 8fy, 8ft, 8gz, 8hip, 8jj, 8kmz, 8cp, 8spam, 8ren, 8uga, 8zoé. SU—2ak. B—1b. M8, 06, P2. G—2kt, 2st, 5au, 5dh, 5hx, 5ku, 5ma, 5xd, 5za, 5zy, 6ai, 6ft, 6ks, 6nx, 6iz, 6oo, 6pu, 6tg, 6vp. GW—14b. Oslo—ohk.—(From G22C), A. M. HOUSTON, FERGUE, La Cotta, La Moye, Jersey, C.I. Am hearing a lot of UEA4's all call "test." DC or Recst AC. Can anyone trace QRA? All work 43-47 metres and can be heard at various times of day.—A. M. H. F.

The following via radio from C3JL:—G calls heard by C3JL during the past winter: G—2it, 2cc, 2dn, 2oq, 2rg, 2sw, 2vj, 2xk, 5ad, 5by, 5gq, 5jo, 5ma, 5mq, 5nw, 5pm, 5tz, 5wv, 5zu, 6mu, 6nx, 6oh, 6oo, 6yd, 6yq, 6yv. A QSL card will be sent to any of the above on application to NC3JL, JACK B. LYON, Woodroffe, Ont., Canada. He is QRV QSO Europe 17:00-19:00 EST, or any time after midnight EST; QRH on the 40 metre band.—GEO. A. MASSEY, (6YQ).

SU-FB, CARLOS E. JUELE, La Paz, Colonia, R.O. del U., Uruguay, SU-FB wants reports from "G" hams; will QSL.

Calls heard, CHAS. M. ENGLISH, 9, Park Circle, White Plains, New York, U.S.A., NU2BV. December, 1926—SB—1aw, 1ad, 1ai, 1ao, 1af, 1ac, 1ak, 1al, 1as, 1am, 2al, 2ad, 2as, 2ag, 3am. NQ—2jt, 8kp. NM—5c. O—3ab, 5o. HU—2mk. EF—8zr, 8yor. EG—gi2it, 2nm, 2kz. January, 1927—NM—xc66l. SC—2ld. SB—1am, 1aw, 1ar. K—4uah. N—pl, fg, ff. EF—8gi, 8yor. EG—2cc, 5by, 5nw, gi2it. SU—1fd, 2ak. EAR—44. NQ—2cx. February—EF—haf, atuv, ocmv, 8z, 8cn, 8max, 8ssw, 8bf, 8xm. SU—2ak. SC—2ag, 2ig, 2as. NM—1n. ES—2co. NL—4x. NQ—8kp. NJ—2pz. FO—3ab. EG—gfy, 2vl, 2rg, 5xy, 5ku, 6mu. EK—4uah. NT—8af. SH—bzl. EP—1aa, 1aj. EI—1gw. March—EF—8ab, 8il, jhp. EP—3fz. EG—gi2it, 2rg, 2cc, 2xy, 2dn, 2gx, 5jw, 5sz, 5by, 5yx, 5ms, 6yd. FO—4q. EB—4ww, 4cb, 5h, 4cu. EI—1no. FM—8ju. SH—6zl.

Correspondence.

Instructions to Correspondents.

We are always glad to hear from members. Correspondence published in these columns should be written clearly on one side of the paper and marked "For Publication."

All correspondence should be addressed to the Editor, T. & R. BULLETIN, who reserves the right to refrain from publishing any material which is lacking in general interest or for other reasons. Correspondence for publication will not be acknowledged.

Correspondence must be kept reasonably brief.

ORM.

To the Editor of T. & R. BULLETIN. 6YQ's letter in the March BULLETIN is very opportune. The number of stations on our band using "squeers" is certainly not diminishing.

Another cause of QRM, especially at week-ends, is the unnecessary power used by G 'phone stations in their "inter-G" work. The subject matter of some of this 'phone work is also not illuminating, and is frequently of unconscionable length, being interspersed with "er's and um's" as though the speaker were at a loss for something to say.

If some of these fone stations would realise that they are jamming quite a large number of CW stations, I feel sure that they would reduce their transmissions to more reasonable limits both as regards length and power used.

M. J. DENNIS (GW11B).

Fortgranite, Baltinglass, Co. Wicklow.

P.S.—The transmission of music should, I think, be absolutely barred on this band.

BAD TRANSFORMERS.

To the Editor of T. & R. BULLETIN.

Your correspondent "6LJ" in his note on "Rectifier Valve Filaments" in the February issue, warns users of H.T. rectifiers against dangers which ought not to exist in any moderately well-designed equipment.

With the object of disabusing the mind of any prospective user, I would like to say that there is no reason whatsoever why a transformer having an output of 20 volts 10 amperes should not be made with a regulation of the order of 4 per cent., even though the insulation between primary and secondary is made suitable for a working pressure of 6,000 volts.

With a regulation not exceeding 4 per cent. the difference between secondary voltage at full load and light load would not exceed 0.8 volts, so that in the event of the burning out of one filament of two parallel valves, the remaining one would be quite safe, more particularly as the filaments of larger and more costly valves ought not to be run at their uttermost limit.

It is, of course, admitted that transformers constructed by experienced persons frequently have a very poor regulation, brought about through lack of attention to the following points:—

1. Working the iron in the magnetic circuit at too high a density.
2. Too great a radial depth of winding.
3. Magnetic leakage due to the primary and secondary windings being placed too far apart on different parts of the magnetic circuit.
4. Excessive current density in the windings.

The amateur constructor should take care to comply with the following approximate conditions:—

1. Not to exceed approximately 10,000 lines per square centimeter in the magnetic circuit.
2. Make the axial length of the coils at least three times the diameter.
3. Wind the primary and secondary concentric with each other, interposing suitable insulating space or material.
4. Choose copper section, such that the density does not exceed 1,000 amperes per square inch.

Providing the above simple rules are not too seriously departed from, it would be quite impossible for a transformer to exhibit the extraordinarily bad characteristics of the one described by your correspondent.

Yours faithfully,

L. F. FOGARTY.

Dene Cottage, Ruislip, Middlesex.

(EDITOR'S NOTE.—The Italics are ours.)

MIS-USE OF CALL LETTERS.

To the Editor of T. & R. BULLETIN.

I am continually receiving "cards" reporting on my transmissions from both English and foreign amateurs.

As I have not been carrying out any tests for over two years, and as I receive two or three cards a week, some reports of 2BC and others 2AY, it is certain someone unauthorised is using my call sign.

Yours faithfully,

DUDLEY F. OWEN (2BC).

Limehurst, Sale.

(EDITOR'S NOTE.—See similar correspondence elsewhere.)

CHANGE OF CALL SIGN.

To the Editor of T. & R. BULLETIN.

My call sign, G2BYN, has now been changed to G6HP.

H. D. PRICE.

12, Hillcrest Road, Sydenham.

To the Editor of T. & R. BULLETIN.

Will you please inform all British amateurs, through the T. & R. BULLETIN, that my experimental station, D7ZM, is now installed in the Telegraph Laboratory of the Royal Technical College of Copenhagen, from where different short wave tests will be made. I should be very glad to receive reports on these transmissions, and if there are any British receiving stations who are willing to listen for regular schedules, I should be glad to communicate with them by letter and, if possible, arrange co-operation. At the

present we are working from 30 to 40 metres, but we are also going to test on the still lower waves under 20 metres. I should also be glad to hear from amateurs being interested in transmission on waves on 8-15 metres.

Yours faithfully,
G. BRANSLEV (D7ZM).

Copenhagen, 14, Willemoesgade.

GERMAN QSL CARDS.

To the Editor of T. & R. BULLETIN.

DEAR SIR.—We beg to draw your attention to the point that in accordance with the resolutions of our second national short-wave convention (Cassel, March 19 and 20, 1927), QSL-cards for Germany may now be sent either via Mr. Rolf Formis (Ky4), Stuttgart, Alexanderstr. 31, or via Deutscher Funktechnischer Verband, (DFTV), QSL-Section, Berlin W57, Blumenthalstr. 19. German Hams will therefore ask in future to QSL either via Ky4 or via DFTV. By the latter abbreviation they understand the above-mentioned Berlin address.

Both offices will co-operate in prompt forwarding all QSL-cards for Germany.—

Best 73's, es TNX, OM's.

Deutscher Funktechnischer Verband E.V.
Geschäftsstelle : Berlin W57, Blumenthalstrasse 19.

A TANGLE.

To the Editor of T. & R. BULLETIN.

DEAR SIR.—At this moment of putting pen to paper I would very much like to draw your attention to the fact that I have been having considerable trouble about my call sign. The fact is that old man X— having given up his desire to experiment in this direction still thinks he is entitled to keep his call sign, and as it has now been allotted to me officially by P.M.G., it disturbs me greatly when I get reported to 5AD (who, by the way, very kindly apologised), and who is also taking steps to clear the matter up, has been a *pirate* Hi ! O. M., it's a bit thick. Half the trouble is that my call is addressed wrongly in log book. Please can you make a mention in T. & R. BULLETIN as soon as possible, in QRA Section Notes, and in *big print*? Ha ! ha ! The scoundrel has evidently had sent to him best part of my overseas' cards through this error of address and then having made the collection (of cards from 1/1/27 onwards) declares that there is someone using his call (clever fellow, eh !). If you desire his address, here it is:—5AV-XXX.

W. H. GOODMAN,
94, Addison Road, W.14.

and my QRA for BULLETIN is:—

D. E. CAMPBELL,
45, Wellington Road,
Enfield, Middlesex.

Radio G-5AV,
45, Wellington Road, Enfield, Middlesex.

To the Editor of T. & R. BULLETIN.

DEAR SIR.—On April 6 I raised nu-1RD at 2100 G.M.T., using an input of 10 watts, after a test I was reported R5dc. I then carried out QRP tests; on 2 watts I was R3-4 and on 0.24 watts obtained from H.T. accumulators 80 volts at 3 millamps. I was reported R1 to 2. This is in reply to 5SP's letter in a recent issue of the "BULL." I might add for his information that the wavelength used was 23 m.'s

Yours faithfully,
N. C. SMITH (g5YX).

"Croftholme," 117, Chesterton Road,
Cambridge.

INDIAN LICENCES.

To the Editor of T. & R. BULLETIN.

DEAR SIR.—When I received my transmitting licence a few days ago from the Government of India I was informed that in the immediate future amateurs in India will be restricted to the following wave-lengths below 100 mts., 30, 45 and 80 metres. These wave-lengths are for Telegraphy only; Telephony below 100 mts. will be forbidden.

I thought that this information might be of interest to readers of the BULLETIN should you consider it important enough to publish.

Yours sincerely,
F. RODMAN (A1-2KT, ex FRJ).
c/o. Lloyds Bank,
Homby Road, Bombay, India.
March 17, 1927.

HERTZ ANTENNAS.

To the Editor of T. & R. BULLETIN.

DEAR SIR.—With reference to "Hertz Antennas" by 5RZ in the current BULLETIN.

Whilst I am unable to offer any reasonable explanation for the effect observed by Mr. Wood when using his $\frac{1}{2}\lambda$ Hertz with single line voltage feeder, I can clear up his difficulty with antenna No. 2. This I presume is a full-wave aerial, and in consequence, as his own

diagram shows, a current anode exists at its centre. Hence, since a current feed system is being used no transfer of energy to the aerial is possible. Any resonance effects which he may observe are due to the transmission line alone. Unfortunately the position A of the ammeter is not given, so that I am unable to explain why current is shown by it.

Similarly no circuit LC which could conceivably be tuned to 45 metres is shown. A $\frac{1}{2}\lambda$ Hertz, with current feed, has been in use at this station for some little time now and has given excellent results in every way. A probable explanation for the effect produced, when the two feeders are joined together and tapped onto the closed circuit inductance, is that the two halves of the aerial are each working as $\frac{1}{2}\lambda$ voltage feed Hertz and their radiation practically cancels out except for purely local purposes.

Might I be permitted to recommend Mr. Wood to read the article by Mr. Scroggie in *Experimental Wireless* for March last, which deals with the whole question very much more competently and clearly than I am able to do.

Yours faithfully,
A. E. WALKER (6WW).

"Glen Burn," Ashleigh Road, Leicester.
April 8, 1927.

[EDITOR'S NOTE—Certain other correspondence on this matter has arrived too late for publication in this issue.]

A USEFUL SPHERE FOR RECEIVERS.

To the Editor of T. & R. BULLETIN.

DEAR SIR,—I was very pleased indeed to see that at last a receiving station has hit upon a really useful sphere of work which I consider deserves great encouragement. I refer to the letter from Mr. Verbeek in the April issue of the BULL, in which it will be seen he sends a list of DX stations he has heard calling Europeans without establishing QSO in which he reports my station, 5YX, being called by nu-1AXA. On referring to my log, I find that on that night I raised no DX stations at all as conditions for receiving America were bad. Information of this kind is extremely useful and would be far more welcomed from B.R.S. stations than reports on my signals, and I think that lists of this sort will be of the greatest use in the "BULL."

Yours sincerely,
N. C. SMITH (g-5YX).

"Croftholme," 117, Chesterton Road, Cambridge.

To the Editor of T. & R. BULLETIN.

DEAR SIR,—I have received a letter from Mr. Y. Imaoka, of JKZB, he is going to travel Europe by following schedule in this summer. Mr. Imaoka should appreciate to meet hams in Europe and to see our stations. In the following you can find the complete plan for Mr. Imaoka's journey:—

May 3	Tokyo	July 15-17	Berlin
" 15	Moscow	" 18-22	Copenhagen, Göteborg, etc.
" 17-20	Berlin	" 24-25	Rotterdam
" 25-31	Switzerland	" 26-31	Paris
June 5-10	Ostend	Aug. 1-8	London
" 11	Brussels	" 9-18	England and Scotland
" 12-17	Paris	" 19-30	London
" 19	Marseilles	Sept. 1-25	Berlin
" 21	Nice	" 25-Oct. 2	Atlantic
" 22-24	Genoa	Oct. 3-15	Schenectady, New York
" 25-27	Rome		
" 30	Naples		
July 2-4	Florence		
" 5-6	Venice		
" 7-8	Trieste		
" 9-10	Vienna		
" 11-12	Praha		
" 13-14	Leipzig		

You can arrange you with Mr. Imaoka by a card to this address:—Mr. Y. Imaoka, c/o Otto Reimers, Alsterdamm 4/5, Germany. Cards from England can be sent to my address and I will collect it so Mr. Imaoka can have it when he arrive to Copenhagen.

In connection to the schedule of JKZB published by Gi6MU, I can inform that JKZB every first Saturday of the month keeps 24 hours' watch, the station will begin with sending CQ at 08.00 G.M.T., 08.20, 08.40, etc., until the next day. QRH=38M.

Yours faithfully,
E. POULSEN.

6, Virginiatej,
Radio D7MT,
Copenhagen, F.

CHIRPS AND SPACERS.

To the Editor of T. & R. BULLETIN.

DEAR SIR,—With reference to the letters from G5MQ and G6YQ concerning chirps and spacers, may I be allowed to add my protests

SELECTED BOOKS FOR MEMBERS.

ALTERNATING CURRENT WORK: by A. SHORE, A.M.I.E.E. 163 pages, 86 diagrams, 7 illustrations. Price 3/6 net, post free 3/9.

ELEMENTARY MATHEMATICS AND THEIR APPLICATION TO WIRELESS TELEGRAPHY: by S. J. WILLIS. 182 pages, 120 illustrations. Price 5/- net, post free, 5/6.

ELEMENTARY PHYSICS, SELECTED STUDIES IN: A Handbook for the Wireless Student and Amateur: by E. BLAKE, A.M.I.E.E. 176 pages, 43 diagrams and illustrations. Price 5/- net, post free 5/3.

MAGNETISM AND ELECTRICITY FOR HOME STUDY. 50 graded lessons. 515 pages, 224 diagrams. Price 6/- net, post free 6/6.

OSCILLATION VALVE: The Elementary Principles of its Application to Wireless Telegraphy; by R. D. BANGAY. Price 6/- net, post free 6/3.

WIRELESS TRANSMISSION OF PHOTOGRAPHS (the only Book published on the subject). Price 5/- net, post free 5/6.

CALCULATION AND MEASUREMENT OF INDUCTANCE AND CAPACITY: by W. H. NOTTAGE, B.Sc. Price 7/6 net post free, 8/-.

RADIO EXPERIMENTER'S HANDBOOK: by P. R. COURSEY, B.Sc. (Eng.), F.Inst.Phys., A.M.I.E.E. Price 3/6 each net, post free 3/10 each.

WIRELESS TELEGRAPHIST'S POCKET-BOOK OF NOTES, FORMULÆ, AND CALCULATIONS: by J. A. FLEMING, M.A., D.Sc., F.R.S., M.I.E.E. 352 pages, $7\frac{1}{2} \times 5\frac{1}{2}$ ins, 39 diagrams and illustrations. Price 9/- net, post free 9/6.

WIRELESS TELEGRAPHY AND TELEPHONY: by H. M. DOWSETT, A.M.I.E.E. 331 pages, 305 diagrams and illustrations. Price 9/-, post free 9/5.

WIRELESS VALVE TRANSMITTERS: The Design and Operation of Small Power Apparatus: by W. JAMES. 270 pages and over 210 figures and plates. Price 9/- net, post free 9/6.

THE RADIO AMATEUR'S HANDBOOK: A Manual of Amateur Short Wave Radiotelegraphic Communication: by F. E. HANDY, A.R.R.L. Price 4/-, post free.

THE ELEMENTS OF RADIO COMMUNICATION: by O. F. BROWN. 216 pages. Price 10/6, post free 11/-.

ANNUAL DIARY & LOG BOOK, 1927. Price 3/6, post free 4/-.

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against those who make the ether hideous. I should also like to suggest a method of keying, which I have used with great success at both G6ZA and G6HW, which I have never seen anywhere in print. The circuit used is the ordinary Hartley, and the keying is carried out in the actual grid tapping head, the key being between the grid clip and the grid condenser. No chirp is ever reported, and key clicks are practically absent, whilst no radiation takes place whilst the key is up. Powers up to 50 watts have been tried successfully.

Yours truly,
L. A. LAFONE (6ZA, 6HW).

The Grove, Harrow, Middlesex.

MORE FRENCH QSL DIFFICULTIES.

To the Editor of T. & R. BULLETIN.

DEAR SIR.—With reference to Mr. Wynter-Blyth's letter regarding the acknowledgment of QSL cards, I have had the same experience.

On looking into the list of Mr. Blyth's, one is struck by the rather appalling fact that over half the offenders are G stations. Now this seems very unsporting—and under the circumstances, how can we turn round on other countries for not QSL-ing? (Might I mention here that YS7XX is permanently on my black list? I have never known him QSL a G yet; I may be wrong, of course.)

Busy DX hams often receive reports which are useless from enthusiastic BCL's, but surely, to ignore a *detailed* report is, to say the least of it, *very* unsporting. Let us hope these offending stations do not use the cards they receive as "wallpaper"!

The following stations owe me cards: G6RW, G5BT, G5DN, G6VP, G2GT, G2NC.

The following have taken over six weeks to reply, and have not yet done so: K4UA, 8UCN, 8CP, 1-ILD, HQS, F8GZ, F8RU, B4DK, K4UUM, F8FY, K4WM, 8TRV, 8VX, B4JK, B4XC, F8PJ, 8JT, B4RU, BA2, EAR18, K2, 8JZ, F8LZ, 8RS, 8CP, 8YY, 8UT, B4U2, 8RV, D7DD, 8LL, B4WM, EB4YZ, 8FU, K4UHU, EB4KK.

Hoping this will have the desired effect of bringing them up to scratch,

Yours truly,
ERIC BATEMAN.

"Monkleigh," Hove Park Road, Hove.

IRISH RADIO TRANSMITTERS' SOCIETY.

To the Editor of T. & R. BULLETIN.

DEAR SIR.—I have the honour to acquaint you that, as the result of recent meetings, the I.R.T.S. has been reconstituted under the name Cumann Eireanach de Radio-Sheoltoiri (Irish Radio Transmitters' Society), and that a new and more comprehensive constitution and rules were adopted. As the result of increased interest in short-wave amateur transmissions, the membership of the society has increased considerably. Moreover, the greater facilities for the procuring of licences, tendered by the Minister for Posts and Telegraphs, has been all in favour of increased activity in this country. As the result of this development, the society have now engaged finer accommodation, at 5, Leinster Street, Dublin.

The following officers and committee were elected for the current year: President, Colonel Dennis, C.B. (GW11B), Fortgranite, Baltinglass, Wicklow; Vice-Presidents: John J. Dowling, M.A., University College, Dublin, and Eric Megaw (GI6MU), 3, Fortwilliam Drive, Belfast; Chairman, J. Kitchen, Esq., Editor, *Irish Radio Review*, Pearce Street, Dublin; Hon. Secretary, Cyril Fagan, 2, Upper Leeson Street; Hon. Treasurer, D. Burton Bradshaw (GW11C), "Littleton," Ashfield Road, Ranelagh, Dublin; Committee: Dermot M. O'Dwyer (GW18B), 9, Upper Leeson Street, Dublin; Donald F. O'Dwyer (GW18B), 9, Upper Leeson Street, Dublin; Denis Kennedy (GW14C), 21, Morehampton Road, Donnybrook; W. H. Benson, Esq., 46, Dufferin Avenue, S.C.R., Dublin; William Moran (Chief of QSL Section), Solent Villa, Kimmage Road, Terenure, Dublin; Hon. Auditors: J. P. Campbell (GW14B), Marfello Terrace, Sutton, Co. Dublin; William Byrne, Esq., 43, Lower Beechwood Avenue, Dublin.

I shall have pleasure in forwarding a copy of the revised constitution and rules of the society when they come to hand.

Mr. Moran is now in charge of the QSL Section, and in order to expedite the despatch and delivery of cards, I suggest that Mr. Jamblin should be notified.

From time to time we will have pleasure in sending you notes on our activities.

YOUR ARTICLE WILL
BE APPRECIATED!

Wishing you and the editorial staff of the BULLETIN the compliments of the society.—I am, sincerely yours,

CYRIL FAGAN,
Hon. Secretary.

2, Upper Leeson Street, Dublin.

To the Editor of T. & R. BULLETIN.

DEAR SIR.—The following letter, dated March 19, 1927, from the radio operator of a French steamer, came to hand on March 30, 1927, and, perhaps, you will be good enough to publish it for the information of the G stations mentioned therein:—

"Hr wireless operator in ship steamer French. R ok R8 G6WG, QRB about 2,050 kilometres S.W. Pse QRH? Times of traffic? Hr R ok R4 G5YK, G5MS, G2KZ, G5GQ, G5VL, G6WG, R4 QRH? Pse QRB 2,050 km.

"Addresse pour QSL: Jean Repoux, Officier Radio, 8, Impasse des Chateaupieds, Rueil (S. et O.), France."

Yours faithfully,
ROBERT CARLISLE (GI6WG).

"Langside," Union Street, Coleraine.

ESTHONIAN AMATEURS.

To the Editor of T. & R. BULLETIN.

DEAR SIR.—I have received a letter from an Estonian amateur which I think will interest you. He says:—

"There are about four or five amateurs in Estonia at present engaged on short-wave work; these are all unlicensed and use a variety of call signs. Some rules and regulations referring to radio transmissions have recently been made under which all amateurs have to pass the Ship Radio Operator Examination before being allowed to transmit. The authorities have confiscated more than one transmitter operated without licence.

"No cards should be sent to Estonia except under cover, as conditions appear as bad, if not worse, than in Holland.

"All cards may be sent via QSL Section, T. & R., or K4YAA."

The writer has asked me not to disclose his name or address.

Yours faithfully,
G. W. THOMAS.

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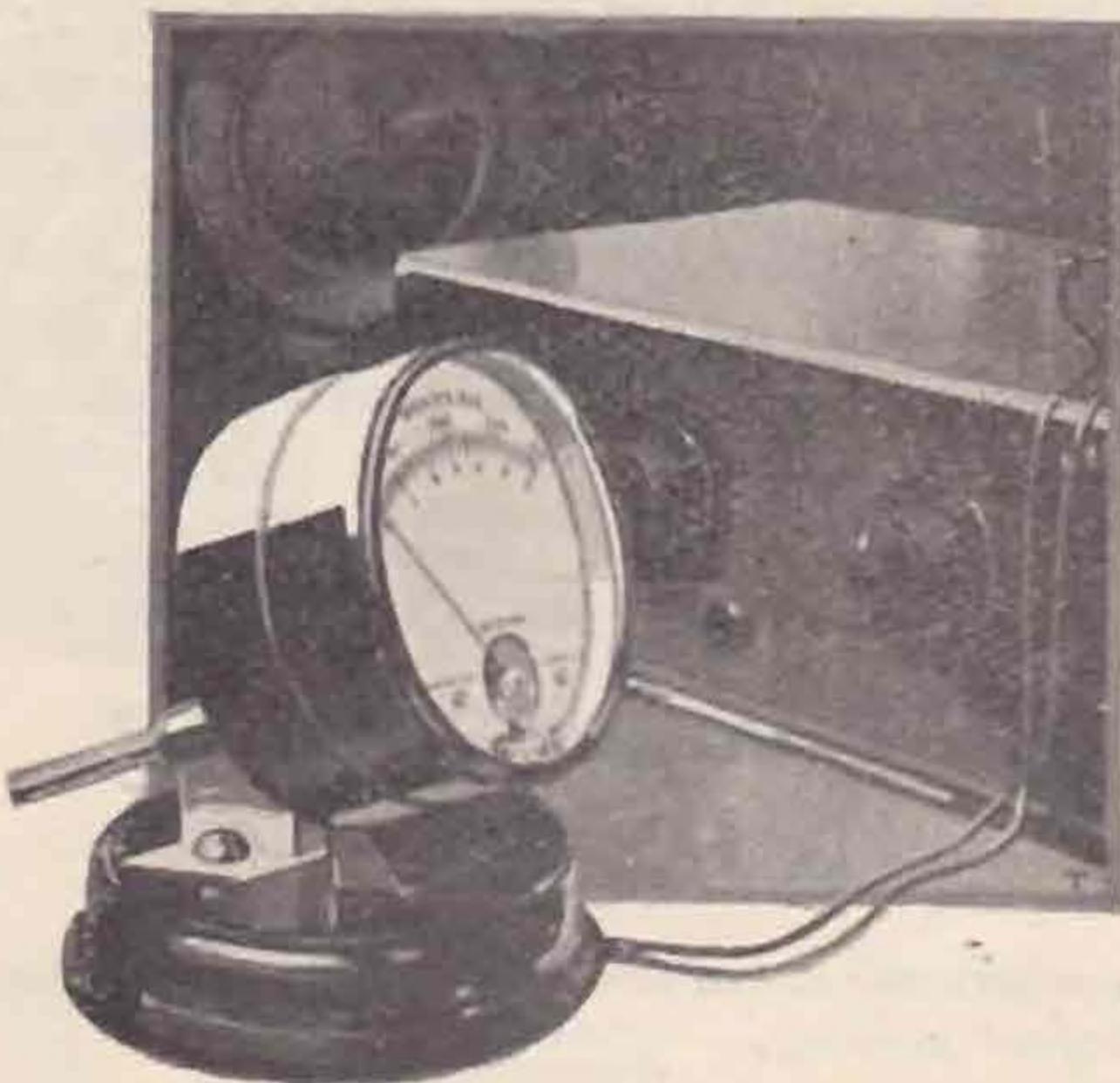
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WANDERERS.

To the Editor of T. & R. BULLETIN.

DEAR SIR,—Re your complaint in this month's "BULL." with regard to short-wave "wanderers," which is, no doubt, justified to a certain extent.

I take the liberty of expressing the opinion that this complaint would have been more in keeping with the usual tone of the journal to which all members of T. & R. Section look to for information and advice had it terminated with some helpful notes, such as the names of any firms (advertising in the "BULL." for preference) who will calibrate a wavemeter for a reasonable fee, instead of with threats and warnings.

The majority of hams regularly take in at least one good radio periodical, in which descriptions of various types of wavemeters appear from time to time.

Having constructed one, which he considers will serve his purpose, he is then advised to calibrate it, the best method being to borrow a reliable wavemeter (Hi!) or to tune in any stations working on known wave-lengths, etc.

This is all very good, and simple, in theory, yet there are so many on the air who cannot state with any degree of accuracy the wave-length on which they are working.

I suggest that this is quite as important as the subject of QSL's, etc., and that helpful information on the subject of wavemeters (particularly with regard to the calibration of same) would be welcomed, even by many who profess to "know it all."

May I ask how many of those who will regard this as a display of colossal ignorance on the part of the writer have an efficient wavemeter, the accuracy of which they can guarantee?

I will conclude by assuring you that this is a sincere attempt to bring up an important subject, in the hope that there will be no further complaints, and not a grouse against the "BULL.," and the efforts of those responsible for its publication, which are greatly appreciated by

Yours faithfully,

H. F. MALCHER (G6HM).

Station House, North Ealing, W.5.

UNIQUE DX CONDITIONS.

To the Editor of T. & R. BULLETIN.

DEAR SIR,—I am wondering how many G stations noticed the unique DX conditions prevailing on the night of March 27 up to about 21.30 G.M.T.

During one half-hour's search (from 20.30 to 21.00 G.M.T.) the following DX stations were logged: Australia (OA): 2GW, 2MS, 2SA, 2SH, 2WB, 3BQ, 3DC, 3ES, 5AX, 5WH; Brazil (SB): 2AX; India (AI): 2KW; Russia (EU): 1WW; South Africa (FO): A3B; French Indo-China (AF): 1B and HVA.

By the way, how many BRS stations can beat this DX log for a 30-minute sitting?

Sincerely yours,

C. R. PONTING ("Bristol" and BRS28).

P.S.—0-V-1 receiver used.
11, Woolcott Street, Redland, Bristol.

FRENCH QSL CARDS.

To the Editor of T. & R. BULLETIN.

DEAR SIR,—Like many other transmitters, I am still waiting on cards for French QSO's. On April 2 I worked for the second time a station near Paris. I inquired about my QSL card, and when the reply came I had great difficulty in believing that the operator was actually French. Here it is: "Fr QSL, PSE wait a little. Ere QSL when many crds via R.E.F. because the stamps are too dear. Hi!"

Stands Scotland where she did and the city of Aberdeen, in particular?

Yours faithfully,

R. CARLISLE (G16WG).

To the Editor of T. & R. BULLETIN.

DEAR OM,—I feel that I should express through the "BULL." my appreciations to all who were responsible for obtaining our overdue French QSL cards.

I would like Jamblin and Rock to know that 6CL is well aware of their difficulties in the past, and it was only the grumblings of fellow hams plus my own regret at the delay in obtaining cards, that prompted my grouse in an earlier issue.

It may interest my fellow amateur friends to know why I got "peevved" when I say that I had 85 cards unanswered up to the day I wrote. Since then 17 French have turned up, but my "Black List" is still well over the 60 mark.

Perhaps it will help matters if I give just a few outstanding cards "owing" in the hope that they may meet the eye of those who have failed to QSL (or whose cards have gone astray):—British: 2VJ, 5AA, 5UW, 6IZ, 6IV, 6HT, 6LJ, 6VO, 6WB, 6OX, 6YD. Denmark: D7XU. Austria: GP, WA, FZ. Italy: 1AX, 1NA. Poland: TPAX. Norway: LA1E. Czecho (CS): 2UN. Yugo (YS): 7XX. French over 20! In the case of TP, YS and CS, they are first-time QSO's and it seems hard lines if no confirmation is forthcoming. Wherever possible, I QSL direct,

so little excuse should be forthcoming for non-delivery. In the case of one or two stations quoted above, I feel sure they *never* QSL because I know other fellows who are without their cards as well as myself.

Thanking you for allowing me to ventilate my opinions on a point which is a sore one to not only 6CL, but to several of his friends,

With my 73's,

Yours faithfully,

J. CLARICOATS (G6CL).

107, Friern Barnet Road, London, N.11.

P.S.—If any station has missed my card, please let me know. I have QSL'd every station worked after first QSO.

To the Editor of T. & R. BULLETIN.

DEAR SIR,—I notice that a large proportion of the correspondence columns of your journal are regularly devoted to the complaints of those who have evidence that their call signs are being misused. In some cases the only evidence is that reports are received of transmissions received on wave-lengths not at the time in use, and I am of the opinion that some of the trouble would disappear if transmitters examined their apparatus with respect to harmonics, before writing to complain.

The harmonics of a 90-metre or even a 180-metre outfit can possibly receive more efficient radiation than the fundamental, and if they are of appreciable strength, can be received over large distances. I once held a QSO with the 45-metre harmonic of a 90-metre station, which was doing much better DX than the fundamental.

With regard to other complaints, a fair amount of trouble may be due to badly-sent or badly-received signals, especially in the case of telephony.

In conclusion, I must agree with you that publications of the nuisance can in no way help to alleviate the trouble, and I think the only course to adopt is to place the matter in the hands of the P.M.G., who is now very efficient in locating pirate stations.

Yours faithfully,

F. CHARMAN.

76, Salisbury Street, Bedford, England.

To the Editor of T. & R. BULLETIN.

DEAR SIR,—I have been asked by our good friend, Drudge-Coates, Rawalpindi, to give the following information to all British stations: New call signs have now been allotted to stations in India, DCR now being 2KX, ACS being 2KW, and FRJ being 2KT. The intermediate used is Ai, and the licensed wavebands are 30 and 45 metres.

Incidentally, Ai2KX informs me that my station, 5NJ, was the first G to work with him when he used the new call. 73's.

Yours, etc.,

FRANK R. NEILL.

Chesterfield, Whitehead, Co. Antrim.

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Wallet against buying
new gear.

To the Editor of T. & R. BULLETIN.

DEAR SIR,—I have received information from BNSKZ, Kirching, Sarawak, that he is now QRP, 5-7 watts, on 23 to 60 metres, and would very much like reports. His old transmitter of 110 watts was closed down on December 6, 1926, and the QRP set was started up on January 10, 1927. He has QSO'd South Africa, New Zealand, Australia, Tasmania, 6th and 7th U.S.A., India and Japan on this small set.

He says the temperature in the shade in Sarawak is 89° F. Phew?

Yours faithfully,

JOHN L. HARMAN (BRS60).

"St. Annes," 506, Chester Road,
Erdington, Birmingham.

Bulletin Standing Notices.

All members are asked to read carefully the following notices before writing.

Address all your correspondence to the particular Officer in whose province it is to deal with the matter under discussion. These are the Advertising Manager, The Hon. Organiser T. & R. BULLETIN; The Hon. Secretary, T. & R. Section; The Sales Manager, T. & R. BULLETIN; Secretary, Experimental Section; Q.S.L. Manager; Q.R.A. Manager, and the Chairman, T. & R. Section. Each one of these officers has his own Department and method of dealing with correspondence.

Always write your letters relating to different subjects on separate sheets of paper. Do not send in an order to the Sales Department and ask the Hon. Organiser a question in the same letter or ask a question about your licence. Also do not mix criticisms of the BULLETIN with criticisms of some other Department of the Section.

When sending cheques or postal orders do not embody payment in respect of several items in one sum, but make out separate sums for the various items.

Orders for all articles except enamelled emblems should be addressed to the Sales Manager and nobody else, and cheques should be made payable to Sales Department, T. & R. BULLETIN. Cheques and orders for enamelled badges should be made payable to the Secretary, Radio Society of Great Britain, and also subscriptions.

Questions concerning licence matters should be addressed to the Hon. Secretary, T. & R. Section.

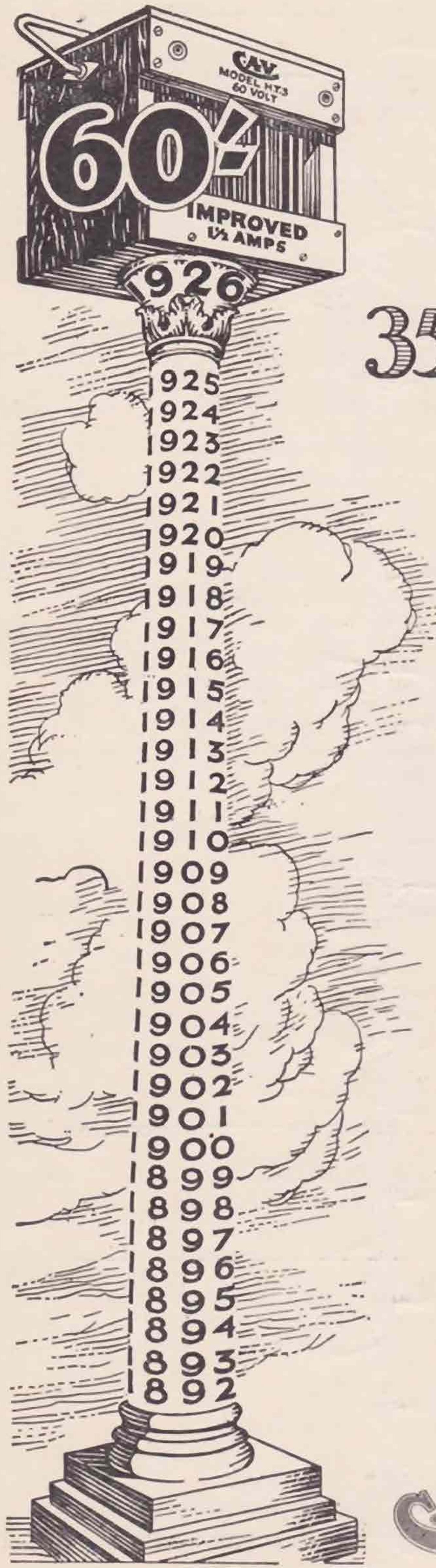
Reports concerning other activities should be addressed to your Area Manager.

Changes of QRA should be addressed to C. A. Jamblin, Esq., QRA Manager, 82, York Road, Bury St. Edmunds, Suffolk, and these will be embodied in a monthly report in the BULLETIN, and will be noted by Headquarters.

QSL cards should be forwarded properly addressed and stamped in the case of known QRA's to QSL Manager, Radio Society of Great Britain, 53, Victoria Street, S.W.1. In the case of the free delivery countries, however, it is only necessary to address the card and not to stamp it.

When corresponding with the Hon. Organiser, T. & R. BULLETIN, and if a reply is required always send a stamped addressed envelope unless you are sending an article for publication. Replies cannot be guaranteed unless this rule is observed.

Read these notices month by month in order to ensure that no change takes place without your knowledge.



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