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AUTOMATIC AND HIGH-SPEED WIRELESS WORKING.

By B. S. T. WALLACE (C.T.O.)

THE report of the Imperial Wireless Telegraphy Committee indicates the great advance made in this science during the past few years, and its tremendous possibilities. From a practical telegraphic point of view the most important achievement is the satisfactory accomplishment of high speed automatic working. For continuous and "difficult" traffic, such as would pass over a world-wide system of large wireless stations, this method of transmission is essential. Though not a new development, the advent of the thermionic valve has enormously facilitated and simplified automatic working, so that an ordinary wheatstone slip can be run through the usual transmitter and printed in morse or caused to operate a Creed reperforator, as on a line or cable. With the old spark systems there were two main difficulties to contend with. (1) The enormous power that had to be made and broken by the transmitter or special transmitter relay. (2) The extreme weakness of the received oscillations and consequent difficulty in operating any form of mechanical contact relay to close a local circuit. There remains a third obstacle, to be referred to later, that at times seriously interferes with all wireless working.

By virtue of a certain characteristic of the thermionic valve, modern high power stations can control an output of many kilowatts in a way that is easily handled by a slightly modified wheatstone transmitter up to its maximum speed. Reception is still mainly carried on by means of telephone receivers, the dots and dashes being heard in them as musical notes. Recording has been done photographically with the use of sensitive reflecting galvanometers, and also by means of the dictaphone, the records of the latter being re-run at a speed suitable to the transcribing capabilities of the individual operator.

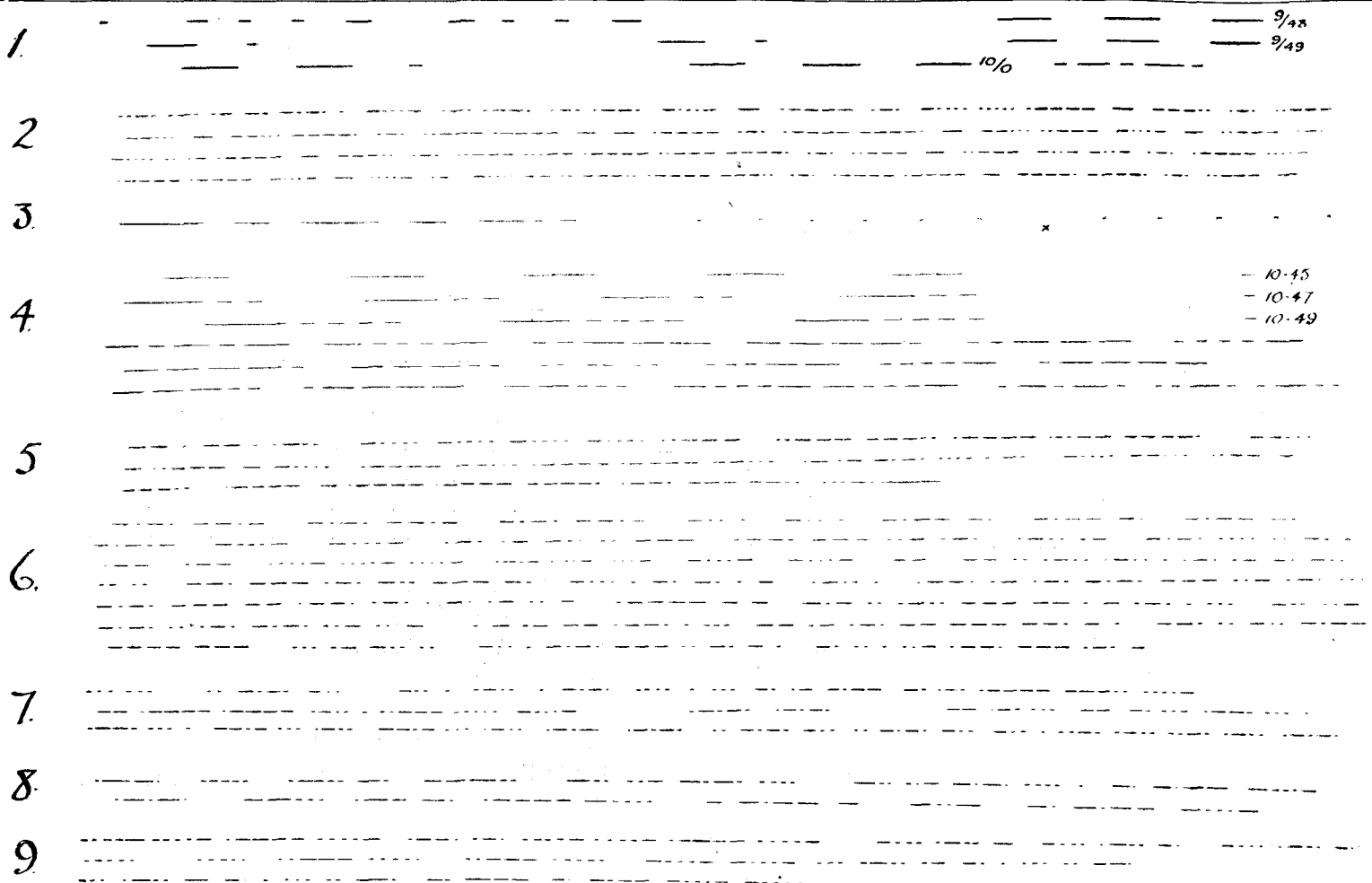
All these methods are unsuited to modern conditions, competition with cables, and the creation of a new class of cheaper long-distance communication. Morse recording with ultimate direct type printing are imperative, and for this it is necessary to operate a contact relay similar to the P.O. standard instrument. This can now be done with less difficulty than formerly by what is known as the trigger relay action of the thermionic valve. Some idea of

the extreme sensitiveness of this device, can be gained from the following illustration. With a valve, contact relay, and electric bell suitably connected, the bell can be rung by electrifying a piece of ebonite by friction with a silk cloth and holding the ebonite several feet from the thermionic valve. In fact, given a sufficiently dry atmosphere, it would be impossible to stroke a cat the wrong way anywhere near the apparatus, without ringing the bell!

The records illustrated in the photograph were printed at the author's experimental station, and give some idea of what can be done, bearing in mind they were produced by more complex arrangements than are necessary for the latest devices, owing to limited facilities in the matter of apparatus, &c. With the exception of Paris "time," the signals were all hand operated from the distant stations. The most striking feature is the absence of distortion or irregularities such as would probably be experienced on land lines and cables to the same individual stations. This point is well illustrated on a sounder. Wireless "marks" from any distance are reproduced accurately and as clear and sharp as on short circuit. I have seen a test wheatstone slip received by wireless at 400 words per minute. It was perfect.

There is, however, one great difficulty to contend with: interference caused by atmospheric and other electrical storms. Sometimes the phenomenon is quite local and due perhaps to thunderclouds, at other times it is world wide and attributed to some form of solar activity. The effect is analogous to a land line being in continual intermittent contact or under heavy induction. With such conditions recording is, of course, impossible, but owing to the musical notes of the various transmitters aural reception can still be carried on, provided the extraneous noises are not stronger than the signals. Conditions are at times so bad that it is necessary to send slow, and repeat each word twice. Many methods and suggestions have been tried for the segregation of these "stays," but the trouble is almost as bad as ever.

On the day these records were taken, there was a fair amount of minor static disturbance below the signal strength of the stations concerned and therefore causing no interference with recording in London. It would probably have been manageable up to a distance of 2,000 miles. Beyond this figure the strength of moderate atmospherics approaches nearer the received signal intensity and also another at present little understood factor creeps in; the variation in volume of the received signal itself.



Now the stations whose work is here illustrated, and many others, were transmitted over 3,000 miles, most of them experiencing difficulties even with telephone reception. There were frequent requests to "send twice" and "slower." In the early evening Nauen (Berlin) sent the following "note" to Madrid. "Cannot read anything owing to weak signals and atmospheric; stop sending; nothing Rd.; start again at midnight, very slow, once." This was in English, by the way, which is frequently used for service purposes by wireless stations of all nationalities.

There is evident wisdom on part of the Imperial Committee in confining their scheme to 2,000 mile stages. We all hope the Engineering Department of the G.P.O. who will be entrusted with the erection and working of the stations, will be able to supersede the performance of the various systems at present in operation, eventually overcome outstanding difficulties, and so establish a means of communication that will one day, put long lines and cables on the scrap heap.

The following details of the slips in the reproduction may be of interest:—

1.—Paris (FL) 2,600 metre wavelength spark.

New international time signals. The letter "O" is signalled after each of a series of "X's" (with curiously short dashes), "N's," "G's," the final dash of each "O" terminating exactly on 9.48, 9.49, 10.0 respectively, Greenwich mean time a.m.

2.—Paris (FL) 2,600 spark.

Portion of code weather report giving meteorological conditions for whole of Europe. The key is published and enables mariners, farmers, and anyone interested within a vast area of Paris, to obtain this useful information. Note the figure "O" is signalled by a longish dash. This is now a universal practice among wireless stations on other than ship work.

3.—Paris (FL) 2,600 spark.

Scientific dots. 360 are sent at 10.30 a.m. G.M.T. each 60th being missed to facilitate counting. The missing 60th is shown by the cross. They

are sent for the purpose of checking chronometers by the coincidence method and ensure an accuracy of $\frac{1}{1000}$ th of a second. They have been of vital importance for determining the exact longitude in the survey of parts of Africa.

4.—Paris (FL) 2,600 spark.

Old time signals, still in use. A dot follows each of a preliminary series of "T's," "D's" and "6's," indicating respectively 10.45, 10.47, 10.49 G.M.T., a.m. Two groups of figures, repeated three times slowly for the benefit of observers unskilled in morse, follow this time signal.

They refer to calculations to be made in connection with the scientific dots sent 15 mins. previously, and vary daily.

5.—Nauen (POZ) (Berlin) 3,500 metres wavelength. Spark.

Portion of weather report giving readings from Memel and Aachen.

6.—Lyons (YN) 15,500 metres wavelength. Continuous wave.

Press for China and CQ 444 words, showing portion announcing Sadi Lecointe as the winner of one of the Gordon Bennet cup races.

This particular message was a model of perfect morse and from the photograph it looks almost incredible that it could have been hand signalled

7.—Paris (FL) 10,000 metres wavelength. Continuous wave.

Preamble of commercial message from Lechesnay to I C D (Rome) and the request at end of message "Mrs pse Q S L" which interpreted liberally, means, "Send Rd pse."

8.—Carnarvon (MUU) 14,000 metres wavelength. Continuous wave.

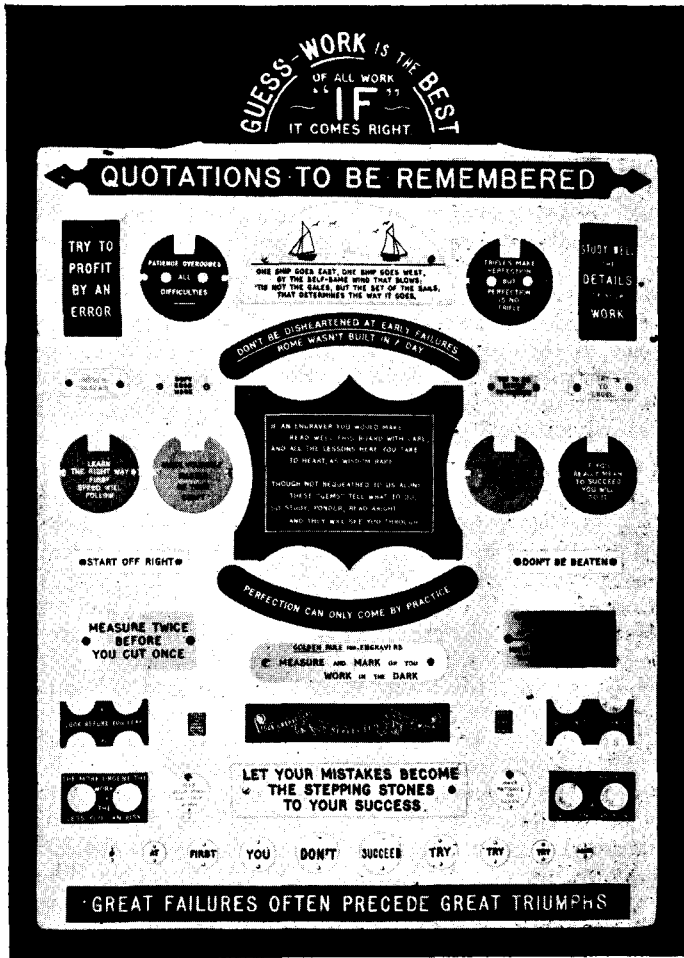
Preamble of commercial messages LN (London) to NY (New York.)

9.—Nauen (POZ) 12,600 metres wavelength. Continuous wave.

Preamble of message Berlin to New York showing each symbol repeated twice owing to bad atmospheric conditions.

As will be observed, ideal operators are on the key at all these large stations. They possess that vital quality "rhythm," their work is beautifully timed and spaced that it "goes like music" and "writes itself." Such a contrast to the fidgetty, soul-destroying, tarradiddle that is still allowed to pass as morse on too many of our land lines.

MACHINE ENGRAVING.



A board which the foreman of the Machine Engraving Shop at Holloway Factory has put together to be placed before learners and used by them when they are learning to operate the engraving machines. The idea of combining precept and practice seems a happy one.

THE BAUDOT—XIV.

By J. J. T.

BEARING in mind the construction and principle of the Baudot keyboard as already studied, we may now consider that portion of the apparatus known as the Receiver and which performs the important function of translating or converting the electrical pulsations into mechanical action, and thus into printed letters. As a first step it should be remembered that (whether in a Single Plate or Double Plate form of Baudot) the relay which repeats the signals into the Baudot receiver coils, only repeats the marking signals, the spacing currents being represented by their time value, i.e., that period during which they hold the relay tongue against the Spacing Stop. This may seem an elementary point to accentuate, but the more expert Baudotistes will recognise the appositeness of the reference and the less informed will do well not to miss its importance.

A general view of the receiver was shown in the earlier articles last year. I am again indebted to the Indian Telegraph Service for photographs (Figs. XXXVI and XXXVII) of the same when opened out. Reference to these may prove useful as we proceed. The fact that the old-fashioned winding gear and base is shown in Fig. XXXVI instead of the more modern direct motor drive does not affect the description of the receiver itself, which remains essentially unchanged. Each receiver is fitted with five electro-magnet coils wound with fine insulated silk-covered wire to a resistance of 50 ohms, each coil being provided with a non-inductive shunt of 200, thus reducing the resistance to 40 ohms. Each of these coils (Fig. XXXVII A¹ to A⁴ and Fig. XXXVIII A) is screwed end-on to the inside of the back supporting plate 2 (Figs. XXXVI and XXXVIII).

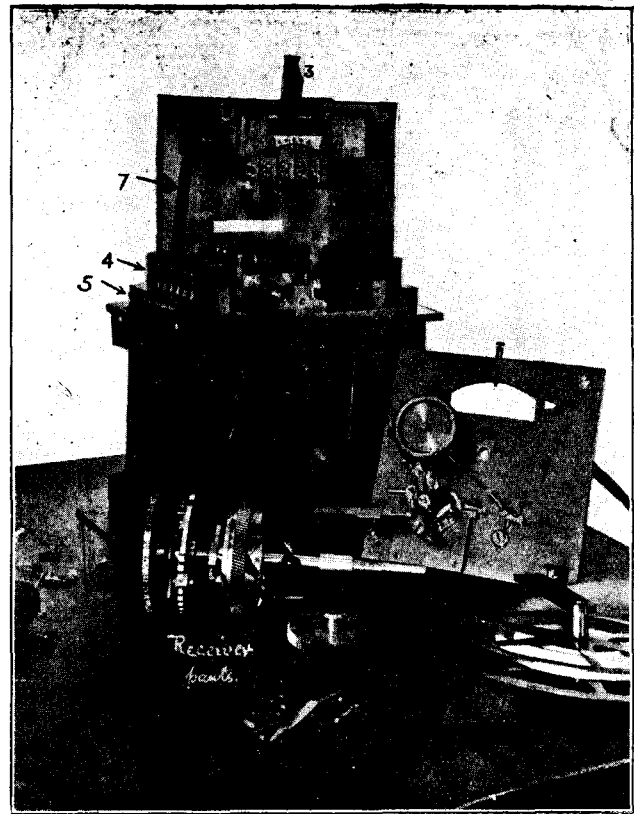


FIG. XXXVI.

Fig. XXXVIII gives a sectional view of part of the interior mechanism of the receiver with the printing axle X and C the combiner wheel, shortly to be described. The soft iron core E of the coil A projects outwards and terminates in an extended pole piece E¹. An armature E², hinged at H is slightly under-cut at its free end so as to present a maximum surface to the tapered pole piece E¹.

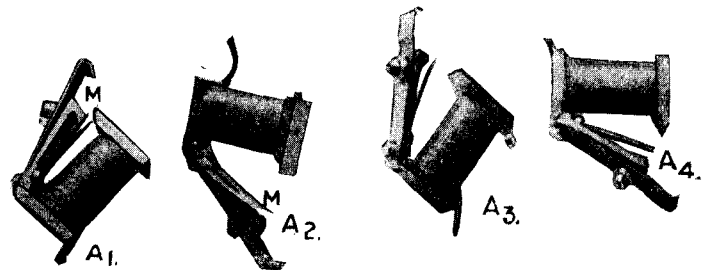


FIG. XXXVII.

The armature E² is also fitted, upon its under side, with a laminated brass split spring M (see also Fig. XXXVII), adjustable in its tension, which in addition to replacing the armature and appendages when the current has ceased to energise the coil, prevents actual contact between the armature and the pole piece E¹ when the former is attracted towards the latter. The detrimental effects of residual magnetism are thus avoided, and the rapid action of E² is therefore materially assisted, being of course aided still further by the shunting of the coils.

The electrical connexions are brought to a base block 5 (Fig. XXXVI) fixed on the base plate in the winding gear type of Baudot. In the direct motor drive type of receiver a studded strip connexion takes the place of the base block and is screwed up to the flat spring connexions 4 of the receiver, which latter form the normal and permanent equipment of all Baudot receivers. From the block 4 the connexions are led to the various parts of the receiver, the five coils being served by means of insulated wires fitted to the back plate 2 (Fig. XXXVI 7 → and Fig. XXXIX 7). The reverse ends of each coil are finally connected to the framework which in turn is joined to earth by simple contact with the base plate, itself connected with the main earth,

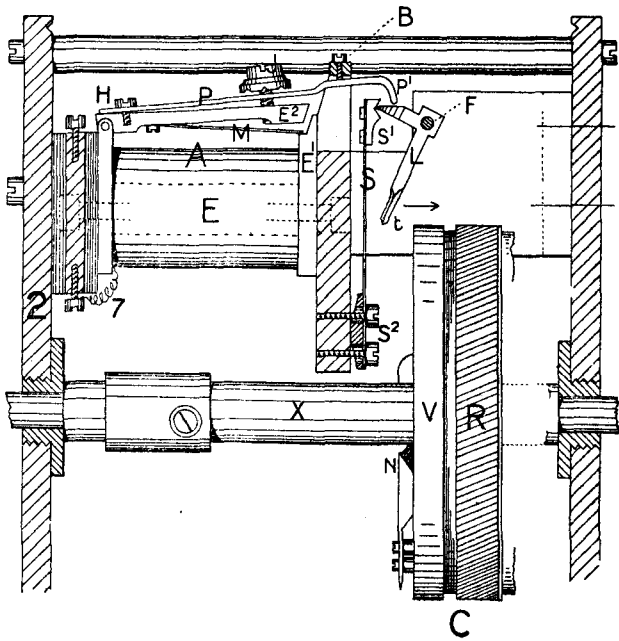


FIG. XXXVIII.

To the armature E^2 (Fig. XXXVIII) is fitted an "appendix" P (see also P^1 to P^5 Fig. XXXIX) adjustable as regards its distance from E^2 by a notched screw J, the notches of the latter locking the adjustment in any determined position. When the armature E^2 is at rest the lipped portion P^1 overhangs, but does not touch the lever L, known as the appendix lever (see also Fig. XXXIX). S is a laminated steel spring fixed at S^2 and fitted at S^1 with a double slotted head piece. When P and its armature are quiescent, the nose of the lever L rests in the uppermost of the two slots; when the action of the armature E^2 draws P downwards the lip P^1 strikes L smartly and forces the nose of L into the lower slot of S. This movement results in the foot t of L being thrown out in the direction of the arrow, and towards the edge of the combiner wheel C.

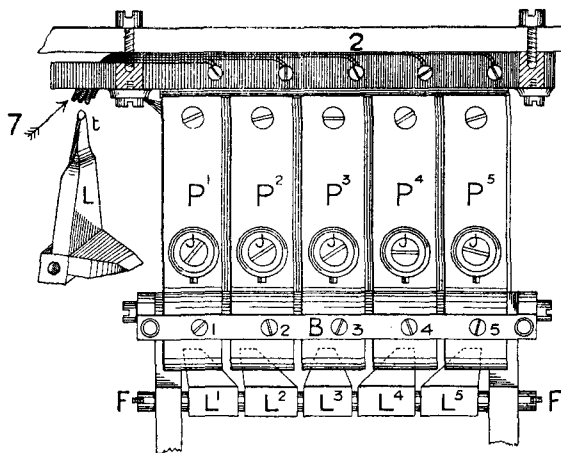


FIG. XXXIX.

Fig. XXXIX gives a bird's eye view of the five appendices P^1 to P^5 with the respective levers L^1 to L^5 which they govern. One of these levers L is shown separately. It should be remarked that as the feet are arranged radially round the combiner wheel C Fig. XXXVIII (see also Fig. XXXVI just underneath the raised armature 3) they are not interchangeable as regards position on the spindled axle FF (Fig. XXXIX). See also F (Fig. XXXVIII).

A brass bridge-piece B (Fig. XXXIX) fitted with stop-screws 1 to 5 controls the upward movement of the appendices and armatures when the electro-magnet coils are de-energised. This bridge-piece is also indicated in section Fig. XXXVIII where an individual stop screw B may be noted.

(To be continued.)

THE HANDLING OF TELEGRAPH TRAFFIC.

It has come to be realised that Telegraph Traffic study has too long been delayed, and that there are potential possibilities which await application. It is only within the last decade that the question has been grappled with seriously. Some advance has undoubtedly been made, and there still remains much to be done if the Service is fully and adequately to meet the requirements and demands of present-day tendencies. If, as is anticipated, we are on the threshold of a new era in the history of the world, in that the conditions of life and work are about to be transformed—if that has not yet been already begun—everything possible that forethought can imagine must be carefully examined, in order that it may be ascertained along what pathway advancement can be made which will be for good. Already we have the production of science in the form of better and—from a manipulating point of view—simpler telegraph apparatus, but the question remains, are we utilising the facilities and the means of applying them to the best advantage?

It has been said that the basis of proper traffic study is the study of statistics, and I am not sure that it can be truly said the telegraph statistics have been adequately studied in the past. Through neglect of such study, it is feared that the economic factor in telegraph management may have been neglected. The consideration of costs is everything, and in studying costs statistical investigation is the all important factor. This does not necessarily mean economic study with a view to saving of a purely parsimonious kind—such saving, after all, is not always true economy—but study of the most profitable means of adjusting staff in using the apparatus and plant provided, and what is even more important, study of the best means of handling the work. Even those who have taken but a superficial interest in the development of the Telegraph Service remember that, not so long ago, certain large towns worked a great number of Morse circuits to the Metropolis mostly by ordinary key signalling, while the admirable Wheatstone instrument was merely held in reserve. Think of the enormous maintenance cost of those wires! This is not indicated as a reproach, but merely to illustrate our tardiness in looking at things from a traffic point of view. Changes for the better have been, and are being made, and it is hoped that the course entered upon will be pursued, in order that a more expeditious and reliable service may be established.

While it has to be admitted that the flat tariff rate for the Inland Telegraph Service cannot be regarded as in any degree satisfactory from an economic point of view, and that such an arrangement as that which exists has sometimes restricted forward movement, it is more urgently necessary than ever before that the equipment should be the best and the most up-to-date. Only by maintaining the means by which quick and reliable dispatch can be maintained will it be possible to retain public confidence. Men of all professions and businesses not only require that, but demand it, because without it they are unable to keep in touch with the world markets, and to compete fairly therein. So soon as and not till unreasonable delay is eliminated, will business men and the public generally be satisfied. If, then, a quick and reliable service is to be given between all important commercial and industrial centres, equipment and channels ought to be provided to ensure the dispatch of every telegram within ten minutes of its receipt. If that were achieved, increased business would assuredly follow. Old ideas must be set aside if progress is to be made. Therefore, let us think less of reducing the number of channels and spare equipment, and concentrate attention on the full use of the excellent apparatus available. It is a pity, and I sometimes think a great mistake, that freer use is not made of the Wheatstone transmitter on busy circuits, where at present it is very often more ornamental than useful. That, of course, is due to the fact that it is not considered desirable to commence punching until the circuit delay is approaching 30 minutes. Co-operation between offices is asked for, but however willing and desirous all are to co-operate in expediting the transmission of traffic, it

cannot be done for the simple reason that no staff margin exists. A staff margin ought to be fixed at all large offices in order to permit the best possible use being made of Baudot and Wheatstone apparatus at all times, conjointly with Creed re-perforator and printer. When not required to assist at main points, such staff could generally be usefully employed at the concentrator switches or at other points. An alternative to the full and free use of Wheatstone would be the installing and extending of Baudot sets which, so far as experience has gone, is the most satisfactory high-speed arrangement for dealing with large volumes of commercial traffic. It is cleaner than any other, and admits of corrections being instantly dealt with. Manipulation of the apparatus is readily acquired—from six to eight weeks' training being sufficient to produce a good keyboard operator. Such apparatus, if introduced, which it ought to be at all suitable points, coupled with organised efficiency, would, I venture to believe, overcome many if not all the difficulties attending the expeditious and accurate transmission of telegrams. In this connexion it is fully recognised that the utility of typewriting machines in an Instrument Room becomes more restricted, but their value in connexion with the transcription of Morse slip and copying work generally remains, and their usefulness as a means of acquiring a knowledge of and a proficiency in keyboard perforator manipulation is as great as ever. Now that the abolition of office "C" copies is an accomplished fact, one more forward step in opening the way for the employment of typewriters in conjunction with Morse Sounder apparatus has been taken. Again introduce, wherever they can be used to advantage, mechanical message conveyors, and thereby assist in reducing the circulation delay. Superintending officers and staff cannot be too frequently reminded of the fact that it is of the utmost importance that telegrams should be collected from the baskets and circulated with a minimum delay. Anything beyond two or three minutes should be challenged if a firm grip is to be kept upon the circulation.

In every large telegraph office there should be a chart in every division showing the staff required during every half-hour of the day, and, if found practicable, the fluctuation of the traffic which should approximately at least be ascertained by exhaustive statistical study. By these and similar means, force could readily be transferred from one section to another without difficulty, and the waste which results from only transferring staff when congestion actually sets in at a particular point avoided. I am quite alive to the difficulties in the way of this, but I am not disposed to believe the idea to be impracticable. Let the best brains be applied to the problem, and I for one am hopeful. Every variation of the traffic must be studied, not quarterly, or half-yearly, but daily, and it would pay to employ a highly-efficient officer at all large offices exclusively on such work. The result would probably be that traffic would be dealt with more expeditiously than it is, and the whole organism would run more smoothly, both from a superintending and a staff point of view.

There are many problems and anomalies connected with the prompt delivery of telegrams awaiting solution. During the period of the great War, and even now, the want of a full complement of messengers has and is preventing an expeditious service being rendered. It seems to some extent to be wasted energy to effect improvements in the handling of traffic in Instrument Rooms, while delay in delivery at the booking-out point continues to exist. The present practice of batching is, from a business point of view, bad, and gives rise from time to time to serious complaint, not to mention losses to the business public. It shakes confidence in the Service and leads to the withholding of traffic which otherwise would be freely tendered. A messenger force sufficient to permit of every telegram being separately delivered is, therefore, necessary. A short study of local requirements would probably establish to what extent the messenger force required strengthening, in order to achieve the desired result. The present practice of delivering telegrams from Head Offices after 7 p.m. in large centres is still too expensive, and it is suggested that consideration might properly be given to the question of imposing a charge for portage after

7 or 8 p.m., or the adoption of some other means to cover the cost of delivery. It is an inequitable arrangement that a delivery charge of 1s. per mile should be charged for the delivery of telegrams addressed to districts of a city which happen to be outside the postal area of the Head Office, while messages for other districts situated at greater distances are delivered free. Such anomalies can hardly be defended. For example, we have in Edinburgh a free delivery at all times to all districts, with the exception of Portobello, which, although nearer to the Head Office than Newhaven, Granton and Murrayfield, has an impost of 1s. per mile placed on each telegram requiring delivery after 7 p.m.

The whole position appears illogical, and the existing portage charges so involved, that the question appears to open a field for inquiry and the application of the expert mind, in order that an expensive, if not wasteful, system may be superseded by one which would apply fairly all round.

It would be interesting and instructive were figures available for study as to the cost of the delivery of telegrams from the larger offices after 7 p.m., and from the smaller offices at all times. No doubt such figures would be illuminating, as showing the extravagance at present permitted. At the Edinburgh Head Office the weekly cost for tramway car tickets alone is approximately £5 to £6. If a similar expenditure applies to all large offices throughout the country and the cost of delivery from the smaller offices be added for purely day services, apart from the fixed wages or docket earnings of the messengers, the total additional cost would, I believe, be astonishing. All that could readily be saved by a justifiable re-adjustment of the limits of free delivery. The something for nothing policy must cease, and every activity of our national life be required to pay its way.

Then we have the delivery of telegrams by telephone, which is also an unremunerative arrangement and calls for at least modification. It is true that during the War period the Department, by a canvass of subscribers, to some extent solved a real difficulty which existed, but like many other War measures, at what cost! Can a continuance be justified? As a business proposition it cannot be defended, and now is the opportune time to set about bringing it into line with economic needs of the Service. The provision of confirmation copies was a bribe to induce business houses to accept delivery by telephone, but when it is considered that confirmatory copies are not sent to the Department by those who prefer to dictate their telegrams to the Post Office, there appears to be no cogent reason why they should require and be granted confirmatory copies of telegrams dictated to them from a Post Office.

Most, if not all, of the points dealt with have at one time or another been under consideration and therefore no originality is claimed for them, but each touches the basic principles of our craft and, unless they are dealt with on scientific lines and translated into every-day practice, the Telegraph Service will fail to meet the requirements of commerce and the general public.

All true Progressives would do well to lay to heart and put into practice at the present time the sage advice of one of the greatest of modern organisers: "I should say audacity is the thing for you. Think out new ways. Think out new methods. Think out even new ways of dealing with old problems. Don't always be thinking of getting back to where you were before the War. Get a really new world."

G. S. H. (Edinburgh).

CEYLON.

There seems a great shortage of watches and clocks in Ceylon if we may judge from the fact that as many as 800 calls a day were made last year by subscribers for "correct time," and that many subscribers repeat the request ten or twelve times every day. And as the measured service is not in operation the revenue receives no benefit from the added burden.

REVIEWS.

"*Life Stories of Famous Men.*" Published by Watts & Co., 17, Johnson's Court, Fleet Street, E.C.4. Price per volume, cloth, 3s. 6d. net, in paper cover, 2s. net.

Under this title a series of volumes is being issued by Messrs. Watts & Co., descriptive of the life-work of some of the chief protagonists in the great struggle for freedom of thought and inquiry.

The aim of each of these volumes is not to produce a study or appreciation, but to furnish a pictorial presentment showing what manner of man the person dealt with was, just what he actually did, and what he strove to accomplish.

Each volume will contain four full page half tone portraits or illustrations.

The first two volumes of the series, dealing with THOMAS HENRY HUXLEY and AUGUST COMTE, are now ready. They are written in a pleasant style, and certainly fill a want in present day literature. Notwithstanding the amount of cheap reading matter which has been produced in recent years, very little biographical work has been published in a cheap form. The importance, from the educational standpoint, of knowing the history of really great men is very great, especially in an age when blatant self-advertisement is so often taken at its face value, without any thought as to how much genuine merit lies beneath.

We feel sure that the present series of volumes will be welcomed. They are well printed, and the illustrations are good.

Since the foregoing was written, we have received the third and fourth volumes, dealing respectively with ROBERT OWEN and CHARLES BRADLAUGH.

ROBERT OWEN was one of the leading social reformers of the first half of the nineteenth century, while CHARLES BRADLAUGH took a prominent part in the struggle for freedom of opinion, both in and out of Parliament, during the latter half of that period.

Both these volumes are well up to the standard of the first two in arrangement and in the interesting manner in which the biographical story is related.

Subsequent volumes will be devoted to DARWIN, VOLTAIRE, J. S. MILL, HERBERT SPENCER, THOMAS PAINE, HUME, DIDEROT, GIBBON, G. J. HOLYOAKE, R. G. INGERSOLL and RICHARD CARLILE. Others, not yet announced, will probably follow these.

"*The Practical Electrician's Pocket Book*" has been officially recommended by the City and Guilds of London Institute. This book was reviewed in our August number, page 179. (*S. Rentell & Co., Ltd.* 2s. 6d. net.).

Messrs. Siemens Bros. & Co., Ltd. have issued a new and enlarged edition of their catalogue (No. 537) dealing with Siemens' dry cells and batteries, and a new edition of their Pamphlet No. A550 about wireless telegraphy for ships.

We have received No. 4, Vol. 1 of *Radio Electricité* published at 12, Place de Laborde, Paris, 8^{me} Arroud. The cover as was to have been expected from our French colleagues, is thoroughly original, while not failing to appeal to the artistic. It is not clear

at what intervals of time the periodical appears, but apparently each month. The production is excellent, the paper being of first-class quality, the type new and clear-cut, the diagrams and photographs beautifully reproduced, and in this respect vies with the *Wireless World* for first place. A photograph of General Messimy who is credited with an *initiative audacieuse* in 1910 whereby he utilised credits already voted and ear-marked for the erection and maintenance of telegraph lines by transferring these credits to the erection of a wireless net-work uniting Tchad, the two West African French Colonies and Equatorial French Africa. All's well that ends well. The scheme turned out for the best and proved of inestimable value during the War, providing the French with much needed apparatus. Much as one may admire the daring of the man, we most sincerely hope that there may not be many others like-minded in the French or any other administration so empowered as to be able to divert upon their own initiative funds allocated, let us say, to telephone re-construction and re-organisation, to works specially concerning the telegraphs, or *vice versa*.

A most valuable map of Africa is reproduced showing the present or projected local and inter-colonial wireless telegraph system, which comprises over sixty stations. The territory covered may be better realised when it is recorded that these stations are as wide apart as Djibouti on the east coast, Dakar in the west, Tanger and Alger in the north, and Tamatave (Madagascar) in the south, not forgetting the new and more powerful post in construction at Tananarive.

There is much other interesting matter of general and scientific interest and one cannot conclude without reference to, what is rather unusual in a review, the beautifully attractive advertisement of "Les Accumulateurs Dinin pour T.S.F. 'pendant la guerre' and 'en temps de paix.'" There are two photogravures typical of war and peace conditions wonderfully blended, while the whole is not aggressively advertising, the batteries just taking their normal proportion and place in the picture insinuating yet not intruding themselves upon the reader.

Readers will be glad to learn that Mr. Gunston is very much better. We hear that he has benefited so much from his sojourn at a South Coast resort that he is able to take mild exercise without undue fatigue.

APPRECIATION.

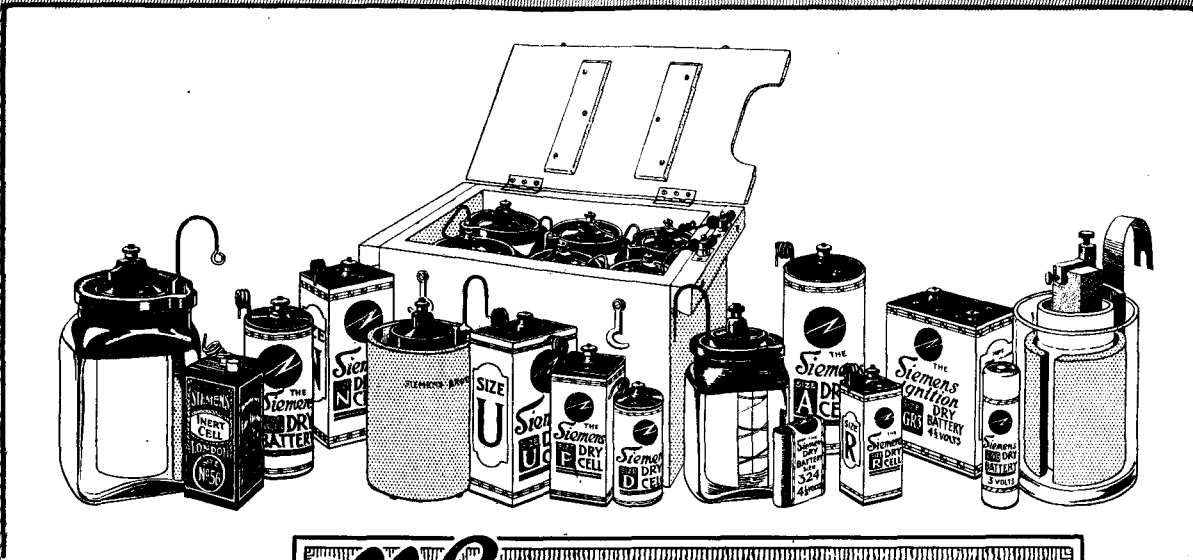
The following extract seems to conflict strangely with the journalistic views of certain week-end visitors to the United States; but it is reprinted without addition or alteration from the *Evening Standard*, of Sept. 24, and represents the opinion of Sir John Foster Fraser:—

Oh, but the London telephone system is much better than that in New York. If I have acquired any grey hairs during the last two years it has been due to being the victim of incompetent New York telephone operators. The machinery side is better in the United States; there are more telephones, and booths are plentiful; but the service is better in old London than in little old N'Yawk—at least that is how I've thought during my 24 hours at home.

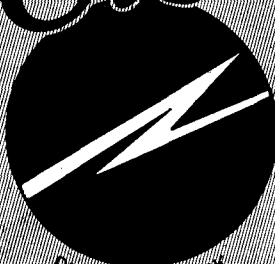
COVENTRY.

The Postal, Telegraph and Telephone Society has been revived and the programme of papers for the 1920-21 season is as follows:—

- Oct. 7. "Scientific Illuminations," by Mr. J. R. Milnes.
- Nov. 4. "Authorship of Shakespearian Plays," by Mr. W. H. Oliver.
- Dec. 2. "The Night Relief and 'Amongst' the Clouds," by Mr. H. T. Kirby.
- Jan. 6. "The Wonderland of the Wasps," by Mr. J. J. Ward.
- Feb. 3. "Postal Facilities in Egypt and Palestine During the War," by Mr. H. J. Wilkinson.
- Mar. 3. "The Experiences of a Telegraphist in East Africa," by Mr. R. W. Bingham.
- April 7. Short papers by members only. Prizes given.



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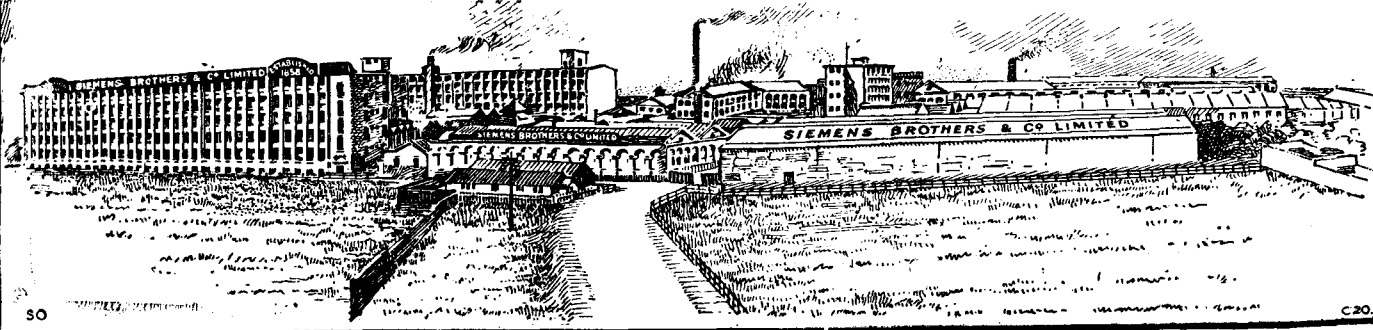
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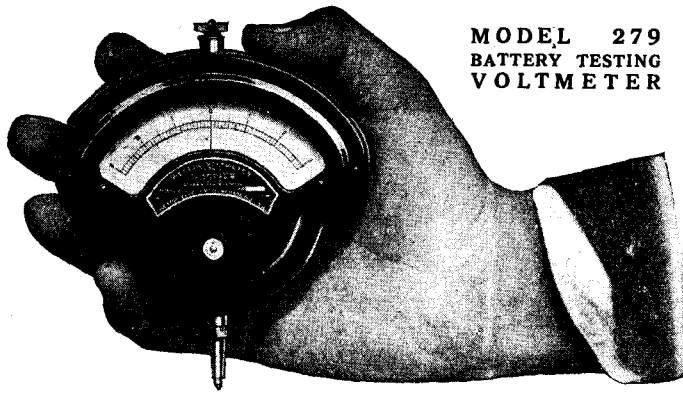
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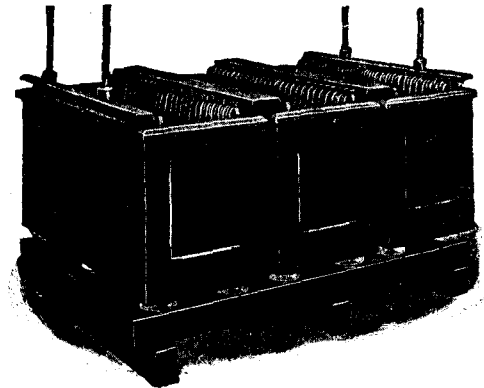
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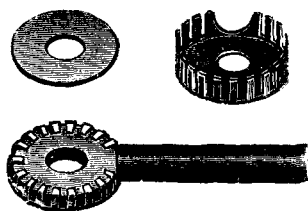
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THE OPERATOR'S VIEWPOINT.

THE following extracts from an article by Miss Lucille C. Selk in the *Telephone Engineer*, of Chicago, U.S.A., shows that it is not only in this country that subscribers are at times unreasonable in their demands on the operators.

If there is one individual in America who is getting more unfavorable publicity than an anarchist or a profiteer it is the telephone operator, and, land knows, the poor girl little deserves it!

Service complaints have become household bywords; jokes about Central's waning efficiency have crept into the newspapers and magazines and on to the moving-picture screen. When debates over the latest Senate shortcomings lag for street car travellers, there is always left the telephone girl on whom to let forth disgruntlement because she can no longer supply numbers as speedily and as bulkily as we demand them.

Attacks like these nettle her pride, but do not prick her conscience.

* * *

So when you hurl forth your customary, "Well, Central, did you finally wake up" or "Enjoy your nap?" remember that not for a second is the telephone operator off the job; that every ten feet apart there is a watchful overseer, who travels her ten-foot beat to see that every light, flash and flicker is answered within record time; that over every watchful overseer there is a more vigilant overseer to intensify the job of watching, and that over the vigilant one there are machines with still greater authority.

"But," says the public, "it took me five minutes to get Central on the line this morning, and then she gave me the wrong number and couldn't get the right number, and I knew they were there because I could see them from where I was standing, and when I did get them—finally—she cut me right off in the middle of the conversation. Why, the service is terrible!"

There are angel subscribers who are always satisfied with your service, there are subscribers who meet you halfway, and there are downright grouches who are never satisfied, no matter how hard you try to please them. Every office has them, every telephone girl is "posted" on them. Central knows that when Mr. Grouch's light comes up she must drop her half-finished connection and minister to the man who gets \$100 worth of service each month for \$2.

If a day passed without his calling the manager and giving him the usual diatribe, that day would be gala in the history of the office. He begins to flash before the receiver is off the hook. His voice is warped and shrill and pugnacious.

Failure to answer him within three seconds means "You reported!"

I have known subscribers who felt that securing the discharge of an operator whose ability to serve failed to coincide with their ability to demand was a sacred obligation.

* * *

The root of all antagonism between public and operator is the subscriber's failure to realise that besides himself there are thousands as eager to get their "parties" as he is.

When signal lights appear on a switchboard as thick as a patch of stars, it is mortally impossible to answer every calling subscriber in record time. Operators to the left and right of you are there with the long reach to help you out, but even then it is impossible to serve every one with equal quickness.

Fundamentally, local and toll are alike. Whether you are connecting parties in different streets or in different cities demoniac speed, flawless accuracy and unswerving courtesy are expected of you.

Mr. Business Man in Cleveland forgets that it may take an hour to locate Sam Brown in Chicago, that the operator may have to trace him from a dozen hotel registration books to golf links or winter gardens.

He thinks the operator can jab a plug in a jack, ring and have Sam Brown instantly report "Here!" as easily as you can get a response from that most obliging of all numbers—the police station. But not so.

Hundreds of other operators from different cities and states are all bent on the same game of "getting somebody's number;" and in the maze of circuits, out-lines, trunks and a thousand other technicalities there is bound to be a clash or delay.

* * *

Did you ever pick up your receiver and toss off casually: "Central, I have a list of numbers to call. See that I get a little special service, will you?" Of course you have.

But do you know that in order to give you that special service Central has to watch your light ahead of thirty others, must pop out "Operator!" the fraction of a second your light comes up must drop a half-finished connection and forget numbers on two other calls and miss her chance in the Main circuit to see that you have no cause for flashing? Then when she returns to her dropped parties and say apologetically, "What number, please?" she gets the weary advice to take the cotton out of her ears.

* * *

In the old days five minutes to get a number was a fair record. To-day the haste with which an operator is expected to answer is appalling. You say, "Gimme Fairchild 620."

"Fairchild 6—20?" says the voice with the smile.

Up in the exchange the operator makes a quick dash for your number, but before she reaches it Operator 20 to the right comes this way on a lurch, bent on getting 8000. Now 8000 is high and requires a reach which drags No. 20's shirtwaist three inches out of the belt. Operator 20 poises the tip of her cord on the rim of jack 8000, but before she can give it the little push that places it, down it tumbles, and the straining job of reaching has to be done all over again. She falls back to her position and you go on after 620.

The line tests revertible busy, but you know it can't be possible. You split the connection and test separately to make sure you don't give Mr. Subscriber the wrong report. Yes, it's a clear, busy test.

"The line is busy," you say pleasantly.

"What!" he screeches, "and it took you all this time to find that out? Well, good"—and he bangs the receiver up in your ear with a crash that makes the drum vibrate so rapidly as to nearly give out under the strain.

* * *

Yet the "hello girl" must smile—never laugh—just smile. If she comes in on the line with such an irregularity as a laugh on her lips, you infer it's no wonder "the service is plunk when those operators have time to carry on so!"

The
Telegraph and Telephone Journal.

PUBLISHED MONTHLY IN THE INTERESTS OF THE TELEGRAPH AND TELEPHONE SERVICE, UNDER THE PATRONAGE OF THE POSTMASTER-GENERAL.

Editing and Organising Committee - - -	}	JOHN LEE.
		J. J. TYRRELL.
		W. A. VALENTINE.
		J. W. WISSENDEN.
Managing Editor - -		W. H. GUNSTON.

NOTICES.

As the object of the JOURNAL is the interchange of information on all subjects affecting the Telegraph and Telephone Service, the Managing Editor will be glad to consider contributions, and all communications together with photographs, diagrams, or other illustrations, should be addressed to him at G.P.O. North, London, E.C.1. The Managing Editor will not be responsible for any manuscripts which he finds himself unable to use, but he will take the utmost care to return such manuscripts as promptly as possible. Photographs illustrating accepted articles will be returned if desired.

Vol. VII.

NOVEMBER, 1920.

No. 68.

THE STANDARDISATION OF MAN.

WE are all familiar with the efforts made to standardise telegraph and telephone plant, efforts which are often disturbed by the genius of inventors which places at our disposal thermionic valves, high speed printing telegraphs, wireless telegraphy, automatic telephones and similar epoch-making diversions. We even appreciate the advantages of standard parts, especially if we happen to be changing a wheel in the dead of night when even the elements are weeping sorrowfully; and, possibly, we may have an earnest desire to see some great statesman introduce standardisation of weights and measures with a metrelitregramme. The modern schoolboy has no doubts on the last point when he is struggling with firkins, coombs and other commercial idiosyncracies, which in his mind were invented solely for his discomfiture.

We already have standard bread, standard suits, standard boots, which pinch non-standard feet, and we read standard books. But have we ever imagined that Nature, assisted by science, is perchance carrying out a scheme for standardisation of US. The prehistoric man recognised no laws; he was as profoundly unaware of his fellow creatures in the next valley as he was of the inhabitants of the antipodes. If the strenuous struggle for existence ever allowed him time to think, his thoughts were his own, and his manners and habits were likewise primitive. Civilisation and evolution, nature's own forces, have made great changes in man's environment. His servants, steam, electricity and petrol, the harbingers of speed, have annihilated distance. Man is no longer a biped with a circumscribed horizon but a winged amphibious animal who is tenant in possession of the heavens and the earth and the waters under the earth. The broadening of his sphere has made him more and more cosmopolitan. The same thoughts,

the same foods, the same ideals and the growing knowledge of foreign languages are wiping out the differences between men of different nations. The need of universal service is for universal language. The English language, so Mr. Wallace tells us in this number, has become the general tongue of wireless telegraphists. Telephony, even more than telegraphy, demands one uniform method of expression.

International Telephony is as yet in its infancy; but when the day arrives for universal telephony, we shall be forced to adopt a common language. Our American friends have already found that telephonic intercourse is abolishing the territorial oddities of speech in their vast country. Local phrases are either being lost or absorbed in the general language; dialects are disappearing and speech is gradually becoming more uniform in timbre, tone and pronunciation. Is this not a sign of the forthcoming standardisation of language? Much as we might regret the loss of the refreshing speech of our friends north of the Tweed, yet, if constant telephonic intercourse between Aberdeen and Somerset is to be a thing of the future, both parties will have to abandon their peculiar and picturesque idioms and talk plain English. Sorrowful though the thought may be in many respects, we are being standardised. Differences in food, clothing, laws, thoughts and even speech are becoming things of the past and Dame Nature herself is in the front rank of those that standardise.

HIC ET UBIQUE.

A SHY and retiring man was advised by a friend to propose by telephone to the lady of his choice who evidently did not share his failing. The conversation is said to have taken the following form:—

"Is that you, Mary?"

"Yes."

"Will you marry me, dear?"

"Yes, rather. Who is it speaking?"

Punch rarely misses an opportunity of a gibe at the Telephone Service. A recent issue depicted a fat man in a call box with the legend:—

"*Caller*: Exchange? Get me double-six double-five nine Central—and get it quick like they do it on the pictures."

The fat man in the picture certainly does not deserve prompt attention as he is using the receiver as a telescope by applying it to his eye instead of his ear, and he has obviously not read the instruction to get his money ready. Moreover he seems to be bellowing into the transmitter in a way not calculated to secure good results.

Again, our amusing contemporary says:—

"The West Dulwich man who struck a rate-collector on the head with a telephone deserves credit for finding some use for those instruments."

I DON'T see how ever they know it
 But picture-play actors all do it;
 They don't have to look
 In a telephone book,
 But grab up a 'phone and go to it.

Telephone Engineer, Chicago.

LONDON TELEPHONE SERVICE NOTES.

The opening meeting of the London Telephonists' Society was very successful although the number of members present was not so large as one would have wished, nor as might have been expected in view of the total membership. Perhaps the title of the paper "Some Thoughts on Efficiency" was not expressed in the most attractive terms, but, as the sages tell us, birds of attractive plumage are seldom good singers—the application is to the paper and not to its author—and those who were not present missed an interesting subject full of matter calculated to set many thinking. In the discussion newspaper criticism was given a larger share of attention than it deserves. The newspaper mostly tells tales of the harassed subscriber, and in his paper Mr. Beck enumerated attributes required by the harassed telephonist to carry her through her troubles with subscribers. The thought suggests itself whether the disagreeable features, real and imagined, of the telephone are responsible for the appellation "Hello Girl!" used in the press by friend and foe alike. The term appears to convey the suggestion of a place obtained "via Trunks" where, if reports are true, all residents are harassed. The public have generally quite an erroneous impression of many things telephonic, especially those which concern the interior of an exchange, and there seems to be some case for the education of the subscriber. Subscribers do not know, for instance, as one speaker observed, that telephonists are provided with little keys bearing various letters of the alphabet which can be used in combination for word making. The use of this facility by the operating staff has been suggested as an explanation of overhearing on order wires to Dalston, Avenue, Museum and North Exchanges. Whol knows?

Mr. Beck's paper was not illustrated, but those who are interested will do well to refer to the photographs appearing in the recent issues of this JOURNAL in connection with articles on the subject of the London Engineering District. There will be found illustrations of a rare species of Government servant, so far the personification of efficiency that in the September issue the suggestion is made that a collective photograph might be suitable for a poster advertising an efficiency exhibition which is being organised by a daily contemporary.

The next meeting of the Society takes place on Wednesday, Nov. 3. Two short papers will then be read, one by Miss M. H. Knights, of the Controller's Office, on "The London Telephone Directory," and the other by Miss A. M. Scott, also of the Controller's Office, on "Trunk Tickets."

All who are interested in the development of machine switching in London should not fail to attend the meeting of the Telephone and Telegraph Society of Nov. 15. The meeting will be held at 5.30 p.m. in the Hall, River Plate House, Finsbury Circus, which is close to Moorgate Street Station. On that occasion Mr. M. C. Pink is reading a paper entitled "Automatic Telephony in Large Areas." The installation of an automatic exchange in the Carter Lane building will, it is hoped, be commenced before very long. It will be known as Blackfriars, and will provide for about 3,000 subscribers and will constitute the nucleus of a machine switching system to serve the London Telephone Area.

During the course of next year our readers in the London Exchanges may expect to be wrestling with changes of operating practice consequent upon the application of machine switching to London, and also in connexion with the development of the Toll or short distance trunk system. An acquaintance with the problems which Mr. Pink will unveil will certainly be valuable. Tickets of membership of the London Telephonists' Society are available for this and all meetings of the Telephone and Telegraph Society, and it is hoped that there will be a very large audience.

The first season of the London Telephone Service Swimming Association had a fitting conclusion in a highly successful Gala, held at the Holborn Baths, on Oct. 7. A programme of 20 events was presented. It included an exciting water polo match between the Ravensbourne and Gresham teams, the former winning by three goals to two, and a splendid exhibition of diving by members of the Amateur Diving Association. Competition was very keen in all the events and especially in the five open to all members. The enthusiasm of the grouped supporters from the various exchanges put to shame the few men who were present and who had cherished the delusion that their own vocal efforts on behalf of favourite football teams represented the last or rather loudest word in partisanship. The Learners' Race was won in great style by Miss Borrowes (H.S.), the next two places being filled by Miss Goddard (R.E.) and Miss Creed (E.) respectively. The manner in which this race was won made it excusable for one to suppose for the moment that Miss Borrowes had mistaken the event for the next, which was the individual Championship of the L.T.S.S.A. There were three heats to the Championship race, the winner of each and the fastest loser swam in the final. A good race saw Miss Wilson (Gerrard Exchange) returned as champion. Miss Millbank (C.) was second and Miss Digweed (K.) third.

The "Pounds" Challenge Cup was won by the Gerrard Team after a very exciting race, in which the Central team led by about half a yard at the time Gerrard's last string entered the water. A battle royal ensued, Central being beaten by a few inches only. The Trunk team finished third but were disqualified owing to a too hasty take off by one of their strings, and the third place was consequently awarded to Kensington. The first prize in the Graceful Breaststroke Competition went to Miss Fisher (C.) who defeated Miss H. Davies (G.) by 36 points to 35. Miss Amos (VI.) was third. In the Diving Competition Miss H. Davies (C.) was first, Miss Amos (VI) second and Miss

Fern (VI.) third. Not only was the diving of high quality, but considerable pluck was exhibited by some of the competitors who took a header from the topmost board. In the serious contests, calculated on a points basis, Gerrard Exchange were first with an aggregate of 11, Central second with 7 and Victoria a close third with 6 points.

The prizes were distributed by Mrs. G. F. Preston. The first season of the Association has been an undoubted success, due to that enthusiasm which is so prominent a feature in the staffs of our exchanges. The officers of the Association and the members of the several clubs are to be congratulated and we wish them even greater success next year.

There's many a true word spoken in jest. Is the reference in the Personalia column of last month to Miss Symons, of Victoria Exchange, as an Assistant Superintendent an instance? ["The wild waves!" Ed., T. & T.J.]

Contract Branch.

It recently came to light that two Limited Liability Companies were using the same Private Branch Exchange with which some Unlimited Service lines were connected. Enquiries revealed the fact that the two Companies were not identical and as is usual in such cases, Joint User rates were pressed for. The following is an extract of a letter received from the Company who were the original subscribers in respect of the Private Branch Exchange in question.

"The chief difficulty appears to be that the two Companies have separate Directorates. In order to obviate this we have arranged for the present Directors of (the second Company) to retire, which they have already done, and at a general meeting which will be held at these offices on Tuesday next the same Directors will be appointed on the Board of (the second Company) as are now on the Board of (the first Company). The two Companies will then have the same Board of Directors, the same offices, the same staff and will use the same Banking account and we presume this will get over the difficulty. You will understand, of course, that we are not in any way attempting to evade the payment of any dues to which we may be liable, but at the same time we do not wish to pay a heavy additional annual charge through a technicality."

Of course!!!

It is generally assumed nowadays that telephone subscribers in the City of London are aware that they have solemnly entered into an agreement not to remove or damage in any way the instruments or fittings which have been fixed by the Department. It may surprise some of our readers to learn that a caller at the City District Office recently brought with him a wall set neatly tied up in a brown paper parcel and calmly informed the Enquiry Clerk that he had decided to give up the line. In fairness to the operating staff it must be added that the subscriber's action was not due to any delinquencies on their part.

The Contract staff frequently have to exercise a great deal of ingenuity in ascertaining the requirements of correspondents. The following letter illustrates the point:—

Just few lines to ask you could let ours have telephones on shop for the bussness. An exchange to — West India Dock Road. But get some nder in my shop befor just want to put box on will you soon you as possible.

X.X.X.

The Contract Branch negotiated agreements for 3,791 stations during the four weeks ended Sept. 25, 1920. The number of stations recovered during the same period amounted to 1,448, leaving a net gain of 2,343 stations

City Exchange.

A most successful Bazaar, Concert and Social was held by the City Exchange staff at Stationers' Hall, Ave Maria Lane, on Oct. 9. The stately hall made an admirable setting to the bazaar, which was opened by Mrs. Inge, wife of the Dean of St. Paul's. In a charming speech she expressed her pleasure in making closer acquaintance with her neighbours in such happy circumstances. The object of the function was to raise money on behalf of the War Seals Foundation and so enthusiastic were the workers and so appreciative the supporters that the sum realised will approach £300. The concert and social were thoroughly enjoyed by a large audience and the whole function was pronounced excellent. Great credit is due to the Organising Committee and specially to the Secretary, Miss Nicholson.

London Wall Exchange.

In response to the appeal of the London Hospital for contributions, a collection has been made among the staff and the sum of £20 raised on behalf of that deserving institution.

Trunk Exchange.

The Imperial Swimming Club held a very enjoyable Social Evening at the Sunday School Union on Oct. 12. Miss Beaumont, President of the Club, kindly undertook to distribute the prizes which had been won in the Gala held on Sept. 9. The Captain and Secretary, the Misses Temme and Hodder, were each presented with a small token in appreciation of their services. The musical part of the programme was left in the able hands of the Misses Flint and Walder, vocalists, and Miss Grist, monologues. Thanks are due to Miss Ruffy who acted as M.C., and to the Misses Longman and L. Smith, pianists, who contributed so largely to the success of the evening.

LONDON ENGINEERING DISTRICT NOTES.

Institution Meeting.

The London Centre of the Institution of Post Office Electrical Engineers held the first meeting of the Session at the Royal Society of Arts on Monday, Oct. 11, under the Presidency of Mr. J. M. G. Trezise (Chairman of the Centre), when the Engineer-in-Chief, Sir William Noble, read a Paper on "Telegraph and Telephone Engineering in the United States." Among the many distinguished visitors present were Sir Evelyn Murray, Secretary of the General Post Office, the Engineer-in-Chief of the New Zealand Telegraph and Telephone Service, and Mr. Addenbrooke. As Sir William stated it was not possible in the time at his disposal to give a detailed account of all the many interesting technical developments of telephone and telegraph work in America, and his paper was a *resume* of the outstanding features which most impressed him during his visit in 1919.

No one questions the fact that America has played a larger part in the development of telephony than any other country, and visits by experts from the British Post Office such as took place last year cannot fail to have beneficial results. The pity is that America is too far away to permit of very frequent visits or to enable large numbers of the staff to gain first-hand knowledge of the telephone system of the States. Perhaps, when it has become common practice for the Atlantic to be flown in the time set by the late Sir John Alcock and Sir F. Whitten Brown, the Department will arrange week-end tours. Sir William paid tribute to the extraordinary pains taken by the officials of the various manufacturing and operating companies in the States to make the visit a success. Some even gave up Sundays and public holidays in order that the visitors should not lose any time. Naturally the subject to which most attention was given was automatic telephony, and Sir William was so impressed with the Western Electric Co.'s panel system and its suitability for large cities that he made arrangements for the purchase and installation of a 3,500 line exchange which will be installed in the Carter Lane premises, London, which building already contains the City, Central and Trunk Exchanges. Several other important features of American telephone practice were dealt with in the Paper, such as line construction and long distance telephony with the help of thermionic valves, and the instructiveness of the lecture was greatly enhanced by numerous excellent lantern slides.

One of the most satisfactory references in Paper was that although America has a greater number of clever Telegraph and Telephone Engineers than there are in this country, she has none more clever than those in the Engineering Department of the British Post Office. Those present at the meeting left the Hall with a feeling that they had added to their store of useful information and with the intention of applying the added knowledge whenever possible and so justifying the policy of the Department in sending officers across the Atlantic.

Underground Cables.

The passing of Mr. J. T. Langley, formerly an Assistant Engineer in the London Engineering District, revives memories of the time when he took part in the laying of the first long-distance underground paper core cable in England some twenty years ago. This cable was laid between London and Birmingham, and many engineers of the older school solemnly shook their heads when they heard of the decision to proceed with the venture. The result was so successful that other cables were soon put in hand and the growth of the underground cable system became rapid. With the extension of the system came improvement in methods based on the experience gained, and on the research work which was carried out in the Engineer-in-Chief's Office and elsewhere.

There is a vast difference in the characteristics of the original Birmingham cable and the cables which are now being laid. The difference in efficiency is comparable to that in the design of the pre-war battleship and the modern super-dreadnought. The introduction of the loading coil and the telephone repeater had made it possible to use conductors of considerably less weight per mile with a corresponding increase in the number of conductors in each cable, the increase amounting to 500 or 600%. In order to obtain and maintain this efficiency, however, it is necessary to observe special precautions in the jointing and to make somewhat elaborate tests during construction and subsequently. The Engineer-in-Chief has been paying special attention to this matter and has arranged training courses for those who will be engaged in supervising the construction and maintenance of the cables. These officers are given instruction in the theory and practical work of balancing cables and in methods of testing which will enable a fault to be discovered before it has developed sufficiently to interfere with commercial speech. Of course, when the first underground cables were laid, it was not known in what direction the line of development would be and the methods adopted, although considered a high standard at the time, were much below those obtained to-day. Efforts, however, are being made to bring the older cables up to the modern standard so far as it is possible to do so. It is quite possible that twenty years hence someone, in a moment of curiosity, will turn over an old volume of the TELEGRAPH AND TELEPHONE JOURNAL and seeing this note will smile and wonder why the reduction in the weight of conductors was not effected sooner. There is no doubt that but for manufacturing and jointing difficulties a conductor lighter even than those employed on local lines at present could be used. If metallic conductors are used at all in those coming times, probably they will consist of a slight metallic deposit on a strip of paper, many thousands of these strips being subsequently laid together to form a cable. We do

not know yet how the manufacturing and jointing difficulties will be overcome nor how the increase of electrostatic capacity will be neutralized, but he would indeed be a rash man that would be prepared to stake his reputation upon the assertion that finality in telephone cable construction has been achieved.

Pneumatic Tubes.

A number of extensions to the pneumatic tube system are now being made and others are in contemplation. These works involve long lengths of tubes being laid under the ground and in subways and also additional apparatus at the terminations. Owing to the necessity of keeping the tubes perfectly cylindrical very great care is necessary in handling them. Any dent or flattening which is not discovered before the ground is filled in results in the stoppage of a carrier, and it is sometimes a very difficult matter to locate the exact point of stoppage due to such a cause. It is much more easy to locate a definite break. For many years it has been realised that the traffic capacity of pneumatic tubes could be increased if a satisfactory method of signalling could be introduced which would indicate automatically when the tube is ready to receive another carrier. Various devices of the trigger type have been tried and rejected. Experiments are now being made with a device in which no trigger is employed. The passage of the carrier past a certain point causes a variation in pressure on the two sides of a diaphragm which is connected with the main tube by a bye-pass. Movement of the diaphragm completes an electrical circuit and causes a signal to be given at the outgoing end. The result of the experiment is awaited with interest. If it is entirely successful much relief should be experienced during the busy periods.

Threading Pipes.

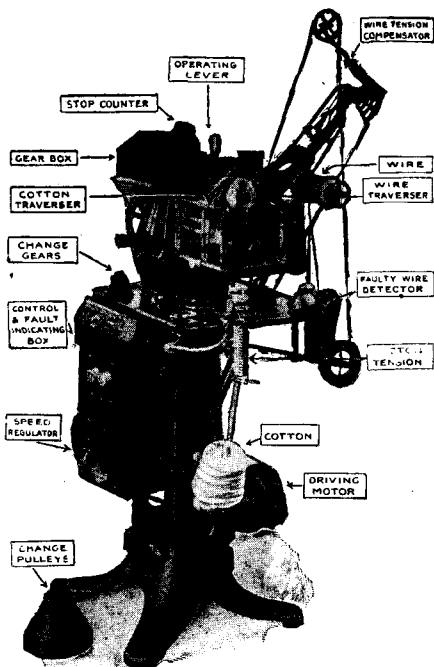
How many men who use the term "Ratting" for the process of threading a wire through underground pipes are aware of the origin of the term? At one time it was the practice to tie the end of a ball of light twine to the body of a live rat and then to put the rat into the mouth of the pipe that it was desired to "thread." The rat (sometimes) ran along merrily to the distant end, drawing the light line after him. As soon as he emerged at the distant end he was pounced upon and the light line was used to draw in a heavier line. A few years ago attempts were made to force a form of carrier through a pipe by air pressure, the carrier having a light line attached, but it was not successful and this and other experimental methods have been abandoned in favour of the use of sweeps rods, which, although slow, is reasonably sure. It is possible that in the intervals of working out what the pay should be under the present bonus system some one may find time to invent a device which will enable a draw wire to be quickly threaded through empty and partly filled pipes.

Claims for Damage.

Apocryphal of the paragraph which appeared in a recent number of this JOURNAL re Claims for damage by vehicles to the Department's plant, an officer attached to the section dealing with the cases has drawn attention to the remarkable fact that the damage is never done by a vehicle travelling at a greater rate than five miles per hour. Occasionally a less speed is quoted, but not often, so that there appears to be need for an enquiry into the special circumstances attending this rate of travel. It is curious too, that although a constable is sometimes prepared to swear that 10 seconds before the accident the vehicle was travelling at the rate of 30 miles an hour the driver will swear (drawing upon an extensive vocabulary) that at the time of impact the speed had dropped to the magic standard rate of five. Probably there is some mysterious emanation from telegraph poles and linemen's trucks which is ineffective at a lower high rate of speed, but which will inevitably attract towards them a motor or trap driven at five miles an hour. There are persons who cannot understand the need for a Ministry of Transport nor what its functions should be, but what body could undertake a research into this singular phenomenon so well as a Ministry of Transport.

A Wayleave Episode.

One of the most important things to be done before any engineering work is commenced is to see that all wayleaves for operations on private property are in order. In this connection the story is told of two linemen who were about to run some wires from a pole which had recently been erected on private property. Whether the pole had been put up without the proper consent having been obtained we are not told, but just as the men were about to commence, the owner of the field appeared and asked them who gave them permission. The leading hand was speechless for the moment owing to the fact that he had not got the requisite authority with him. His mate with more presence of mind said "Show the gentleman the paper, Bill," and the former, acting on the suggestion, showed the proprietor the written instructions of his Engineer to proceed with the work. Without saying any more the latter went away, and the two men congratulated themselves on getting so well out of an awkward predicament. A few minutes later a fierce-looking bull walked into the field and at once made for the scene of operations. The linemen hastily climbed up the pole for safety, while the bull with plenty of time to spare leisurely took up his position at the foot of the pole, content to wait for his victims. Time went on but no-one appeared to relieve the situation. At last the two unfortunates saw the owner of the field in the distance and loudly hailing him, they called on him to take the bull away. "That's all all right," was his reply; "Show the bull the paper, Bill."



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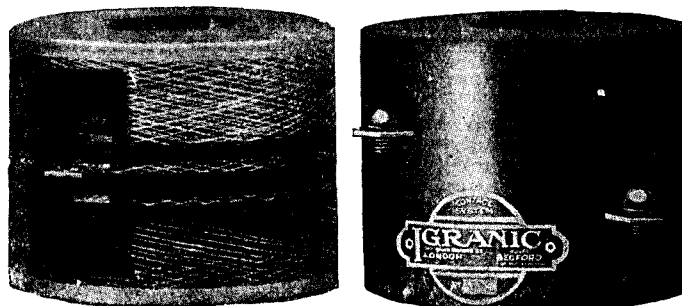
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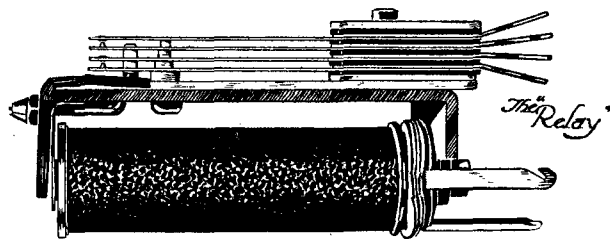
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Presentation.

The retirement of Mr. C. J. Hathaway, the Section Mechanic, was the occasion of a pleasing ceremony at Denman Street on the Sept. 30. The Sectional Engineer, Mr. A. Wright, in the presence of a representative gathering of the Staff gave a *resumé* of Mr. Hathaway's highly creditable and valued services both with the Department and the late National Telephone Company. A handsome carved oak barometer (suitably inscribed) and a case of silver-mounted pipes, were tokens of the esteem in which Mr. Hathaway was held, and these were presented by Mr. Wright on behalf of the staff of the South Internal Section. In his reply, Mr. Hathaway asked that his thanks should be conveyed to his late colleagues for their kind recognition and good wishes.



Outing.

The photograph, a copy of which appears above, was taken at Sunbury-on-Thames on Saturday, Sept. 25, on the occasion of a steam-launch excursion in which 60 members of the Mechanics and Linemen Staffs employed at the Central Telegraph Office took part. Messrs. Strawson, Mellows and Pemberton were also of the party. It is pleasing to record that the arrangements were carried through without a hitch. After an excellent dinner, provided by mine host of the Weir Hotel, an adjournment was made to a field close by, where sports were held and prizes distributed to the winners. After tea an impromptu concert was given and the party then made for home after a most excellent day. Such functions do much to cement the friendship already existing between the two staffs, and our hearty thanks are due to those gentlemen who made the outing possible.

* * *

The Denman Chess Club.

The first meeting of the newly-formed Chess Club took place on Wednesday, Oct. 13, when about 30 members were present. The Club has been formed in connexion with the London Engineering District, the officers being as follows:—

- President ... A. Moir, Esq., O.B.E.
- Vice-Presidents ... J. E. Taylor, Esq., G. F. Greenham, Esq., J. M. Shackleton, Esq., J. H. Stanhope, Esq., A. E. Cooke, Esq., F. Freeman, Esq., and W. J. A. Payne, Esq.
- Committee ... Messrs. W. D. Frewin, H. J. B. Francis, A. J. Nevill, and H. Barrett.
- Match Captain ... C. W. Cornwell.
- Hon. Treasurer ... J. E. T. S. Hilton.
- Hon. Secretary ... E. H. M. Slattery, from whom all particulars can be obtained.

A very attractive programme has been arranged. In addition to ordinary matches, a tournament and a competition on Cup Tie principles will be held. It is also hoped to fix up matches with other service Chess Clubs.

TELEGRAPHIC MEMORABILIA.

THE Triple Baudot Duplex trials between London and Berlin appear to have been indefinitely postponed, as, with the present heavy traffic, and the at times indifferent working of the existing restricted telegraphic communications between the two countries, there is obviously no margin of time available for experimental use of any of the present working Anglo-German conductors, while staff shortage also adds a factor on both sides of the North Sea to these adverse circumstances. Nevertheless, it is quite plain that the communications are not at present up to their pre-war efficiency.

It is not to be inferred from the foregoing that the German authorities are unalive to the needs of Anglo-Continental telegraphy. The working of these circuits from a diplomatic point of view leaves little to be desired, and it becomes more and more evident that the main causes are electrical and technical. Apropos of this relationship with Germany it is with some degree of regret that one notes the removal of Herr Kunert from the repeater office at Emden. This regret is mingled with satisfaction at the promotion of this highly efficient officer to the position of *Posttrath* of Oldenburg, and it is certain that others of those than the writer who came into direct contact with Herr Kunert when he visited this country will tender congratulations to a telegraphic engineer whose mind was particularly open to well-reasoned scientific facts and opinions.

While still on matters cablegraphic it is interesting, if curious, to note that while the Inland Telegraphs traffic curve is on the downward tendency the Anglo-Foreign curve abounds with peaks of considerable altitude. South American traffic to and from Europe figuring somewhat markedly. The Anglo-German traffic increase is measured in percentages of three figures.

Still lingering in the neighbourhood of the Cable Room, one passes to matters of comparative local interest where it is pleasurable to place on record a letter from the Secretary of the Hospital Saturday Fund, acknowledging with special thanks the sum of over £38 collected from this department.

Opening on to a matter of a wider sphere it is with very special pleasure that publicity is given to the "C.T.O. Games Fund for Benenden Sanatorium." This fund was started as a result of a few words in letters received from a Benenden colleague suggesting that a supply of games and music would be greatly appreciated. A committee of four aided by a band of enthusiasts at once set to work, and by means of a "Penny Collection" quickly obtained a sum of over £17. Perhaps other offices would kindly copy. Of this nearly £14 was at once expended on the re-covering of the billiard table, a supply of chalks, tips, wafers, also half-a-dozen cues, dominoes, chess, table bowls and cribbage boards have also been added. The average population of the Benenden institution is about 100. Above all things it is necessary to provide all the possible adjuncts to creating a cheerful atmosphere. The institution itself cannot possibly provide these "extras" on account of the present economical situation, and an appeal is therefore made on behalf of our less fortunate colleagues for further assistance towards what is now to be known as the Benenden Games Fund. Miss M. B. Jamieson, Cable Room, C.T.O., and Mr. R. E. V. May (Local Secretary of the P.O. Sanatorium Society) would be only too glad to receive donations. Will our telephone friends help with a penny per head collection please? No apology is offered for taking up so much space for a laudable purpose.

It is certain that much interesting matter will be compulsorily held over this month, but space must be made for just a passing reference to the Autumn Flower Show of the C.T.O. Amateur Gardener's Association, and to the aquatic display by both sexes of the same office, in which the ladies played no mean part. By the way, it is recorded that the Deputy-Controller was "well in at the finish." Thus do our *young* folks recreate themselves after office hours!

Was it not Lubbock who wrote, "The advantage of leisure is mainly that we may have the power of choosing our own work, not certainly that it confers any privilege of idleness." Most certainly our telegraphists are able to take their pleasures strenuously and judging from all accounts of the water display, they take those pleasures with no trace of intermingle of that sadness with which foreign critics are reputed to have credited us as a nation.

In a well known electrical journal there recently appeared a remarkable example of the "marvellously small" and the "marvellously great." On one page was printed a description of certain apparatus, manufactured by a firm of electrical engineers in South Norwood, known as the Vernier Potentiometer 1920 pattern (Tinsley & Co.). The lower range of this delicate instrument is from one-millionth of a volt to 190100 volts, and is, of course, used for thermo-electrical work and similar low E.M.F. measurements. Turning to another page in the same issue one could not help being struck with the contrast between the tiny power above indicated and the giant strength of the new electrically-driven battleships of the U.S.A. Each of the propellers of these giant vessels is driven by two eight-wound rotor Westinghouse motors, rated at 22,500 h.p. each. It is estimated that the electrical power developed for all purposes in any one of these leviathans (189,000 h.p., or 160,000 k.v.a.) would be sufficient to drive all the electrical railways of London!

A member of the Indian Government Telegraph Service from Akyab, recently passed through the London office and gave excellent accounts of Baudot working in India and Burmah. He informed us that the authorities were endeavouring to cut out repeater offices as unhealthily situated as is that of Akyab by utilising two wires instead of one. A first trial was being made on the Calcutta-Rangoon lines. Our visitor stated that the results of the experiment would not be known for some time.

The change-over from summer to winter or from winter to summer-time is generally associated with some little confusion in international telegraphy, especially if one of the countries is situated a considerable distance east or west of its correspondent, or where for this or other reasons one country or the other commences the alteration some days or weeks prior or subsequent to its telegraphic neighbour. Then there arises the problem of, for example, how to induce the distant office to open his circuits one hour earlier than scheduled time. This with difficulty having been more or less arranged, the next problem is to reciprocate (with a limited staff) at the other end of the day by prolonging the circuit hours by a corresponding period. By this

time the limit of staff attenuation is fairly well reached. Fortunately, this echeloned arrangement of working hours only lasts two, or three weeks, but it is a perplexing phase while it lasts.

The existence of the "George Montefiore Foundation" prize is apparently little known, but it consists of the accumulated interest on 150,000 francs invested in 3 per cent. Belgian Stock, and is awarded every three years for the best original work on "Progress and development in the technical application of electricity." The 1921 prize, actually the postponed 1917 one, is of the value of 20,000 francs. As the essay may only be written in French or English there may be an opening here for some of our engineer readers. The latest date for the receipt of competitor's contributions is fixed as April 30, 1921. Full details and information may be obtained upon application to M. le Secrétaire, Association des Ingenieurs Electriciens de l'Institut Electrotechnique Montefiore, 31, Rue St. Gilles, Liège.

At a lecture some time ago telegraphist listeners received something in the nature of a shock when they learnt from the words of wisdom which flowed from the platform that what they had been taught to consider as fundamentally right and immovable in their youth regarding the direction of the current in an electrical cell was in fact fundamentally wrong, the simple reason being that experiments had produced irrefragable evidence that the current actually moved in the reverse direction. We were all recovering from this shaking of our faith in the ancient verities of the cult of Slingo, when our attention is directed to an article appearing in the *Electrical Review* (Aug. 6). Therein Mr. E. Raymond Baker dilates to the extent of three columns upon the unsuitability of comparing the properties of telegraph cables by the "cable constant," which so many of us had viewed as at least one of the few impregnable rocks. Most readers will recognise our old friend, the $K \times R$ law. There are others of us who, willing to be converted to the "new school" are also perfectly willing to surrender the thought that, judged by the results sometimes obtained, there always has been the lurking idea that other factors than these two mentioned should not be left out of consideration, more especially in the case of long multiple core submarine cables.

Fairly recent oral examinations, to which some of our telegraphist and telephonist colleagues have submitted themselves, have apparently been experimentally based upon certain psychological facts. For the benefit of these and other possible "victims," the following excerpts from Moede's *Praktische Psychologie* are submitted in abbreviated form in order to test:—*Attentiveness and the correct grasping of instructions*: A map or diagram is exposed to view for $\frac{1}{2}$ of a second several times. The candidate has then to write out all he or she has seen! Here is another test in which our craftsmen should shine. Simultaneous acoustic and optical signals are made, and whenever certain combinations occur the candidate is to press a switch or bell-push. *Response to stimuli*: A ball is rolled down an inclined plane while the attention of the examinee is occupied observing other distractions. The rapidity with which he is able to divert his attention to stopping the ball in its descent is a measure of his alertness. *Intellectual capabilities*: The candidate is read to, afterwards being examined as to his general conceptions of the document or documents. Psychotechnical examinations have been carried out by the Charlottenburg Psychotechnical Laboratory regarding the suitability of apprentices by testing the powers of judgment, "by setting an angle of the feel, by grouping together a number of metal discs of different thicknesses, and of poise and certainty." These by the aid of the *tremometer*. One feels rather glad that one's age has reached that respectable figure where the imposition of an examination of this type may be looked upon as a really remote contingency.

On Oct. 12, the occasion of the unveiling of the stone memorial presented to Great Britain by the Belgian people as a mark of grateful appreciation for hospitality and other kindnesses during the Great War, messages were exchanged between Mr. Collignon, Chief of the Antwerp office, and his staff, and the Controller of the C.T.O. M. Collignon is well known to some hundreds of telegraphists in London where he manfully and loyally worked as a simple telegraphist during those fateful months which succeeded the flight from the Belgian port.

There was a happy quintette of old pensioners round one of the tables recently within the hospitable precincts of G.P.O. North Dining Club, which brought news of other pensioners whom they had met during their hours of leisure and travel. Of Mr. Mayfield, formerly of T.S., still flourishing in his 80th year, for example! By the by, a very happy thought inspired a specially affectionate souvenir which was forwarded by a number of old T.S. friends to Mr. John Russell—"Jack" Russell, of the scarlet handkerchief cult!—on the completion of four-score and one birthdays. To Mr. H. A. Hodgson, of the Cable Room, sincerest congratulations upon his promotion to an Overseership. Mr. Hodgson's technical qualifications should prove specially useful in his new sphere of activities.

At the invitation of the "Secretary's Office Cricket Club," Messrs. W. T. Cook, A. W. Randall and T. P. Wilmot of the C.T.O., assisted the above club in two interesting matches—G.P.O. *versus* Shepherds Bush—played respectively on Sept. 23 and 30. The first meeting ended in a victory for the "Bush" by a narrow margin. The second encounter resulted in a draw very much in favour of the G.P.O. Cook, who has been awarded his Surrey Second Eleven Cap, played an excellent not out century innings and was ably supported by Hurford, who also played a good innings. Had time permitted the capital bowling of Reid, Hurford, Young and Randall would undoubtedly have disposed of the Shepherds Bush side and given the G.P.O. a win, but failing light caused the match to be undecided.

Both games proved very enjoyable, and it is more than a pious expression when the sincere hope is placed on record that this is only the first of similar invitations to be extended to C.T.O. cricketers.

On Oct. 1 at Holborn Baths a large gathering of the staff of the C.T.O. and their friends assembled to see the Swimming Competitions in connexion with the "Centels" Athletic Club. It was a historic event, not only in that it was a revival of a series of events which have necessarily been interrupted by the war, but also by reason of the fact that the ladies of the staff took part in the competitions. The divisional team competition for ladies gave rise to much interest, and spectators in the galleries encouraged the rival teams with cheers, which indicated a sense of loyalty to their divisions which was more than impressive. The organisation of the whole event was never at fault and once more we had a vision of the many-sided interests and accomplishments of a staff which is as enthusiastic in play as it is in work. All work and no play is clearly regarded, both by Jack and Jill, as falling short of the ideal. A list of the results will be interesting.

100 YARDS BREAST-STROKE CHAMPIONSHIP OF CIVIL SERVICE.

1st	F. V. Hodge, Centels (Holder of Bennett Cup, 1920-21).
2nd	L. S. Hinstead, Customs.
3rd	G. W. Tripp, Ministry of Pensions.
	Time—1 min. 29½ secs.

30 YARDS VETERANS' HANDICAP.

		Time.
		Secs.
Winner of Heat 1	A. W. Edwards, D. Contr.	31½
" "	2 W. Irvine, T.S.F.	33
" "	3 H. Norrey, Evening	32
" "	4 E. Purkiss, T.S.F.	34
Fastest loser	E. Taylor, "I."	32½

Final.

1st	E. Taylor.
2nd	A. W. Edwards.
3rd	H. Norrey.
	Time—32 secs.

100 YARDS CHAMPIONSHIP OF CENTELS S.C.

1st	W. Calton, "E."
2nd	H. Megenis, "K."
3rd	R. W. Goldsmith, "C"
	Time—1 min. 10½ secs.

W. Calton and H. Megenis, joint holders for 1920-21 of Controlling and Supervising Cup.

120 YARDS LADIES' INTER-DIVISIONAL TEAM HANDICAP.

Winners of Heat 1.—"H." Division.
Misses E. Grant, D. Weston, M. Muldowney, D. Cracknell.
Second in Heat 1.—"A." Division.
Misses V. Errington, S. Cumming, P. George, M. Mills.
Time—2 min. 17½ secs.

Winners of Heat 2.—"L." Division.
Misses K. Entwistle, D. Relph, A. Paterson, J. Adams.
Second in Heat 2.—T.S.F.
Misses S. E. Johnstone, N. Nichols, M. Ellis, D. Curtis.
Time—2 min. 22 secs.

RESULT OF LADIES' TEAM HANDICAP.

1st	"H." Division.
2nd	T.S.F.
	Time—2 min. 19½ secs.

60 YARDS CLUB HANDICAP.

		Time.
		Secs.
Winner of Heat 1	H. Keep, "E."	61½
" "	2 H. Parr, "E."	69½
" "	3 W. Jennings, "A."	67½
" "	4 L. Schlarb, "A"	69
" "	5 F. Dyer, "C."	63
" "	6 T. Wright, "F."	64
" "	7 J. Etheridge, "F."	66
Fastest loser	H. Mackrell, "F"	

Result.

1st	F. Dyer.
2nd	W. Jennings
3rd	H. Keep
4th	J. Etheridge.
	Time—66½ secs.

240 YARDS INTER-DIVISIONAL TEAM HANDICAP.

Winners of Heat 1.—"E.B." Division; T.S.F.c. 2nd.
W. Baxter, H. Keep, R. Horton, H. Harborne.

Winner of Heat 2.—News Division.

H. Goldsmith, H. Butler, F. Norton, R. Franklin.
Time—3 min. 41½ secs.

Winners of Heat 3.—“F.” Division.

H. Mackrell, J. Etheridge, F. Tanner, P. Loeber.
Time—3 min. 36 secs.

Fastest losers.—“E.A.” Division.

W. Calton, C. Schlarb, H. Parr, G. Wild.
T.S.F.C. also swam in final.
E. W. Davies, H. Moore, W. Martin, W. Irvine.
No time taken in first, my watch stopped.

Result.

1st News.

2nd T.S.F.C.

Time—3 min. 34 secs.

WATER POLO MATCH.

T.S. v. T.S.F.

W. Holden	Goal	W. Irvine.
R. Horton	Backs	A. Parkhouse
L. Hayward		J. Ayres
W. Calton	Half-backs	H. Dennis
C. Schlarb	Forwards	T. Bowles
H. Megenis		E. Fade
H. Haysey		H. Gibbons
3 goals.		1 goal.

J. J. J.

CORRESPONDENCE.

WAR SEAL FOUNDATION.

TO THE EDITOR OF “THE TELEGRAPH AND TELEPHONE JOURNAL.”

DEAR SIR,—The valuable work done for the War Seal Foundation by the staffs of the London Telephone Exchanges leads me to crave of you space for a short appeal to their provincial colleagues to emulate their example.

At the personal suggestion of Miss A. A. Heap (Superintendent, Female Exchange Staff) the staffs of the London Telephone Service have been brought face to face with the work of this organisation by a series of visits paid at different times to War Seal Mansions at Fulham and, realising the National importance of its work, have contributed quite a large sum in order to help it forward. The actual sum raised to date is £2,040, and this splendid result has been achieved in various ways. Some Exchanges have had weekly collections; others have contributed by purchasing War Seals at a half-penny each or in special envelopes containing 24 seals for 1s. In every Exchange—and in this matter we think London does not hold the monopoly—there is a great deal of vocal and instrumental talent amongst the staff and this has been turned to good account by organising concerts and other entertainments which have been run either by the Exchange as a whole, or by individual members of the staff in their own home neighbourhood. Bazaars, whist drives, sales of work, etc., have been most successful indeed. In the case of the bazaar held by the Trunk Exchange, I understand that assistance was received from the provinces.

Believing that the Telephone staffs throughout the United Kingdom have just as warm hearts and are equally talented as their London confreres, I venture to suggest that during the coming winter most, if not all, of the provincial Exchanges would like to put forward some effort in order to forward the work of this Foundation.

To advertise through the usual channels is costly and not always effective, but every person who buys and uses a War Seal both contributes a half-penny to the scheme and advertises it. Had every person who last year posted a letter—irrespective of post cards and parcels—in the United Kingdom, affixed a War Seal to that letter we should have raised over £7,000,000. Such is the power of a half-penny.

To-day we have seventy-two disabled Service-men gathered from all parts of the country living with their families in War Seal Mansions and obtaining the after-care and treatment necessary to their well-being and comfort, and at this moment I have more than 200 applications for tenancy which I am unable to satisfy.

The pathos of these appeals and the distress revealed in them is so great that early this year Sir Oswald Stoll—our Founder and President—decided to abandon a scheme for the building of a theatre on his property which adjoins the site of War Seal Mansions—the freehold of which, by the way, he gave to us—and, instead, has handed over to us the freehold of the land whereon to build a further 65 flats, should sufficient funds be forthcoming.

It is difficult to bring home to the general mass of people of this country the awful consequences of modern warfare on the minds and bodies of a large number of the men who were engaged in it. The worst cases and the most pitiful are such that they are never seen in our streets because they are too ill

to be moved. For many of them what remains of life must be one continuous round of suffering. It is impossible to keep these cases in hospital because the very fact of continued separation from those they love only increases their misery. Add to this the fact that there is a serious shortage of housing accommodation and you have a conjunction of circumstances which prove almost unbearable to those who are so disabled that they are unable to earn anything wherewith to augment their pension.

That this Foundation is doing a work of national importance is proved by the fact that last year Queen Mary, accompanied by Princess Mary, visited our flats, saw and spoke with the tenants, and afterwards told me how delighted she was “To see the men so comfortable in their own quarters and with their own people around them.”

Supervisors or individual members of staffs are cordially invited to communicate with me, c/o The War Seal Foundation, 10, Charing Cross Road, London, W.C.2, when I shall be pleased to answer any inquiries and be prepared to make suggestions.

The matter is urgent. Please do something now.

Thanking you in the hope that you will grant space for this letter.—Yours faithfully,

WM. J. ROBERTS,

Secretary.

September, 1920.

TO THE EDITOR OF THE “TELEGRAPH AND TELEPHONE JOURNAL.”

Dear Sir,—I enclose herewith copy of a letter received from a subscriber which will probably be of much interest to the readers of your Journal.

The actual difficulty was that the subscriber's line was in contact with No. 802.

The letter will give you some idea of the difficulties to be overcome by those managing telephone concerns in the East.—I am, Dear Sir, yours faithfully,

J. A. ROWLAND KNOX,

Acting Manager, Oriental Telephone & Electric Co., Ltd

Madras, Sept. 9, 1920.

Dear Sirs,

Re: TELEPHONE SERVICE LINE No.....

We have to bring to your notice that when we have had a Table Telephone line at No..... which has given us very difficult in speaking, so we had to erect a Wall telephone at our premises No..... for which also we have not had any ready call, and cannot get early reply from the Exchange, if we want to ring up, highly into greater speed.

When we call the Exchange at your Office it has taken 10 or 5 minutes time, and do not know the course. In that case, if we ring highly then only replies cannot get immediately, and also gives much defect and trouble for our business purposes.

When we want to speak to our Branch Office telephone No. 572 we cannot get them sooner, and in the meantime, the man can go easily, instead of calling in telephone, and seems very much hard to go in the line.

Having experienced all these difficulties, we had telephoned to the Clerk in Charge No..... but after making the complaints for three times, then he came, and seen the defect, but we did not know what he has done in the telephone.

Moreover, we also heard there are some other Firms who are speaking with the other connections.

We suppose the telephone No. 802 is in more connection, with our wire, and also we do not know the defect in our lines, and request you to rectify it by return.

Under the above said circumstances, kindly order your representative to go on here and see the defects at an early date.

Trusting you will do the needful in the matter.—Yours faithfully,

WRONG NUMBER.

We often hear people complain about wrong numbers, blaming the operators for carelessness and inattention to their work. It is not always the operator's fault.

The other day a man visited these offices and, desiring to be called later in the day, left his personal card with his telephone number written on it. When the number was called it was found to be a lunch room, and the man who left the card was in any business but that of a lunch room. He had transposed the figures of his number.

If a man can't give his own number correctly isn't it possible for him to transpose the figures of other numbers? Wrong numbers are not always the fault of the operator.—Transmitter, Baltimore.

PERSONALIA.

LONDON TELEPHONE SERVICE.

Resignations on account of marriage:—

Assistant Supervisors.

Miss R. TOMKINSON (East). Miss R. L. EDMUNDS (Museum).

Telephonists.

Miss D. M. PATTISON (East). Miss I. K. TURNER (London Wall).
 Miss E. BELLAERS (East). Miss W. M. YOUNGS (London Wall).
 Miss A. C. SMETHERS (Victoria). Miss E. MELBOURNE (London Wall).
 Miss M. E. ANGUS (Victoria). Miss L. M. LAWRENCE (New Cross).
 Miss A. L. BARKER (Paddington). Miss F. E. STUBBS (Gerrard).
 Miss B. E. HAWKINS (Dalston). Miss N. T. VALLI (Regent).
 Miss M. SHEELEY (Avenue). Miss A. M. PARKER (Regent).
 Miss M. E. TURNBULL (Holborn). Miss M. P. MORCROFT (Regent).
 Miss G. M. TYLER (Palmer's Green). Miss G. D. TUESDAY (Sydenham).
 Miss E. FLAY (Palmer's Green). Miss M. A. EVANS (Hammersmith).
 Miss F. E. PHILLIPS (London Wall). Miss M. I. SOUTHGATE (Enfield).
 Miss E. C. WARD (London Wall). Miss A. V. TRUE (Trunk).
 Miss F. J. GAIN (London Wall). Miss B. M. NICHOLS (Trunk).

Aberdeen.

Mr. Storrie, the District Manager, on behalf of the staff presented Mr. JAS. MUNRO with a couple of pictures, and Miss ELSPETH R. WATSON with a case of fish knives and forks, in view of their respective approaching marriages.

* * *

Plymouth.

Mr. C. W. DICKINSON, Clerical Assistant, was the recipient of a framed copy of a famous picture on the occasion of his promotion to Third Class Clerk and transfer to the Surveyor's Office, Exeter. He carried with him the congratulations and goodwill of the staff.

* * *

Rochdale.

Mr. JOHN ASHTON, late District Manager for the Rochdale Telephone District, who retired from the Service on Sept. 30 under the age limit, was one of the early pioneers of telephone work in England. He commenced his telephone career at Preston in 1881 with the Lancashire and Cheshire Telephone Exchange Co., Ltd., and became District Manager over 30 years ago. He has served in Preston, Blackburn, Ulverston, Newcastle-on-Tyne, Worcester



Newport, Cardiff, Leicester, Oldham and Dublin. Upon the acquisition of the system by the Post Office, he was appointed to the newly-formed Rochdale District in 1912, in charge of which he remained up to his retirement.

Mr. Ashton is a Lancashire man, born in 1860, his family connexions being with Preston and Blackburn. As evidence of his widespread popularity, it may be stated that he was presented with a gold watch, a case of pipes, an illuminated address, a phot graphic group of his staff (represented above), a barometer and a silver cigarette case. Mrs. Ashton was the recipient of a silver chatelaine spectacle case.

Sheffield.

The District Manager's staff have recently had the opportunity of showing their goodwill in a practical manner to no less than three of their clerical colleagues who—undaunted by the housing and other difficulties of the present day—have entered into the state of wedlock.

On Aug. 13 Mr. H. GILDER of the Traffic Department, was presented with a mahogany timepiece. Mr. Ferguson, the newly-appointed Traffic Superintendent, made the presentation and was cordially received.

On Aug. 27 the recipient was Mr. G. A. HARRIS, of the Contract Department, and the gift, an oak timepiece, was handed over by Mr. Thyne, the Chief Clerk.

On Oct. 8 the presentation of another clock was made by Mr. Thyne to Mr. W. LAING of the General Office.

* * *

Headquarters.—Mr. H. JULIUS MACLURE, Inspector of Contract Departments, has returned to the Post Office after 5½ years of loaned service with the War Office and Ministry of Munitions.

"EVENTS OF THE WEEK."

It is not entered at Stationers' Hall nor has it "over a million sale." In fact its total circulation amounts to one copy. Edited by the Rising Junior, it is published every Saturday morning.

Its readers are the travelling members of a provincial Traffic Staff. From their little "Weekly" they learn what is happening in the whole district, what other members of the staff are doing. From the abbreviated items presented them is obtained knowledge which is useful when visiting exchanges.

The little Journal is nothing to shout about. Its conception is not new—nor claimed as such—but it's useful, and—it's a link.

Here is a recent copy.

J. C.

For retention.

Traffic Section.

No. 66.

"EVENTS OF THE WEEK."

Week ending Sept. 18, 1920.

Colchester.—2 Trunk junctions authorised; additional record line proposed; additional phonogram circuit proposed; Admiralty circuit Bradwell; Walton line to be taken off Colchester local exchange.

Manningtree.—Proposed new C.B.S. switchboard equipped for 40 lines agreed to.

Burnham-on-Crouch.—New C.B.S. switchboard applied for 5+20.

45

Wivenhoe.—10 additional indicators and jacks fitted.

Laindon.—Existing board to be replaced by C.B.S. 5+20

45

Ipswich.—Additional multiple "hundreds" end position approved.

Long Melford.—New switchboard applied for 5+40

45

Marks Tey.—New switchboard authorised 5+20

45

Brentwood.—Secretary agrees provision of additional 100 lines switchboard.

Braintree.—Proposed date of transfer of exchange Sept. 28, 1920. (9 a.m.).

Staff Revisions in hand.—Dunmow, Bishop's Stortford, Manningtree, Witham.

Call Offices.—Opened, Clacton-on-Sea, P.O.; authorised, nil; proposed Felixstowe (Station Road).

Saxmundham-Leiston.—Aldeburgh intermediate circuit divided at Leiston.

Chelmsford.—Miss E. D. Dyke, temporary telephonist takes up duty at Colchester on Monday; Miss Harding, telephonist, resignation received.

Colchester Trunks renumbered in proper sequence.

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Sept. 18, 1920.

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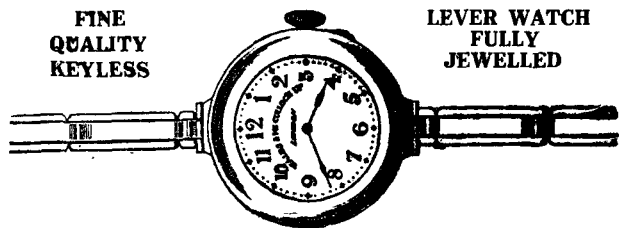
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