### Notes and Comments

The Board of Editors deeply regrets to have recorded the deaths of the following members of the Engineering Department while serving with the Armed Forces.

<table>
<thead>
<tr>
<th>Department</th>
<th>Area</th>
<th>Telephone</th>
<th>Name</th>
<th>Rank</th>
<th>Reason for Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen</td>
<td>Telephone Area</td>
<td></td>
<td>Scott, A.</td>
<td>Unestablished Skilled Workman</td>
<td>Private, The Black Watch</td>
</tr>
<tr>
<td>Belfast</td>
<td>Telephone Area</td>
<td></td>
<td>Devine, E. D.</td>
<td>Unestablished Skilled Workman</td>
<td>Lance Corporal, Royal Ulster Rifles</td>
</tr>
<tr>
<td>Birmingham</td>
<td>Telephone Area</td>
<td></td>
<td>Hitchman, A.</td>
<td>Unestablished Skilled Workman</td>
<td>Able Seaman, Royal Navy</td>
</tr>
<tr>
<td>Canterbury</td>
<td>Telephone Area</td>
<td></td>
<td>Parker, R. F.</td>
<td>Unestablished Skilled Workman</td>
<td>Able Seaman, Royal Navy</td>
</tr>
<tr>
<td>Chester</td>
<td>Telephone Area</td>
<td></td>
<td>Jones, A. T.</td>
<td>Skilled Workman, Class II</td>
<td>Signalman, Royal Corps of Signals</td>
</tr>
<tr>
<td>Edinburgh</td>
<td>Telephone Area</td>
<td></td>
<td>Bentley, G. F.</td>
<td>Unestablished Skilled Workman</td>
<td>Signalman, Royal Corps of Signals</td>
</tr>
<tr>
<td>Edinburgh</td>
<td>Telephone Area</td>
<td></td>
<td>McDonald, W.</td>
<td>Unestablished Skilled Workman, Class I</td>
<td>Signalman, Royal Corps of Signals</td>
</tr>
<tr>
<td>Glasgow</td>
<td>Telephone Area</td>
<td></td>
<td>Henderson, G. M.</td>
<td>Unestablished Skilled Workman</td>
<td>Acting Sergeant, Highland Light Infantry</td>
</tr>
<tr>
<td>Liverpool</td>
<td>Telephone Area</td>
<td></td>
<td>Morris, A. E.</td>
<td>Labourer</td>
<td>Leading Stoker, Royal Navy</td>
</tr>
<tr>
<td>London</td>
<td>Telegraph Communications Region</td>
<td></td>
<td>Bignall, W. P.</td>
<td>Labourer</td>
<td>Private, Duke of Cornwall’s Light Infantry</td>
</tr>
<tr>
<td>London</td>
<td>Telegraph Communications Region</td>
<td></td>
<td>Brayman, D.</td>
<td>Unestablished Skilled Workman</td>
<td>Private, Royal Engineer Corps</td>
</tr>
<tr>
<td>London</td>
<td>Telegraph Communications Region</td>
<td></td>
<td>Cross, S. C.</td>
<td>Labourer</td>
<td>Trooper, Dragoon Guards</td>
</tr>
<tr>
<td>London</td>
<td>Telegraph Communications Region</td>
<td></td>
<td>Goodwill, H. F.</td>
<td>Unestablished Skilled Workman</td>
<td>Signalman, Royal Corps of Signals</td>
</tr>
<tr>
<td>London</td>
<td>Telegraph Communications Region</td>
<td></td>
<td>Hills, A. A.</td>
<td>Unestablished Skilled Workman</td>
<td>Able Seaman, Royal Navy</td>
</tr>
<tr>
<td>London</td>
<td>Telegraph Communications Region</td>
<td></td>
<td>Humphreys, S. A.</td>
<td>Unestablished Skilled Workman</td>
<td>Corporal, Royal Norfolk Regiment</td>
</tr>
<tr>
<td>London</td>
<td>Telegraph Communications Region</td>
<td></td>
<td>Seeple, J. G.</td>
<td>Labourer</td>
<td>Private, Kings Own Scottish Borderers</td>
</tr>
<tr>
<td>London</td>
<td>Telegraph Communications Region</td>
<td></td>
<td>Tocock, J. C.</td>
<td>Labourer</td>
<td>Lance Corporal, Middlesex Regiment</td>
</tr>
<tr>
<td>London</td>
<td>Telegraph Communications Region</td>
<td></td>
<td>Jones, C. J. E.</td>
<td>Unestablished Skilled Workman</td>
<td>Lance Corporal, Royal Armoured Corps</td>
</tr>
<tr>
<td>Newcastle</td>
<td>Telephone Area</td>
<td></td>
<td>Hunter, T.</td>
<td>Unestablished Skilled Workman</td>
<td>Trooper, Royal Horse Artillery</td>
</tr>
<tr>
<td>Newcastle</td>
<td>Telephone Area</td>
<td></td>
<td>Jones, C. J. E.</td>
<td>Unestablished Skilled Workman</td>
<td>Fusilier, Royal Northumberland Fusiliers</td>
</tr>
<tr>
<td>Peterborough</td>
<td>Telephone Area</td>
<td></td>
<td>Pearson, S. J. F.</td>
<td>Labourer</td>
<td>Trooper, Royal Hussars</td>
</tr>
<tr>
<td>Plymouth</td>
<td>Telephone Area</td>
<td></td>
<td>Callcott, P.</td>
<td>Skilled Workman, Class II</td>
<td>Leading Stoker, Royal Navy</td>
</tr>
<tr>
<td>Reading</td>
<td>Telephone Area</td>
<td></td>
<td>Butler, L. R.</td>
<td>Unestablished Skilled Workman</td>
<td>Corporal, Royal Air Force</td>
</tr>
<tr>
<td>Scotland</td>
<td>West Telephone Area</td>
<td></td>
<td>Howison, R. M.</td>
<td>Unestablished Skilled Workman</td>
<td>Sergeant, Royal Air Force</td>
</tr>
<tr>
<td>Scotland</td>
<td>West Telephone Area</td>
<td></td>
<td>Hamilton, E.</td>
<td>Unestablished Skilled Workman</td>
<td>Pioneer, Gordon Highlanders</td>
</tr>
<tr>
<td>Sheffield</td>
<td>Telephone Area</td>
<td></td>
<td>Wood, E. W.</td>
<td>Regional Motor Transport Officer</td>
<td>Trooper, Royal Lancers</td>
</tr>
</tbody>
</table>

The Board of Editors has learnt with great pleasure that the following members of the Engineering Department at present serving with the Armed Forces have been honoured for the services they have rendered to their country. The Board offers its congratulations on the signal honour they have earned.

- **Engineer-in-Chief’s Office**
  - **Wilkinson, E. H.**
  - **Chief Inspector**
  - **Lieutenant, Royal Corps of Signals**

- **London Telegraph Communications Region**
  - **Kelly, F. A.**
  - **Skilled Workman, Class II**

- **London Telegraph Communications Region**
  - **Syrett, C. E.**
  - **Chief Petty Officer, Distinguished Service Medal**

- **Scottish Region**
  - **Wood, E. W.**
  - **Regional Motor Transport Officer**

### Malayan Posts & Telegraphs Department

It is gratifying to note from the annual report for 1939 that the Malayan Posts and Telegraphs Department is maintaining steady progress. On the telecommunications side, telephone installations increased by 8.7 per cent., 65 of the 117 exchanges being of the automatic type. A start has been made with the introduction of no-delay trunk working, and a third 3-circuit and another single-circuit carrier system were installed to augment the trunk network. In addition a direct radio link with North America was introduced, although this had to be suspended on the outbreak of war.

### Obituary

The past few weeks have seen the passing of two grand old men of science, Sir Oliver Lodge and Sir J. J. Thomson. Sir Oliver Lodge, who was 89 when he died, started work at 14 and studied in his spare time. At 29 he began an academic career, filling posts successively at London, Liverpool and Birmingham Universities. These enabled him to devote a large part of his energies to original investigations. He will be remembered today for his work on the relation between matter and the ether, and for his inventions and discoveries in the field of wireless communication.

Sir J. J. Thomson, like Sir Oliver Lodge, lived to a good age—he was 83. He will always be associated with Cambridge University and the Cavendish Laboratories, where his principal researches were carried out, including his revolutionary discoveries of the electron. This was followed by his hypotheses on the mechanisms of the electric field, in which he combined the wave motion and corpuscular theories. Both men were honoured with a knighthood, and by many universities and scientific societies both in this country and abroad, for their substantial contributions to the advancement of electrical science.

### The Institution of Post Office Electrical Engineers

**LIST OF HON. LOCAL SECRETARIES OF CENTRES**

**London**
- Centre Secretary, Mr. C. A. R. Burdick, London Telegraph Communications Region (E.B.), Waterloo Bridge House, Waterloo Bridge Road, S.E.I.
- E.T.R. Secretary, Mr. J. E. Martin, London Telegraph Communications Region (E.B.), Waterloo Bridge House, Waterloo Bridge Road, S.E.I.
- E.T.R.O. Secretary, Mr. W. H. Fox, Engineer-in-Chief’s Office (Park Branch), Alder House, Aldersgate Street, E.C.I.
- S.E. Secretary, Mr. E. W. Atkins, Post Office Engineering Department, 34 Sydenham Road, Croydon, Surrey.

**Harrogate**
- Secretary, Mr. E. W. Norfolk, Engineer-in-Chief’s Office (Top Branch), Prince of Wales Hotel, Harrogate.

**Eastern**
- Centre, Mr. W. E. T. Andrews, House, Counties Region (E.B.), 100 Hills Road, Cambridge.
- N. Midland (Nottingham Centre), Mr. A. E. Tytcross, Telephone Manager’s Office, 37 Stoney Street, Nottingham.
- N. Midland (Birmingham Centre), Mr. R. J. Clark, Development Group, Telephone House, Newhall Street, Birmingham.

**Bristol**
- Secretary, M. A. Adwick, Regional Director’s Office, Room 302, 5th Floor, 36 Park Row, Leeds, J.
- Northern, Mr. E. Jeffery, Engineering Branch, Newcastle.
- South, Mr. T. Lawrie, Scottish Region (Eng. Branch), G.P.O., Edinburgh.
- South, Mr. J. Paton, Telephone Manager’s Office, H.P.O., Glasgow, C.2.

**Newcastle**
- Secretary, Mr. G. A. Evans, Telephone Manager’s Office, 54 Westcliff, Preston Lancy.

**SOUTH EASTERN**
- Secretary, Mr. R. G. Alexander, T.M.O., Room 158, St. Stephens Chambers, Baldwin Street, Bristol.
- N. Ireland, Mr. C. R. Worthington, E.B. Telephone House, 1 Crommac Street, Belfast.

**ESSAY COMPETITION, 1940**

The Council have offered five prizes of two guineas each for the five most meritorious essays submitted by members of the Engineering Department of the Post Office below the ranks of Inspector and Draughtsman Class II, and, in addition, to award a limited number of Certificates of Merit. Particulars may be obtained from the local secretary.

**CITY AND GULDS OF LONDON INSTITUTE EXAMINATIONS**

The following candidates received the prizes awarded by the I.P.O.E.E., upon the results of the recent examination held at the University of London, in Transmission and Lines—Grades I and II:

1st Prize of £3—Mr. Arthur Douglas Board, P.O. Engineering Dept., Riddiford.
2nd Prize of £2—Mr. Kerwin William Bone, P.O. Engineering Dept., London.
3rd Prize of £2—Mr. Alan Dan Alrich, P.O. Engineering Dept., Newcastle.
4th Prize of £2—Mr. Thomas Richard Boxall, P.O. Engineering Dept., Poole.

---

**1940 October**
When the switch is inadvertently short-circuited (Fig. 6), the bell is disconnected from the main station and all extension circuits are disconnected. The switch springs are disconnected across the coils of the switches, and the magento bell is disconnected from the main station. There is no external bell at the main station, and the extension bell at the main is disconnected.

The new instrument is a considerable improvement on the previous equipment, and should meet a long-felt want. It overcomes two serious circuit difficulties which existed in its predecessor—the "hold" cannot be accidentally left on the exchange line, since it is disconnected by the cradle switch. Also, the impulse springs of the dial at the main station are short-circuited while the switch is in the "Exch. to Ext."

Col. R. E. B. Crompton

The death of Col. R. E. B. Crompton at the ripe age of ninety-four removes one whose name has been associated with the public supply of electricity from its earliest stages. Col. Crompton's career was as varied as it was remarkable. At the age of ten, he served as a naval cadet in the Crimean War before joining the army, which he tried to mechanise sixty years before mechanisation was accepted. Later, in the South African and Great Wars, he was also called upon to busy himself with mechanisation, and he played a leading part in the development of the tank.

In the electrical field his interests were catholic; but he will chiefly be remembered for his early work in connection with the introduction of the dynamo and the arc lamp. He was twice President of the Institution of Electrical Engineers and was elected an honorary member in 1923.

Mr. T. O. K. Wylie

A shadow was cast over the evacuation of part of the Engineer-in-Chief's staff to Harrogate by the sudden death of Mr. T. O. K. Wylie, who was in charge of the Telephone Development and Maintenance Branch contingent. Mr. Wylie caught cold on the journey to Harrogate which developed into pneumonia from which he died. His loss has been keenly felt among his large circle of friends, for "Toc" Wylie, as he affectionately called, was widely known both in his official capacity and in Office and Civil Service sports circles.

Notes and Comments

Post Office Roll of Honour

We deeply regret to have to record the deaths, while serving with the Armed Forces, of the following members of the Engineering Department:


Col. R. E. B. Crompton

The death of Col. R. E. B. Crompton at the ripe age of ninety-four removes one whose name has been associated with the public supply of electricity from its earliest stages. Col. Crompton's career was as varied as it was remarkable. At the age of ten, he served as a naval cadet in the Crimean War before joining the army, which he tried to mechanise sixty years before mechanisation was accepted. Later, in the South African and Great Wars, he was also called upon to busy himself with mechanisation, and he played a leading part in the development of the tank. In the electrical field his interests were catholic; but he will chiefly be remembered for his early work in connection with the introduction of the dynamo and the arc lamp. He was twice President of the Institution of Electrical Engineers and was elected an honorary member in 1923.

Mr. T. O. K. Wylie

A shadow was cast over the evacuation of part of the Engineer-in-Chief's staff to Harrogate by the sudden death of Mr. T. O. K. Wylie, who was in charge of the Telephone Development and Maintenance Branch contingent. Mr. Wylie caught cold on the journey to Harrogate which developed into pneumonia from which he died. His loss has been keenly felt among his large circle of friends, for "Toc" Wylie, as he affectionately called, was widely known both in his official capacity and in Office and Civil Service sports circles.

Notes and Comments

Post Office Roll of Honour

We deeply regret to have to record the deaths, while serving with the Armed Forces, of the following members of the Engineering Department:


Col. R. E. B. Crompton

The death of Col. R. E. B. Crompton at the ripe age of ninety-four removes one whose name has been associated with the public supply of electricity from its earliest stages. Col. Crompton's career was as varied as it was remarkable. At the age of ten, he served as a naval cadet in the Crimean War before joining the army, which he tried to mechanise sixty years before mechanisation was accepted. Later, in the South African and Great Wars, he was also called upon to busy himself with mechanisation, and he played a leading part in the development of the tank. In the electrical field his interests were catholic; but he will chiefly be remembered for his early work in connection with the introduction of the dynamo and the arc lamp. He was twice President of the Institution of Electrical Engineers and was elected an honorary member in 1923.

Mr. T. O. K. Wylie

A shadow was cast over the evacuation of part of the Engineer-in-Chief's staff to Harrogate by the sudden death of Mr. T. O. K. Wylie, who was in charge of the Telephone Development and Maintenance Branch contingent. Mr. Wylie caught cold on the journey to Harrogate which developed into pneumonia from which he died. His loss has been keenly felt among his large circle of friends, for "Toc" Wylie, as he affectionately called, was widely known both in his official capacity and in Office and Civil Service sports circles.

Ten-Year Index

Readers will recall that in 1885 the Board of Education published a "Ten Year Index" of the Journal. It was at that time, the intention of the Board to revise this index every five years, and the first revision was therefore now due. In view, however, of the shortage of paper and the increased printing costs, the Board has been compelled to postpone the appearance of this reference work. At the same time the Board would point out that a limited number of copies of the original issue is still available, price 6d. per copy; and that annual indices are published in the fourth part of each volume (January issue).

Cover Paper

Giving to the coverage paper the JOURNAL has been able to follow its previous practice of changing the colour of the cover with each new volume, and the colour used during the issue will have to depend on the availability of supplies.
1940 July

Notes and Comments

Post Office Roll of Honour

We deeply regret to have to record the deaths, while on active service, of the following members of the Engineering Department:—

Aberdeen Area:— Davie, H. S., Unemployed; Sturgeon, A. A., Royal Corps of Signals. Macdonald, C., Unemployed; Workman, A. J., Royal Navy. Taylor, W. M., Unemployed; Skilled Workman, Signalman, Royal Corps of Signals.

Bedford Area:— Bagwell, M. W., Unemployed; Skilled Workman, Gunner, Royal Artillery. London Area:— Cooper, A. J., Skilled Workman; Light, S., Royal Corps of Signals. Grierson, S. K., Skilled Workman, Signalman, Royal Corps of Signals. Wiss, R. S., Unemployed; Mechanic, Actuary, 1st Class, Royal Air Force.

North Eastern Region

SLEWING AND LOWERING A 3-WAY DUCT

An unusual case of slewing and lowering a 3-way duct, one way of which contained the Leeds-Newcastle co-axial cable, has recently been completed. In connection with a road improvement scheme which involved the removal of two lamps in the carriageway, it was necessary to lower and slew the duct in two separate sections of 50 yards each; the highest point of lowering being 9 ft. and that of slewing being 8 ft.

To avoid an increase or decrease in the route length of the co-axial cable, and to minimise any risk of distortion at the four jointing points in the sections concerned, careful consideration had to be given to the line of the new track.

The Highway Authority removed all supplies earth down to the new level by mechanical means, the approach to the existing track being made as close as possible consistent with the safety of the Department's plant, and the small quantity of earth remaining was sloped from the old trench to the new, which was excavated to receive the duct. The duct was then bored and jointing boxes were used. Steel scaffolding was erected as indicated in the sketch (a contract having already been let for carrying out the works). Each duct was lashed to a strongback, the strongback then being tied to the sledge poles with an adjustable slip knot at approximately 7 ft. intervals until the whole length of 300 yards was securely held. The earth was then removed to permit free suspension and movement. The actual lowering and slewing was commenced at the midway point in each section, which was also the greatest depth of lowering and width of slewing. Approximately 30 yards of track were dealt with in each movement, 12 men, one on each string between the strongback and sledge poles being engaged in the operation. Instructions were given as to the degree of lowering to be made in each movement, and each slewing as was necessary on the commence of the operation was made by pulling over the sledge poles to a predetermined line. These operations were repeated until the 3-way duct was directly over the newly prepared track. It was then lowered into the trench, sledge and strongback removed, and filling in operations completed. The time taken for the actual lowering and slewing of each 300 yard section was approximately 7 hours, 11 men being engaged upon the work. Only 8 ducts suffered minor fractures at the collars, and the existing length and curvature of the co-axial cable was maintained throughout.

The method is suitable for wide slewing and deep lowering of any type of multiple way duct.

MAGNETIC STORM

A magnetic storm occurred over parts of the N.E. Region on March 24th and 25th, 1940. Although not severe enough to cause any widespread interruption to communications, the effects were noticeable over a wide area and the following brief reports from fault controls may be of interest.

York. Between 4.45 p.m. on March 24th, 1940, and 8.30 a.m. on March 25th, 1940, certain P.W.'s to Rhyll, Catterick and Darlington, and the traffic junctions to Middlesbrough were reported noisy and found to have imposed on them a noise similar to a low dinging tone. Local services were reduced.

Harrogate. Intermittently between 4.30 p.m. on March 24th, 1940, and 8 a.m. on March 25th, 1940, the Harrowbridge, Harston Sessay, Ripon junction (battery dinging), Hubby junctions (loop dinging) and London junctions (generator signalling from Harrogate) were all affected. Complaints of wrong numbers also fairly frequent.

Hall. Short interruptions were experienced, the most important circuits affected being those to Lincoln and Huntly.

Scarborough. At odd intervals during the day all junctions radiating from Scarborough were reported faulty, the chief trouble being P.W.'s on the C.B. calling.

Junior Section Notes

Leicester Centre

During the Winter Session six meetings were held, the programme being as follows:

December 12th. "The winning of the co-axial papers for the Chairman's Committee," by Mr. Shepherd. Visitor: Committee.

This is the second year that we have held this series of ten-minute papers, and already the entries were smaller than last year, but were most enjoyable and interesting evening. The reason for the drop in entries was owing to the loss of last year's competitor being on active service.


Considering the present conditions of black-out and the number of members serving with His Majesty's Forces, we have a fairly successful session.
1941 January

Notes and Comments

Roll of Honour

It is with deep regret that the Board of Editors has learnt of the death of the following members of the Engineering Department while serving with the Air Force:—

Belfast Telephone Area: Cully, F., Unestablished Skilled Workman, Lance-Corporal, Royal Corps of Signals.

Birmingham Telephone Area: Rutter, J. L., Unestablished Skilled Workman, Aircraftman, Class II, Royal Air Force.

Bristol Telephone Area: Kemp, W. L., Unestablished Skilled Workman, Petty Officer, Royal Navy.

The Board is glad to be able to record that the following officer, whose name appeared in the Roll of Honour published in the October issue of this Journal, is still alive:—


Regional Notes

South-Western Region

RECONSTRUCTION OF BRIDGE

A bridge had been prepared to replace an existing structure for a water and sewer main, but owing to war conditions was postponed and was never used. The structure was later used for the construction of a temporary bridge.

Lord Tryon

[Text: Lord Tryon, who was 68 years of age. Lord Tryon, as Major C. C. Tryon, had represented Brighton as its Member of Parliament since 1910, and had held ministerial rank in which he was since 1910. Lord Tryon's association with the Post Office commenced in 1895, when he was Postmaster-General, a post which he held until his resignation in April, 1940.]

Erratum

The author of an article—Resistance-Compensated Transformer Filter—which appeared in the [July issue] had drawn attention to a transistor which occurred near the top of the first invention column on page 596. The expression should read:

\[ \frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2} \]

North-Eastern Region

EXCHANGE TRANSFERS

Despite the additional work and shortage of staff due to the war, three new exchanges have been opened in the Sheffield area recently. The exchanges were at Ecclesfield, where a large telephone exchange with an equipped capacity of 800 multiple replaced a smaller one; Don巴拉, where a U.A. No. 14 exchange with an equipped capacity of 400 multiple replaced an obsolescent, U.A. No. 9 (fly-path) exchange, and Mexborough.

The transfer of Mexborough from C.B. S.I. Multiple to U.A. No. 14 exchange, which was effected on September 12th last, represents a further step in the modernisation of the telephone service of this district. The exchange is housed in the upper floor of the new Post Office building which was opened for business immediately after the closure of the old. The equipment, which provides for an initial capacity of 500 lines, was installed by Messrs. Siemens Bros. & Co., and comprises 5 A units, 2 B units, 14 C units and 1 D unit. A parallel battery float system with two batteries each of 120 Ah has been installed.

The number of subscribers' circuits transferred totalled 234 and the junctions 47. Mexborough is the centre of an important communication of exchanges and has direct routes to 8 exchanges. The automatic board is located at Sheffield. Mexborough subscribers have direct access to the exchanges in the Sheffield, Doncaster and Barnsley areas and the equipment installed provides for the same facility when the remaining manual exchanges, to which access to the manual board is now given, are converted to automatic working.

The transfer of the subscribers' lines was expedited by the prior modification of the cord circuits for C.B. working in accordance with Engineering Instruction Letter A 3108.

CABLE FAULTS

An extraordinary number of cable failures, involving eleven different cables, occurred at different points in the York Telephone area within a period of 12 hours on the night of October 24th, 1940.

At 18.30 hours an important local cable in Hull was reported faulty, and despite unpleasant weather conditions the location and clearing of the fault was immediately put in hand. An hour later the Hull-Leeds No. 2 cable failed, due to a sudden flood of water in a manhole in which a joint was open. The motor pump unfortunately broke down at this critical period. Subsequent hand pumps were quickly despatched to deal with the inflow and although valuable assistance was rendered by the Fire Brigade while the joiners remained in the manhole holding up the joint until the water reached their level, it was not possible to prevent the cable core from becoming saturated. Despite the blackout and rain all superintending staff from York, 40 miles away, reached the scene, and arrangements were made for the代替 replacement lengths within 3 hours.

Meanwhile a further cable fault had occurred. Liggisborough exchange and before midnight a 300 pair sub-ASA cables at Filey had failed. The accident was localised from drawing office records and Clarence Street was replaced by daylights.

In the early hours of the morning failures developed on the York-Linton and Hull-Homrons cables, and during the next few hours five further cable faults, of a comparatively minor character, were discovered. All the faults were as a direct result of the severe weather and not due in any way to enemy action.

FIG. 2—COMPLETE DRAFT TRACK INTERRUPTING BRIDGE.

Up to this stage the Post Office plant remained in situ on the old bridge. The new ducts having been completed, the permanent carrier and local cables were drawn in and the circuits changed over. Temporary cable lengths were then drawn in as the first step in changing over the balanced trunk cables, and circuits changed over to them. All the cables in the old ducts were then recovered and the trunk cables drawn into the new ducts, the 4 ft. reclosers (provided in case suitable for this purpose) being utilised to lengthen the cables as the new route was 2 ft. longer than the old one. Circuits were then changed over to these cables and the temporary cables recovered.

The work of evacuation, reinstatement and reconstruction of the manhole was carried out by the Highway Authority, the duct laying being done by the Department's staff. The whole scheme, which proceeded smoothly and with the minimum interruption to working circuits, is yet another illustration of the value of close co-operation when several authorities are concerned with different phases of a work.
Notes and Comments

1941 April

To be awarded the Medal of the Most Excellent Order of the British Empire: Mr. R. D. Crighton, Inspector, Aberdeen Telephone Area; Mr. T. S. Minto, Skilled Workman, Class I, Belast. Mr. W. Mochrie, Skilled Workman, Class I, Rugby Radio Station; Mr. A. L. Rutland, Inspector, Gloucester Telephone Area; Mr. D. J. T. Raw, Unestablished Skilled Workman, Shrewsbury Telephone Area.

The Board of Editors has learnt with great pleasure that the following members of the Engineering Department, now serving with the armed forces, have been honoured for services rendered to their country. The Board tender its congratulations upon the signal honour they have earned:—

Engineer-in-Chief's Office: Metson, G. H., Executive Engineer, Lieutenant, Royal Corps of Signals, Military Cross.

Engineering Department: Leigh, H., Leading Hand, Corporal, Royal Signals, Order of the British Empire (Military Division).

Burnley: Knowles, H., Unestablished Skilled Workman, Lance-Bombardier, Royal Artillery, Military Medal.

Gloucester Telephone Area: Trimmer, W. J., Chief Inspector, Lieutenant, Royal Corps of Signals, Mentioned in Despatches.

Newcastle-on-Tyne Telephone Area: Latham, J. T., Unestablished Skilled Workman, Signalman, Royal Corps of Signals, Military Medal.

Scotland: Walker, J., Unestablished Skilled Workman, Class I, Sergeant, Royal Corps of Signals, Mentioned in Despatches.

The Board of Editors has learnt with great pleasure that the following members of the Engineering Department, now serving with the armed forces, have been honoured for services rendered to their country. The Board tender its congratulations upon the signal honour they have earned:

Engineer-in-Chief's Office: Metson, G. H., Executive Engineer, Lieutenant, Royal Corps of Signals, Military Cross.

Engineering Department: Leigh, H., Leading Hand, Corporal, Royal Signals, Order of the British Empire (Military Division).

Burnley: Knowles, H., Unestablished Skilled Workman, Lance-Bombardier, Royal Artillery, Military Medal.

Gloucester Telephone Area: Trimmer, W. J., Chief Inspector, Lieutenant, Royal Corps of Signals, Mentioned in Despatches.

Newcastle-on-Tyne Telephone Area: Latham, J. T., Unestablished Skilled Workman, Signalman, Royal Corps of Signals, Military Medal.

Scotland: Walker, J., Unestablished Skilled Workman, Class I, Sergeant, Royal Corps of Signals, Mentioned in Despatches.

The Board of Editors has learnt with great pleasure that the following members of the Engineering Department, now serving with the armed forces, have been honoured for services rendered to their country. The Board tender its congratulations upon the signal honour they have earned:

Engineer-in-Chief's Office: Metson, G. H., Executive Engineer, Lieutenant, Royal Corps of Signals, Military Cross.

Engineering Department: Leigh, H., Leading Hand, Corporal, Royal Signals, Order of the British Empire (Military Division).

Burnley: Knowles, H., Unestablished Skilled Workman, Lance-Bombardier, Royal Artillery, Military Medal.

Gloucester Telephone Area: Trimmer, W. J., Chief Inspector, Lieutenant, Royal Corps of Signals, Mentioned in Despatches.

Newcastle-on-Tyne Telephone Area: Latham, J. T., Unestablished Skilled Workman, Signalman, Royal Corps of Signals, Military Medal.

Scotland: Walker, J., Unestablished Skilled Workman, Class I, Sergeant, Royal Corps of Signals, Mentioned in Despatches.

The Board of Editors has learnt with great pleasure that the following members of the Engineering Department, now serving with the armed forces, have been honoured for services rendered to their country. The Board tender its congratulations upon the signal honour they have earned:

Engineer-in-Chief's Office: Metson, G. H., Executive Engineer, Lieutenant, Royal Corps of Signals, Military Cross.

Engineering Department: Leigh, H., Leading Hand, Corporal, Royal Signals, Order of the British Empire (Military Division).

Burnley: Knowles, H., Unestablished Skilled Workman, Lance-Bombardier, Royal Artillery, Military Medal.

Gloucester Telephone Area: Trimmer, W. J., Chief Inspector, Lieutenant, Royal Corps of Signals, Mentioned in Despatches.

Newcastle-on-Tyne Telephone Area: Latham, J. T., Unestablished Skilled Workman, Signalman, Royal Corps of Signals, Military Medal.

Scotland: Walker, J., Unestablished Skilled Workman, Class I, Sergeant, Royal Corps of Signals, Mentioned in Despatches.

The Board of Editors has learnt with great pleasure that the following members of the Engineering Department, now serving with the armed forces, have been honoured for services rendered to their country. The Board tender its congratulations upon the signal honour they have earned:

Engineer-in-Chief's Office: Metson, G. H., Executive Engineer, Lieutenant, Royal Corps of Signals, Military Cross.

Engineering Department: Leigh, H., Leading Hand, Corporal, Royal Signals, Order of the British Empire (Military Division).

Burnley: Knowles, H., Unestablished Skilled Workman, Lance-Bombardier, Royal Artillery, Military Medal.

Gloucester Telephone Area: Trimmer, W. J., Chief Inspector, Lieutenant, Royal Corps of Signals, Mentioned in Despatches.

Newcastle-on-Tyne Telephone Area: Latham, J. T., Unestablished Skilled Workman, Signalman, Royal Corps of Signals, Military Medal.

Scotland: Walker, J., Unestablished Skilled Workman, Class I, Sergeant, Royal Corps of Signals, Mentioned in Despatches.

The Board of Editors has learnt with great pleasure that the following members of the Engineering Department, now serving with the armed forces, have been honoured for services rendered to their country. The Board tender its congratulations upon the signal honour they have earned:

Engineer-in-Chief's Office: Metson, G. H., Executive Engineer, Lieutenant, Royal Corps of Signals, Military Cross.

Engineering Department: Leigh, H., Leading Hand, Corporal, Royal Signals, Order of the British Empire (Military Division).

Burnley: Knowles, H., Unestablished Skilled Workman, Lance-Bombardier, Royal Artillery, Military Medal.

Gloucester Telephone Area: Trimmer, W. J., Chief Inspector, Lieutenant, Royal Corps of Signals, Mentioned in Despatches.

Newcastle-on-Tyne Telephone Area: Latham, J. T., Unestablished Skilled Workman, Signalman, Royal Corps of Signals, Military Medal.

Scotland: Walker, J., Unestablished Skilled Workman, Class I, Sergeant, Royal Corps of Signals, Mentioned in Despatches.
## Notes and Comments

### Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department -

<table>
<thead>
<tr>
<th>Belfast Telephone Area</th>
<th>Madeley, G. A.</th>
<th>Unestablished Skilled Workman</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belfast Telephone Area</td>
<td>Tozer, J. J.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>Birmingham Telephone Area</td>
<td>Hawkes, W. E.</td>
<td>Assistant Chemist</td>
</tr>
<tr>
<td>Birmingham Telephone Area</td>
<td>Phillips, D. R.</td>
<td>Assistant Chemist</td>
</tr>
<tr>
<td>Birmingham Telephone Area</td>
<td>Miles, J. C.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>Dudley Telephone Area</td>
<td>Peter, A. T.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>Dudley Telephone Area</td>
<td>Wanless, H. H.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>Exeter Telephone Area</td>
<td>Chave, F. S. H.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>Gloucester Telephone Area</td>
<td>Smith, G. S.</td>
<td>Unestablished Draughtsman</td>
</tr>
<tr>
<td>Guildford Telephone Area</td>
<td>Hinde, A. L.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>Guildford Telephone Area</td>
<td>Nash, F.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>London Telephone Communications Region</td>
<td>Mason, R. W.</td>
<td>Labourer</td>
</tr>
<tr>
<td>Nottingham Telephone Area</td>
<td>Hobin, B. A.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>Plymouth Telephone Area</td>
<td>Jewell, E. J.</td>
<td>Labourer</td>
</tr>
<tr>
<td>Sheffield Telephone Area</td>
<td>Hockold, W.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>Stoke-on-Trent Telephone Area</td>
<td>Brinkworth, W. J.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>Stoke-on-Trent Telephone Area</td>
<td>Hall, J.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>Stoke-on-Trent Telephone Area</td>
<td>Price, J.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>Leicester Telephone Area</td>
<td>Foster, P. J.</td>
<td>Mechanic</td>
</tr>
<tr>
<td>Liverpool Telephone Area</td>
<td>Smith, S.</td>
<td>Skilled Workman, Class II</td>
</tr>
<tr>
<td>London Telephone Communications Region</td>
<td>Haugh, T. S.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>London Telephone Communications Region</td>
<td>Allan, C. C.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>London Telephone Communications Region</td>
<td>Gould, W. E.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>Norwich Telephone Area</td>
<td>Creasy, E. E.</td>
<td>Skilled Workman, Class I</td>
</tr>
<tr>
<td>* * *</td>
<td>* * *</td>
<td>* * *</td>
</tr>
</tbody>
</table>

### Birthday Honours

* * *

It was a matter of satisfaction to the whole of the engineering staff of the Post Office to see the name of the Engineer-in-Chief, Col. A. S. Angwin, included in the Birthday Honours list published last month. His valuable contributions to telecommunications, particularly in the development of the overseas radio telephone service and in outstanding work in connection with international conferences at Madrid, Lisbon, Bucharest, Cairo, Luxembourg and Kecskemé, have earned widespread respect in telecommunications circles. The high esteem in which he has been held on him will be a source of interest and satisfaction to friends and associates throughout the world.

Another well-known personality in the communications service of this country who received a knighthood in the same list is Mr. Frank Gill. At the time of the transfer of the National Telephone Co. to the Post Office in 1911, Sir Frank was the Chief Engineer of the Company, and he has maintained a leading figure in the telecommunications industry throughout the following 30 years. Sir Frank Gill particularly interested himself in encouraging the growth of European telephony and his efforts were largely responsible for the setting up of the C.I.F., the international advisory committee on telephony.

### Latest Appointments

We offer our congratulations to Mr. G. F. Odell, who was recently appointed Deputy Director of the new Post Office Contracts Department, and to Capt. J. Legg and Mr. C. W. Brown, who become Assistant Engineer-in-Chief and Staff Engineer, Telephone Branch, respectively, as a result of this appointment. We regret that owing to the enforced restriction in size of this Journal we are not able to publish the usual personal paragraphs, but our congratulations are none the less sincere.

### Recent Honours

- **Belfast Telephone Area**
  - Muckin, W. A. | Skilled Workman |
  - Signalman, R.C. of Military Medal |
  - Pilot Officer, Royal Air Force |
  - Piper Officer, Royal Air Force |
  - Private, Royal Warwickshire Regiment |
- **Engineering-in-Chief's Office**
  - Ross, G. R. | Skilled Workman |
  - Pilot Officer, R.A.F. |
  - Signalman, Skilled Workman |
  - Unestablished Workman |
- **Liverpool Telephone Area**
  - Ward, J. | Skilled Workman |
  - R.N.V.R. |
  - Telephone Telegraphist |
- **South Western Region**
  - Morton, R. N. | Skilled Workman |
  - Chief Inspector |
  - Unestablished Workman |
  - Inspector |
  - Inspector |
- **Swansea Telephone Area**
  - Hunter, J. St. L. | Skilled Workman |
  - George Medal |
  - Inspector |
  - Inspector |
- **Tunbridge Wells Telephone Area**
  - Hanley, C. L. | Skilled Workman |
  - Chief Inspector |
  - Commanded by H.M. the King |
  - Chief Inspector |

### 1941 July

### I.E.E. Awards

We offer our congratulations to Mr. G. F. Odell, who was recently appointed Deputy Director of the new Post Office Contracts Department, and to Capt. J. Legg and Mr. C. W. Brown, who become Assistant Engineer-in-Chief and Staff Engineer, Telephone Branch, respectively, as a result of this appointment. We regret that owing to the enforced restriction in size of this Journal we are not able to publish the usual personal paragraphs, but our congratulations are none the less sincere.
In this article only a few of the possible applications of Poisson probability paper have been mentioned. It has been shown recently that Poisson probability paper can be used on problems which arise in the building-up of any kind of apparatus out of a large number of parts. To ensure that a particular piece of apparatus will function within prescribed limits when it is built up of pieces, selected at random, it is necessary to control the chance variations of each of the parts, so that the resultant chance variation in the quality of the assembled unit will fall within the defined limits with a given degree of confidence. Poisson probability paper can thus be used in the determination of the cost of reducing the overall chance fluctuation by modifying the chance variations of the various piece-parts, and so help ensure an economic control of quality of manufacture. The importance of this control is apparent when it is recalled that over 200 piece-parts are required to make a telephone and over 110,000 other parts may be involved in its connection to another telephone. The annual production of most of these piece-parts runs into the millions, so that the total annual production of parts runs into the billions.

APPENDIX.
Consider the problem of the occurrence of an event in n trials. Let \( p_n \) be the probability of the happening of the event in one trial. Then the probability that the event will happen in each of the first \( r \) trials and fail in each of the remaining \( n-r \) trials is \( p_r(1-p)^{n-r} \). But the number of ways in which the event may happen exactly \( r \) times in \( n \) trials is \( \binom{n}{r} \). Hence the probability \( p_r \) that the event will happen exactly \( r \) times in \( n \) trials is

\[
\begin{align*}
p_r &= \binom{n}{r} p^r (1-p)^{n-r} \\
p_r &= \frac{n!}{r!(n-r)!} p^r (1-p)^{n-r} \\
p_r &= \frac{n(n-1)(n-2) \cdots (n-r+1)}{r!} p^r (1-p)^{n-r} \\
p_r &= \frac{m}{n} \frac{m-1}{n-1} \frac{m-2}{n-2} \cdots \frac{m-r+1}{n-r+1} p^r (1-p)^{n-r} \\
\end{align*}
\]

where the successive terms give the frequency of occurrence of 0, 1, 2, \ldots, \( r \), events on the basis of each event not being prejudiced by what has previously occurred.

\[E.S.T.P., \text{Vol. XX, Jan., 1941, pp. 1-61.}\]
1942 January

Notes and Comments

Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department.

<table>
<thead>
<tr>
<th>Region</th>
<th>Telephone Area</th>
<th>Long, A.</th>
<th>Unestablished Skilled Workman</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>Swallow, W. A.</td>
<td>Unestablished Skilled Workman</td>
<td></td>
</tr>
<tr>
<td>London</td>
<td>Wallace, R.</td>
<td>Labourer</td>
<td></td>
</tr>
<tr>
<td>London</td>
<td>Wright, A. D.</td>
<td>Unestablished Skilled Workman</td>
<td></td>
</tr>
<tr>
<td>London</td>
<td>Jones, W. J.</td>
<td>Labourer</td>
<td></td>
</tr>
</tbody>
</table>

Recent Awards

The Board of Editors has with great pleasure the honours recently conferred on the following members of the Engineering Department:

<table>
<thead>
<tr>
<th>Region</th>
<th>Telephone Area</th>
<th>Alexander, A.</th>
<th>Skilled Workman, Class I</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>Lawrance, R.</td>
<td>Unestablished Skilled Workman</td>
<td></td>
</tr>
</tbody>
</table>

While serving with the Armed Forces including Home Guard

<table>
<thead>
<tr>
<th>Region</th>
<th>Telephone Area</th>
<th>Skilled Workman, Class I</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>Stotes, E. P.</td>
<td>Staff Corporal, Royal Corps of Signals</td>
</tr>
<tr>
<td>London</td>
<td>Diloway, A. C.</td>
<td>Unestablished Skilled Workman</td>
</tr>
<tr>
<td>London</td>
<td>Peacock, D. C.</td>
<td>Assistant Engineer</td>
</tr>
<tr>
<td>London</td>
<td>Warn, H. G.</td>
<td>Skilled Workman, Class I</td>
</tr>
<tr>
<td>London</td>
<td>Coombe, A.</td>
<td>Skilled Workman, Class I</td>
</tr>
</tbody>
</table>

Reduction in Size

A severe cut in the amount of paper allowance for this journal will effect the size of the next (April) edition. As a result, a reduction of about 40 per cent will have to be made and it is proposed to make this reduction effectual from the next edition. An advertisement rate of 65 per cent will be charged to advertisers.

Text: 70% 80% 85%

The severe cut in the amount of advertising matter will seriously affect the advertisement revenue, but as this will be offset to some extent by the reduction in printing costs due to the reduced size, it will still be possible to use this journal effectively.

Regional Notes

London Telecommunications Region

MOLE-DRAINER—MODIFIED USE IN L.R.T. NORTH AREA

By the use of a modified form of agricultural mole-drawer, 4,000 yds. of 20/20 G.C. cable was laid direct in the ground over a period of three days at a labour expenditure of 300 man-days.

The work was carried out early in October under dry weather conditions and generally the soil was of a loamy clay character, fairly free from flints. The alluvium to the standard mole-drawer consisted of a mixture of earth and earth. The mole-drawer was displaced at the bottom of the slot and an expander attachment was placed at the rear of the mole so that 34 ft. cable feed pipe following the expander would pass through the slot before it was closed by the hose top seal. The cable feed pipe entered the ground with a bend of 24 in diameter.

The expander pipe was supplied by a D.6 Caterpillar Tractor to which the mole-drawer was coupled direct. The length of one of the mole-drawers, which includes the approximately 60 yd. of hard digging, was carried out by nine Post Office men and a driver supplied by the owner of the tractor.

For the laying operation the cable drum was set up in a low-speed trolley and the cable end passed through the cable feed pipe with the free end of the cable held by one man. The tractor and mole-drawer with a hose a few yards in advance proceeded along the route which had been previously marked out. Each man carried the cable drum. A bend of 24 in diameter was kept on the drum by a man to keep the cable from becoming too tight.

After the first 40 yd. of operation, the soil resistance was found to be sufficient to hold the cable, which was then raised slightly with petrol j*lly at the input of the feed pipe. The cable was laid at an average depth of 18 in. and the lengths varied according to the specified joining points. One continuous length of 1,000 yds. was laid.

The cost of the hire of the mole-drawer was £3 per day, and it is estimated that tractor hire charges would be £3 per day including the driver. The Post Office measured the expenditure given by the Berkshire County Agricultural Institute and the cost of the tractor together with driver without charge by Means: J. Olling & Co. S. D.

1 Welsh and Border Counties Region

SUB-QUESERABLE CABLE LAYING

Two 1,000 yd. sub-aqueous cable links have been laid in this region by direct labour. The cables are laid in each case to special experiments which lay across the route of a defence cable.

Case I.

At low water this estuary was clear of water with the exception of three channels carrying water from the hills. At the place chosen for the crossing, the bed when exposed consisted of semi-sand. Because of these conditions, the cable was placed in position by man-power. The first channel was crossed by a temporary bridge, the second, being only 2 ft. in depth at the crossing, was forded. The third had only to be crossed by the shore end of the cable, and this was held in position by a line stretched across the channel.

The cable was P.C.G.T. made and armoured in 360 yd. lengths. The cable was transported from the factory to the site, a distance of 100 miles by rail, in a single journey. Each drum of 360 yd. of cable weighed 3 tons.

The cable was removed from the drums with the aid of cable sledges and a lorry. The four lengths were laid out side by side along the road heading from the landing point. On the day chosen for the laying the estuary cleared of water at 11:30 hours. Placing of the cable in position was done by 400 military personnel, 100 to each 240 yd. length of cable. Each party picked up the cable allocated to it and proceed to the appropriate position in the estuary. The cable was carried on the men's shoulders, each man bearing a dead weight of about 40 lb. All the cable was in position by 12:45 hours.

Stages whose platforms were clear of water were erected in the estuary prior to the placing of the cable in position. On these stages the joints and splices of the cable were made. The cable was lowered off the stages after overall tests and the splices completed on the shore. The cable was then removed from the stages and the cable to be berying itself with the action of the tides.

Case II.

P.C.G.T. cable made and armoured in 360 yd. lengths was transported by road to a specially prepared site, and laid in a single journey. Each drum of 360 yd. of cable weighed 3 tons.

The cable was laid in two lengths—one of 200 yd. and the other of 750 yd. Both lengths were floated into position. The laying was done by hand. The drum was laid by 10 yd. rolls and spool spaced at 9 ft. intervals along the cable. The 250 yd. length was dragged over the side of a pail with the oil drums attached and then towed into position by two motor-boats, one stern, the other bow. The boats were powered by 25 H.P. petrol engines.

The three 250 yd. lengths making up the second cable were floated out on the forefront and jettied at a point before launching. This cable was floated into position by hauling on the leading end with 4 ft. lines attached to a farm tractor on the opposite shore. The oil drums, 9 in. in number, were transported from the cable end by two boats, each with a cable shackle attached to its bow through which the cable was made to pass. The joint between the 250 yd. and 750 yd. length was on a temporary clear of water at all except the highest tides. S. J. M.
**Notes and Comments**

**Roll of Honour**

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department —

**While serving with the Armed Forces, including Home Guard**

- Aberdeen Telephone Area: Unestablished Skilled Workman
- Belfast Telephone Area: Unestablished Skilled Workman
- Birmingham Telephone Area: Unestablished Draughtsman
- Coventry Telephone Area: Unestablished Skilled Workman
- Dundee Telephone Area: Unestablished Skilled Workman
- Edinburgh Telephone Area: Unestablished Skilled Workman
- Engineer-in-Chief's Office: Unestablished Skilled Workman
- Engineer-in-Chief's Office: Inspector
- Lincolnshire Telephone Area: Unestablished Skilled Workman
- London Telecommunications Region: Unestablished Skilled Workman
- London Telecommunications Region: Skilled Workman, Class II
- London Telecommunications Region: Skilled Workman, Class II
- London Telecommunications Region: Labourer
- London Telecommunications Region: Labourer
- London Telecommunications Region: Labourer
- London Telecommunications Region: Labourer
- London Telecommunications Region: Labourer
- London Telecommunications Region: Labourer
- London Telecommunications Region: Labourer
- Manchester Telephone Area: Unestablished Skilled Workman
- Norwich Telephone Area: Unestablished Skilled Workman
- Reading Telephone Area: Unestablished Skilled Workman
- Scotland West Telephone Area: Unestablished Skilled Workman
- Sheffield Telephone Area: Skilled Workman, Class II

**Recent Awards**

The Board of Editors has learnt with great pleasure that the following members of the Engineering Department have been honoured for the Services they have rendered to their country:

- Bournemouth Telephone Area: Sergeant, R.A.S.C.
- Glasgow Telephone Area: Sergeant, R.A.F.V.R.
- London Postal Region: Sergeant-Pilot, R.A.F.
- Plymouth Telephone Area: Sergeant-Pilot, Home Guard

**New Year Honours**

The Board of Editors offer its congratulations to the following members of the Engineering Staff whom His Majesty the King has been graciously pleased to honour in the New Year's Honours List:

- Mr. L. H. Hayward, Assistant Engineer, Regional Director's Office, Bristol.
- Mr. J. Blantyre, Inspector, Wemyssfield, Kirkcaldy.
- Mr. W. F. Perrin, Inspector, Engineer-in-Chief's Office (R.)

**Regional Notes**

**London Telecommunications Region**

**REMOVAL OF A P.M.B.N.**

The 12-position C.B. No. 9 P.M.B.N. switchboard at the Gramophone Co.'s factory, Hayes, was removed early this year to a larger switchroom. Adoption of the normal method of duplicating the installation was not possible on account of the small room, and it was decided to transfer the switchboard as it stood, during a week-end.

Preliminary work included the erection of a new main frame, termination of feed cables and running of switchboard cables from the frame ready for soldering to the switchboard jacks. A temporary 2-position switchboard was installed to give service to 100 of the total of 800 extensions whilst the main suite was out of use.

The switchboard was released at 3:30 p.m. on Friday, and the work of dismantling the sections was begun immediately. When the incoming cables and inter-connection wires had been disconnected, the multiple was removed from the sections, which were then conveyed to the switchboard room for soldering to the switchboard jacks. A temporary 2-position switchboard was installed to give service to 100 of the total of 800 extensions whilst the main suite was out of use.

The switchboard was released at 3:30 p.m. on Friday, and the work of dismantling the sections was begun immediately. When the incoming cables and inter-connection wires had been disconnected, the multiple was removed from the sections, which were then conveyed about 100 yd. to the new switchroom and lined up in position. The multiple which, meanwhile, had been carefully examined, was replaced in the switchboard and reconnected. Full service was restored at 2 p.m. on Sunday.

The success of this unusual operation reflects considerable credit on the staff employed, and it is to this Company's staff, who undertook the conveyance and lining up of the sections in addition to structural work, that credit is due.

W.T.
1942 July

Notes and Comments

Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:

**While serving with the Armed Forces, including Home Guard**

- Aberdonian Telephone Area... Buchanan, E. D. ... Unestablished Skilled Workman
- Blackburn Telephone Area... Hall, I. ... Unestablished Skilled Workman
- Brighton Telephone Area... Hodgson, H. B. ... Unestablished Skilled Workman
- Cambridge Telephone Area... Webb-Jones, J. ... Unestablished Skilled Workman
- Canterbury Telephone Area... Upton, A. J. ... Unestablished Skilled Workman
- Cardiff Telephone Area... Hall, R. ... Unestablished Skilled Workman
- Cardiff Telephone Area... McLarty, R. S. A. ... Unestablished Skilled Workman
- Engineer-in-Chief’s Office... Minks, M. F. ... Unestablished Skilled Workman
- Engineer-in-Chief’s Office... Fantham, F. T. ... Unestablished Draughtsman
- Engineering Dept. (M.T)... Walker, J. T. ... Mechanic
- Engineering Dept., Test Section... Moore, J. A. ... Unestablished Skilled Workman
- Glasgow Telephone Area... Flowerdew, S. R. ... Unestablished Skilled Workman
- Glasgow Telephone Area... Girvan, N. ... Unestablished Skilled Workman

**While serving with the Civil Defence Forces or on Post Office Duty**

- H.M.C.S... Borthwick, G. ... Chief Engineer

**Recent Awards**

The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:

- While serving with the Armed Forces including Home Guard
  - Oxford Telephone Area... Dalston, W. J. ... Unestablished Skilled Workman
  - Plymouth Telephone Area... Lobb, S. H. ... Unestablished Skilled Workman
  - Liverpool Telephone Area... Ward, J. ... Unestablished Skilled Workman

- While serving with the Royal Air Force
  - Sergeant Pilot, Royal Air Force... Distinguished Flying Medal
  - Lance Corporal, Royal Corps of Signals... Mentioned in Despatches

- While serving with the Royal Navy
  - Able Seaman, Royal Navy... Mathematician
  - Able Seaman, Royal Navy... Engineer

- While serving with the Royal Corps of Signals
  - Signalman, Royal Corps of Signals... Military Medal
Layout of Oscillator

The general layout of the oscillator follows the same lines as that of the Ryall-Sullivan oscillator and the same chassis is used. Fig. 5 shows the front view with the controls exposed; the positions of the various controls being indicated. The main tuning coils are in the bottom section exactly as in the low-frequency oscillator.

The high frequency amplifiers and modulator are mounted in the middle section to the right of the tuning condenser, as shown in Fig. 6, which is a half-rear view. The low-frequency amplifier and power smoothing circuits are mounted in the top section.

The output is to a coaxial jack, and a similar jack is used for the multivibrator input.

Power Consumption

The valve heaters are arranged in two circuits across the 24 V supply. These consume 1.0 and 1.5 A respectively or 2.5 A total. The anode consumption is 160 mA at 130 V.

Conclusion

The oscillator described covers the basic carrier group (60-108 kc/s) and the frequency range likely to be transmitted over multi-pair cable. It is thus very suitable for use in the laboratory and in the testing and servicing of crystal filters. The precision and stability are adequate for most purposes, comparing favourably with other available oscillators.

Notes and Comments

Roll of Honour

The Board of Editors deeply regret to have to record the deaths of the following members of the Engineering Department:

While serving with the Armored Forces, including Home Guard
Aberdeen Telephone Area... Buchanan, E. D. ... Skilled Workman, Class II ... Signalman, Royal Navy
Brighton Telephone Area... Hodgson, B. H. ... Unestablished Skilled Workman... Temp. Sub-Lieutenant, Royal Navy
Cambridge Telephone Area Webb-Jones, J. ... Unestablished Skilled Workman... 2nd Lieutenant, Royal Corps of Signals
Canterbury Telephone Area Upton, A. J. ... Unestablished Skilled Workman... Private, Royal West Kent Regiment
Cardiff Telephone Area ... Hall, R. A. ... Unestablished Skilled Workman... Sergeant, Royal Regiment
Cardiff Telephone Area ... McLeave, R. S. A. ... Unestablished Skilled Workman... Sergeant Air Gunner, Royal Air Force
Cardiff Telephone Area... Minks, M. F. ... Unestablished Skilled Workman... Corporal, Queen's Bays
Farnham, F. T. ... Unestablished Draughtsman... Ordinary Seaman, Royal Navy
Engineering Dept. (M.T.) Walker, J. T. ... Mechanic ... ... ... ... Captain, Indian Army Ordnance Corps
Engineering Dept. Test Section Moore, J. A. ... Unestablished Skilled Workman... Acting Leading Seaman, Royal Navy
Glasgow Telephone Area... Flowerdew, S. R. ... Unestablished Skilled Workman... Private, Black Watch
Glasgow Telephone Area Girvan, N. ... Labourer ... ... ... ... Private, Royal Army Service Corps

Recent Awards

The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:

While serving with the Armored Forces including Home Guard
Oxford Telephone Area... Dalton, W. J. ... Unestablished Skilled Workman... Private, Hampden Regiment
Plymouth Telephone Area... Lobb, S. H. ... Unestablished Skilled Workman... Sergeant Pilot, Royal Air Force
Liverpool Telephone Area... Ward, J. ... Unestablished Skilled Workman... Signalman, Royal Corps of Signals

1942 July

Guisborough Telephone Area... Appleford, A. E. ... Unestablished Skilled Workman... Sergeant Pilot, Royal Air Force
Leeds Telephone Area... Divine, J. ... Unestablished Skilled Workman... Signalman, Royal Corps of Signals
Leeds Telephone Area ... Driver, F. ... Unestablished Skilled Workman... Driver, Royal Artillery
Leeds Telephone Area ... Ellison, J. A. ... Unestablished Skilled Workman... Private, Royal Air Force Ordnance Corps
Leeds Telephone Area ... Harrison, H. ... Unestablished Skilled Workman... Driver, Royal Corps of Signals
Leeds Telephone Area ... Thompson, J. ... Unestablished Skilled Workman... Able Seaman, Royal Navy
Leicester Telephone Area... Lewis, E. R. G. ... Unestablished Skilled Workman... Able Seaman, Royal Navy
Lincoln Telephone Area ... Griffiths, B. ... Unestablished Skilled Workman... Signalman, Royal Corps of Signals
London Postal Region ... Collier, W. J. De C... Skilled Workman, Class II... Sergeant, Royal Air Force Ordnance Corps
London Telecommunications Region ... Fieldman, C. R. ... Skilled Workman, Class II... Driver, Royal Corps of Signals
London Telecommunications Region Holmes, A. J. ... Unestablished Skilled Workman... Able Seaman, Royal Navy
London Telecommunications Region Jordan, H. F. ... Unestablished Skilled Workman... Signalman, Royal Corps of Signals
London Telecommunications Region Mills, F. E. ... Unestablished Skilled Workman... Able Seaman, Royal Navy
London Telecommunications Region Ord, R. W. E. ... Labourer ... ... ... ... Ordinary Seaman, Royal Navy
London Telecommunications Region Treanor, J. ... Unestablished Skilled Workman... Leading Seaman, Royal Navy
London Telecommunications Region Owen, G. E. ... Unestablished Skilled Workman... Sergeant, Royal Air Force Ordnance Corps
London Telecommunications Region Reid, J. W. ... Unestablished Skilled Workman... Chief Petty Officer, Royal Navy
London Telecommunications Region White, W. G. ... Labourer ... ... ... ... Able Seaman, Royal Navy
Newcastle-on-Tyne Telephone Area... Coutts, L. G. ... Unestablished Skilled Workman... Signalman, Royal Corps of Signals
Newcastle-on-Tyne Telephone Area... Lunan, T. ... Unestablished Skilled Workman... Private, Durham Light Infantry
Newcastle-on-Tyne Telephone Area... Nairn, J. K. ... Unestablished Skilled Workman... Signalman, Royal Corps of Signals
Newcastle-on-Tyne Telephone Area... Nicholson, A. C. ... Unestablished Skilled Workman... Gunner, Royal Artillery
Newcastle-on-Tyne Telephone Area... Renton, J. F. ... Unestablished Skilled Workman... Private, King's Own Scottish Borderers
Newcastle-on-Tyne Telephone Area... Smith, M. ... Unestablished Skilled Workman... Corporal, Royal Air Force
Newcastle-on-Tyne Telephone Area... Thompson, C. W. B. ... Skilled Workman, Class II... Chief Engineer

While serving with the Civil Defence Forces or on Post Office Duty
H.M.C.S. 'Borthwick, G. ... Chief Engineer
H.M.C.S. ... ... ... ... Borthwick, G. ... Chief Engineer

While serving with the Armed Forces including Home Guard
Ordinary Seaman, Royal Corps of Signals
Chief Petty Officer, Royal Navy
Chief Engineer
H.M.C.S. 'Borthwick, G. ... Chief Engineer
H.M.C.S. ... ... ... ... Borthwick, G. ... Chief Engineer

Distinguished Flying Medal
Military Medal
Mentioned in dispatches
Key Mounting.

A more elaborate mounting is shown in Fig. 4. This is an improvised box type mounting for a single key (Key Mounting NAA). The construction is straightforward, but care must be taken with detail B2. The two holes for fixing are shown offset from the centre line by \( \frac{1}{4} \) in.; this is essential to prevent the key binding in the slot and presents no difficulty if a piece of packing \( \frac{1}{4} \) in. thick is inserted in the foot.

The bottom can be either soldered into position or a piece of thin wood cut and fixed with panel pins. Two small angle brackets bolted to the sides form a ready means of holding cover in position. In practice it will be found that a tinplate cover will be more serviceable and easier to make than the wood case which is usually attempted. For this and other key mountings used with the key handle in a vertical position a fibre dust cap can be cut and inserted between the key and key plates. The fixing holes are punched with the tool and the slot cut by punching holes at the ends with a bolt punch, then cutting along the lines with a sharp wood chisel.

Measurements.

Accuracy in measurements is essential. A folding rule and pencil are not the tools for this work. Use an engineer’s foot steel rule (not folding), an engineer’s square, dividers and scriber. Perhaps the correct method of marking out a master copy of detail B for the key mounting will illustrate the point. First select a clean straight piece of flat strip; rub over the face to be marked lightly with 00 emery cloth that is free from grease; get three pennyworths of sulphate of copper from the chemists (ask for large crystals), moisten one of the crystals and gently rub over the face of the strip; a thin face of pure copper is deposited on the metal (do not try to get a thick coat or it will be patchy) the centre line is then drawn down the complete length; obtain centre of length; mark \( \frac{1}{4} \) in. each side by means of the dividers and using the square cut a thin, deep line across the face with the scriber.

Conclusion.

The mountings illustrated in this article are but two of a number which the author has constructed. The use of the Juneero angle and strip, and of fibre such as that used for spacing cards at maintenance control centres, offers a wide scope in meeting miscellaneous requirements, the limit being set only by the ingenuity of the operator using the tool.

Notes and Comments

Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department —

While serving with the Armed Forces, including Home Guard

Belfast Telephone Area Bryson, M. R. Unestablished Skilled Workman

Birmingham Telephone Area Gardiner, S. W. Unestablished Skilled Workman

London Telecommunications Region Clasmar, G. H. Unestablished Skilled Workman

London Telecommunications Region Kileon, A. Labourer

Newcastle Telephone Area Allan, M. Unestablished Skilled Workman

Oxford Telephone Area Weeks, F. C. Unestablished Skilled Workman

Scotland West Telephone Area Anderson, T. Unestablished Skilled Workman

Recent Awards

The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:

While serving with the Armed Forces, including Home Guard

Bournemouth Telephone Area Pettifer, R. R. Skilled Workman, Class II

Liverpool Telephone Area Hewson, E. Inspector

While serving with the Civil Defence Forces or on Post Office Duty

Canterbury Telephone Area Harrison, L. H. Skilled Workman Class II

York Telephone Area Fox, E. M. Unestablished Skilled Workman

York Telephone Area Holder, J. H. Unestablished Skilled Workman

Birthday Honours

The Board of Editors offers its congratulations to the following members of the Engineering Staff whom His Majesty the King has been graciously pleased to honour in the Birthday Honours List —

On loan to Ministry of.

Gloucester Telephone Area Stiff, A. J. Skilled Workman, Class II

London Telecommunications Region Allen, G. J. Labourer

London Telecommunications Region Kileon, A. Labourer

London Telecommunications Region Marchant, G. W. Unestablished Skilled Workman

London Telecommunications Region Russell, A. D. Unestablished Skilled Workman

London Telecommunications Region Walter, R. J. Unestablished Skilled Workman

London Telecommunications Region Allan, M. Unestablished Skilled Workman

London Telecommunications Region Weeks, F. C. Unestablished Skilled Workman

London Telecommunications Region Anderson, T. Unestablished Skilled Workman

On loan to Ministry of

England

1942 October
with the machine running slowly the disc is lowered on to the pipe by the hand feed. When the disc touches the pipe the air valve is opened fully and the disc lowered until a cut has been made through the thickness of the metal of the pipe. In this operation, the hand feed may be turned quite quickly as the cutting speed of the disc is high, penetration of the pipe being made in a few seconds.

The machine is then gently pushed along the pipe. Great pressure is not required, although it is advantageous to hold the machine down on the pipe. In this way a cut is made along the pipe. As the end is reached the front wheels of the carrier pass beyond the end of the pipe and the weight of the machine is carried on the centre and rear wheels so that the cut can be made to the end of the pipe without the dropping which was liable to occur with the earlier four-wheeled carriers. Care must be exercised as the end of the slot is cut, as some pipes have a tendency to spring either open or closed when this point is reached, and disc breakage may occur.

The machine is lifted off the pipe, turned to face the opposite direction and replaced on the pipe near the starting point of the cut. These operations are repeated for the few remaining inches of cut between the beginning of the slot and the other end of the pipe.

Observations.

The advantages of the pneumatic machine over the electric machines at present in use include the following:

1. Universal availability, as the machine can be driven from a mobile compressor or from a factory compressed air installation.
2. Complete independence of electricity supply enables the machine to be brought into use quickly without the need of co-operation from other undertakers or of portable petrol electric generators.
3. Superior performance owing to greater power of the motor.
4. Greater robustness of compressed air motor as compared with the electric motor. The pneumatic machine is not damaged if the motor is stalled or run in an overloaded condition for any length of time.

Some performance figures of the new machine may be of interest. The following figures obtained under experimental conditions are probably better than those which will be obtained in practice. Even so, it is not thought that an expectation of one foot of cut per minute is unduly optimistic.

Length of cut . . 15 in.

Time . . . . . . . 40 sec.

In view of the speed of cut, the question arises whether it is still economical to force the pipes open in the way described in the previous article where they can be revolved on the cables. In cutting a pipe, say 1 yard in length, the time taken to make the cut would be approximately three minutes, so that two cuts could be made in about eight minutes (allowing time for setting up) and the pipe removed in two halves. The time required to force open one yard of pipe is approximately thirty minutes and it would appear, therefore, that this operation could be dispensed with except where the pipe has been flattened and forcing open is unavoidable.

A provisional patent specification has been filed in respect of the machine.

Acknowledgments.

It is desired to acknowledge the assistance given by the members of the Engineering Department who have co-operated in the development of the machine.

Messrs. Rose & Howard, who made up and modified the various machines and carriers.

Messrs. Holman Bros., Ltd., who recommended and supplied suitable power units and pneumatic fittings for the machines.

The Carburetted Co., Ltd., and The Universal Grinding Wire Co., Ltd., who supplied various abrasive discs for trial purposes.

The Renold & Coventry Chain Co., Ltd., who recommended and supplied a suitable type of chain for the machine, and Mr. G. Nash.

Book Review—Continued from page 125.

138

Summary of the Book

A book on telephony complete without reference to the Director system. Non-Director circuits and trunking arrangements are dealt with in 23 pages, and presumably an outline of Director working could have been covered in a similar space, i.e. less than the number of pages devoted to batteries. Also the 2,000 type of separate cables for go and return channels must be provided in each pair, the use of carrier systems, submarine cables and transmission standards.

Minor points of criticism of this section include the treatment of crosstalk purely from the electromagnetic viewpoint (Fig. 280), lettering faults on Figs. 296 and 299, the description of carrier systems now almost obsolete, and the statement that "when more than two or three carrier pairs are required in each pair, the use of separate cables for go and return channels must be considered." The book does not attempt to cover radio telephony or external plant construction.

It is hoped that the 9th edition will see a general cleaning-up of those minor points which detract somewhat from what is otherwise an excellent book. The book includes basic principles throughout and avoids the temptation to go into lengthy details—particularly with regard to circuit descriptions—the authors have produced a very readable book which is well worth a place on every telephone engineer’s bookshelf.

H. L.
Notes and Comments

1943 April

Recent Awards.

The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:

While serving with the Armad Forces, including Home Guard

Edinburgh Telephone Area ... Campbell, A. B. Unestablished Trooper, Hussars Flight Sergeant, Royal Air Force

Engineering Department ... Bartram, W. Motor Cleaner Stoker Petty Officer, Royal Navy

Engineering Department ... Beecher, A. F. Motor Mechanic Flight Lieutenant, Royal Air Force

Glasgow Telephone Area ... Kennedy, A. Unestablished Signalman, Royal Corps of Signals Captain, Home Guard

London Telecommunications Region ... Sears, H. F. Unestablished Skilled Workman, Class I Member of the Order of the British Empire

London Telecommunications Region ... Turpin, F. W. Skilled Workman, Class I Leading Seaman, Royal Navy

Portsmouth Telephone Area ... Makin, W. E. D. Skilled Workman, Class II Pilot Officer, Royal Air Force

Reading Telephone Area ... Hillyard, E. G. Unestablished Telegraphist, Royal Air Force

Southend Telephone Area ... Honesy, E. H. Unestablished Skilled Workman, Royal Navy

New Year Honours List.

The Board of Editors offers its sincere congratulations to the following members of the Engineering Staff who have been honoured by the King in the New Year's Honours List:

Guildford Telephone Area ... Perkins, B. H. Chief Inspector Member of the Order of the British Empire

London Telecommunications Region ... Aldrich, L. E. Cable Joiner British Empire Medal

Portsmouth Telephone Area ... Lorrfus, J. Royal Navy Medal Class I British Empire Medal

London Telecommunications Region ... Hornsby, G. Aviation Officer, Royal Air Force British Empire Medal Class I British Empire Medal

Southend Telephone Area ... Hamblett, R. Skilled Workman, Royal Navy British Empire Medal Class I British Empire Medal

Regional Notes

Home Counties Region

The photograph below is of the Spitfire provided by voluntary contributions from the Staff of the Home Counties Region. All ranks of the Engineering, Clerical and Postal staffs, totalling approximately 35,000, have played their part in providing this fighter, a "striking" example of their devotion to the National cause and determination to assist in the attainment of final victory. We wish the Home Counties Region every success, and may all who fly in her help in retaining the supremacy of the air so magnificently won in the Battle of Britain and other superb battles achievements.

PIPE LAYING BY MOLE-DRAINER

An interesting development in the use of the mole-drainer recently tried in the Home Counties Region is the laying of metal water-pipes. The mole-drainer used was a proprietary model adapted for cable laying by local Post Office engineering staff, and towed by a D.4 army type tractor. The trial was undertaken by military personnel under the advice of Post Office engineers.

The subsoil in which the experiment was carried out consisted of loam overlaying chalk containing varying proportions of flints. There was a fall of approximately 1 ft. in 60 ft., and work was carried out down hill in all cases. The total length of pipe-line laid was 6,000 ft. at a depth of 2 ft. The route was situated carefully to avoid irregularities of surface. The pipe used was 1¼ in. internal diameter screwed water barrel in standard lengths of 18 ft. The sketch depicts how the mole-plough was modified and adapted to pull in the pipes.

To start the mole-plough at the correct level a trench was excavated to a length of 20 ft.; later results indi-
**Book Review**


This book is the first edition of a second volume in the publisher's series of monographs on electrical engineering and the author is the general editor of the series. The book begins by dealing shortly with the parallel operation of D.C. generators and at greater length with A.C. machines; this is followed in the second chapter by the voltage control of A.C. generators covering exciter and generator instabilities and methods of automatic voltage control. The last subject is continued in the next chapter in which the Brown Boveri, Metropolitan Vickers, carbon pile and automatic voltage regulators are dealt with in detail. Chapter 4 deals with automatic synchronizing of A.C. generators, two methods being described in detail. The fifth chapter discusses the short-circuit capacity of A.C. generators and short-circuit currents, following on to the use of reactors: types of reactors are described briefly and their installation in generator and feeder circuits and between busbar sections is dealt with. Vector diagrams are used freely here and throughout the book. A chapter on circuit breakers follows next and after some notes on arc extinction, some types of oil circuit breakers are described. The air blast circuit breaker, a type which has been developed to a considerable extent abroad and in which greater interest is now being taken in this country, is mentioned briefly, as are H.R.C. fuses. Power station switch gear arrangements, sectioning busbars and the calculation of short-circuit current for several specific systems assuming symmetrical three-phase short-circuits are also dealt with. Chapters 8 and 9 deal respectively with the inter-connection of power stations and with the apparatus for inter-connector control including the conditions for transfer of load between stations, voltage control by tap changing, static boosters and induction regulators. The last chapter describes methods of automatic supervisory control and of remote metering permitting control over a system to be exercised from one central point; in this the unsized operator plays a considerable part.

The aim of this series is the presentation of the up-to-date outlook on each subject, condensed into a volume of moderate size. In doing this the author of the present volume has drawn upon I.E.E. papers, information furnished to him by manufacturers and other sources and the present volume shows that he has exercised the wisdom and judgment in the choice of material that the successful attainment of this aim requires. The book is an excellent summary of the present position in this branch of electrical engineering and should be of value both to engineers actually engaged in it and to others who wish to keep space of modern practice and, as might be expected from its author, it is written in a style that makes it very suitable for students. Its mathematics do not go beyond simple calculus and its production is excellent.

**Notes and Comments**

**Roll of Honour.**

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:

**While serving with the Armed Forces, including Home Guard**

- Bournemouth Telephone
  - Coles, S. A.
  - Skilled Workman, Class II
- Bradford Telephone Area
  - Kidwell, J. A.
  - Unestablished Skilled Workman
- Brighton Telephone Area
  - Barrett, C. R.
  - Draughtsman, Class II
- Brighton Telephone Area
  - Redford, L. H.
  - Unestablished Skilled Workman
- Brighton Telephone Area
  - Temple, R.
  - Unestablished Skilled Workman
- Cambridge Telephone Area
  - Jenkinson, L.
  - Unestablished Skilled Workman
- Edinburgh Telephone Area
  - Murdoch, W.
  - Skilled Workman, Class II
- Engineering Department
  - Franklin, G.
  - Assistant Engineer
- Engineering Department
  - Hasting, C. P.
  - Motor Cleaner
- Engineering Department
  - Maynard, G. E.
  - Unestablished Skilled Workman
- Engineering Department
  - McHugh, S.
  - Skilled Workman, Class I
- Engineering Department
  - Plant, F. S., M.
  - Motor Mechanic
- Exeter Telephone Area
  - Strong, R. A.
  - Skilled Workman, Class II
- Gloucester Telephone Area
  - Hatfield, G.
  - Unestablished Skilled Workman
- Gloucester Telephone Area
  - Kirton, J. E. W.
  - Unestablished Skilled Workman
- Gloucester Telephone Area
  - Talbot, W. A. J.
  - Unestablished Skilled Workman
- Lancaster Telephone Area
  - Higgins, A.
  - Skilled Workman, Class II
- Leeds Telephone Area
  - Marshall, L. D.
  - Skilled Workman, Class II
- Liverpool Telephone Area
  - Good, C. A.
  - Skilled Workman, Class II
- Liverpool Telephone Area
  - Hulme, R.
  - Inspector
- Liverpool Telephone Area
  - Irwin, W. G.
  - Unestablished Skilled Workman
- Liverpool Telephone Area
  - Lunt, J. J.
  - Inspector
- London Postal Region
  - Burke, J.
  - Skilled Workman, Class I
- London Telegraphic Region
  - Bailey, N. F.
  - Skilled Workman, Class II
- London Telegraphic Region
  - Baker, F. J.
  - Labourer
- London Telegraphic Region
  - Burridge, T.
  - Unestablished Skilled Workman
- London Telegraphic Region
  - Cornish, F. D.
  - Unestablished Skilled Workman
- London Telegraphic Region
  - Cox, W. A.
  - Skilled Workman, Class II
- London Telegraphic Region
  - Doughty, A. W.
  - Unestablished Draughtsman
- London Telegraphic Region
  - Freeland, W. G.
  - Labourer

**1943 July**
1943 July

London Telecommunications Region
Greengrass, L. C. ... Labourer... ... ... Private, Norfolk Regiment
London Telecommunications Region
Hedstock, A. L. ... Skilled Workman, Class II ... Private, Home Guard
London Telecommunications Region
Hankins, C. A. ... Labourer... ... ... Stoker, Class I, Royal Navy
London Telecommunications Region
Horner, R. W. ... Unestablished Skilled Workman ... Gunner, Royal Artillery
London Telecommunications Region
Hyland, N. A. ... Skilled Workman, Class II ... Sergeant, Royal Electrical and Mechanical Engineers
London Telecommunications Region
Lever, M. ... Unestablished Skilled Workman ... Sergeant, Royal Air Force
London Telecommunications Region
Lines, G. C. ... Skilled Workman, Class II ... Signalman, Royal Corps of Signals
London Telecommunications Region
Orridge, G. W. ... Labourer... ... ... Private, King's Own Scottish Borderers
London Telecommunications Region
Swellenhurst, R. Y. ... Unestablished Skilled Workman ... Lieutenant, Royal Corps of Signals
London Telecommunications Region
Wallington, L. J. ... Unestablished Skilled Workman ... Signalman, Royal Corps of Signals
London Telecommunications Region
Watson, D. M. ... Youth-in-Training ... Leading Aircraftman, Royal Air Force
London Telecommunications Region
White, C. ... Labourer... ... ... Able Seaman, Royal Navy
London Telecommunications Region
Williams, F. W. ... Unestablished Skilled Workman ... A/Sergeant, Royal Corps of Signals
Manchester Telephone Area
Carberry, J. ... Skilled Workman, Class I ... Sergeant, Rifle Brigade
Manchester Telephone Area
Morris, W. ... Unestablished Skilled Workman ... Able Seaman, Royal Navy
Manchester Telephone Area
Stopford, N. G. ... Skilled Workman, Class II ... Sergeant, Royal Air Force
Newcastle-on-Tyne
Doel, S. V. ... Youth-in-Training ... Sergeant, Navigator, Royal Air Force
Telephone Area
Norwich Telephone Area ... Frostick, F. R. W. ... Unestablished Skilled Workman ... Leading Aircraftman, Royal Air Force
Norwich Telephone Area ... Grant, C. C. ... Labourer ... Driver, Royal Army Service Corps
P.O. (London) Railway ... Cowan, H. ... Labourer ... Clerical, Royal Northumberland Fusiliers
Sheffield Telephone Area ... Boardman, C. ... Unestablished Skilled Workman ... Signalman, Royal Corps of Signals
Sheffield Telephone Area ... Goodhand, H. H. ... Skilled Workman, Class II ... Signalman, Royal Corps of Signals
Shrewsbury Telephone Area ... Russell, D. H. ... Inspector ... Signalman, Royal Corps of Signals
Southampton Telephone Jones, T. G. ... Labourer ... Leading Naval Airman, Fleet Air Arm

Recent Awards.
The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:

While serving with the Armed Forces, including Home Guard
Birmingham Telephone Area
Beard, D. R. ... Skilled Workman, Class II ... Flight Sergeant, Royal Distinguished Flying Medal
Engineering Department ... Plant, F. S. ... Motor Mechanic ... P/A Sergeant, Royal Military Medal
Leicester Telephone Area ... Harris, S. H. ... Unestablished ... Able Seaman, Royal in

Birthday Honours.
The Board of Editors offers its congratulations to the following members of the Engineering Department who have been honoured by H.M. the King in the recent Birthday Honours List:

Mr. P. J. Ridd ... Deputy Engineer-in-Chief ... Commander of the Order of the British Empire
Mr. T. H. Flowers ... Executive Engineer, Engineering Department ... Member of the Order of the British Empire
Mr. S. A. Hobbs ... Skilled Workman, Class I, Bristol ... British Empire Medal
Mr. H. Miller ... Inspector, Lincoln ... British Empire Medal

Colonel N. F. CAVE-BROWNE-CAVE.

Post Office Engineers throughout the country will learn with regret of the death of Col. N. F. Cave-Browne-Cave at the age of 58.

Malvern College; Birmingham University; Staf- ford; Napier University; and London University Engineering Sections.

Foreign service with the Royal Engineers (Signals); mentioned in despatches; Birmingham Test Branch; Eastern Engineering District; American Commission; Telecommunications Investigation Group; and lastly—Deputy Regional Director, Home Counties Region and Zone Commander, Post Office Home Guard, is the outline of Cave’s lifetime of energetic and devoted service.

As chairman of numerous Engineering Head- quarters Committees—which he handled with a rare combination of tact, patience and good humour—he showed a thorough grasp of fundamentals whilst his original thinking was an inspiration to his colleagues. In the field of training was unshakable. His capacity for digesting and digesting statistics enabled him to detect weaknesses in management with an accuracy little short of wizardry—weaknesses which he would pursue with a tenacity aptly phrased in the family motto, "Cave."

Regional Notes

Home Counties Region

IN THE FRONT LINE

No doubt many of the Female Engineering Assistants now employed on P.O. Engineering work are familiar with the skill of the female bomb and machine gunners as they go about their daily work, but it is hoped that the experience that these women possessed as engineers in the Portsmouth Area will not become too common.

That F.E.A. in company with a S.W.2 fighter, had been installing some apparatus in a "secret" establishment situated on the outskirts of a much-bombed small coastal town, and were returning over a cliff road in a small P.O.Van. As motorists will appreciate, they did not realize that an "alert" was on as they travelled along, and the first intimation they had of "imminent danger" was a swooping attack by a fast raiding plane, firing cannon shells at their vehicle. The vehicle was struck repeatedly and soon the S.W.2 fighter, who was driving, was struck in the shoulder by one of these substantial missiles, losing control of the van, which was overturned. Fortunately, assistance was available, and the fitter and his assistant were extricated, the former obviously badly hurt and unconscious.

The funeral was attended by the F.E.A. of the command and the officers of the Portsmouth Area, and the occasion was marked by a very impressive service in the church. That was our first time we had to work in this area, and we were well pleased and proud to read this short account of a very praiseworthy action.

A VETERAN EXCHANGE

On the 16th April, 1916, when the last Great War was settling down to the stalemate on the Western Front, and November 11th, 1918, with its glorious climax was still hardly visualised by even the most "wishful" thinkers, Portsmouth telephone exchange was opened for service. Little did any of the staff at that time (and two or three venerable gentlemen are still serving in the same installation), imagine that the same installation, with certain additions and modifications, would be working during an ever greater world catastrophe twenty-seven years later.

The installation was one of the first automatic switching systems to be put into service in a large town.
An Improvised Oscillator for Pip-Tone Supply

U.D.C. 621.396.615

An expedient means of generating a 900 c/s pip-tone supply, using a line repeater, an equaliser, and a pair of rectifiers.

Introduction

Fig. 1 shows a recently-developed special service employing pip-tone signals similar to those of the trunk chargeable-time indicator, it was necessary to provide sources of tone at a large number of stations. The requirement at each station was merely a few milliwatts of tone at any frequency between 900 and 1,000 c/s. Among the expedites adopted to obviate the provision of special oscillators is one that may be of general interest, and find other uses. This is termed the “oscillating amplifier,” and is a practical somewhat unusual application of well-known principles.

The arrangement may be set up at any repeater station without modification of either equipment or permanent wiring, and consists of a spare audio 4-wire repeater (or pair of amplifiers) of any type, an equaliser or any other device that can be arranged to provide a resonant circuit of the desired frequency, and a pair of small metal rectifiers.

Principle

The principle of the arrangement is shown schematically in Fig. 1. The U/D amplifier, having its input and output terminals connected together, “sings” at a frequency determined by the resonant circuit L, C. The rectifier-combination MR acts as a voltage-limiting, preventing the oscillation from reaching a level likely to cause crosstalk into neighboring circuits. The tone supply is available at the ouput of the U/D amplifier, which may be adjusted to give any suitable output level.

Fig. 1—Schematic Diagram showing Principles of Operation. Fig. 2 shows a typical practical arrangement, consisting of a Unit Amplifier No. 28A, Equaliser No. 8A and Rectifier-element No. 27A. The equaliser conveniently provides an inductance of 37 mH and capacitance of 974 μF, giving a nominal resonant frequency of 900 c/s. The rectifier-element is of the double type used in operators' telephone circuits for the prevention of acoustic shock, and its effect is to reduce the level of the oscillation generated by the U/D amplifier from about 20 db to 10 db, relative to 1 milliwatt. The input circuit of this type of amplifier being unbalanced, a transformer (No. 48), which may be of any ratio, is provided for each input circuit to prevent possible crosstalk trouble. Another transformer (No. 40) with line windings paralleled is used at the output of the

![Diagram](https://via.placeholder.com/150)

Fig. 2—Typical Arrangement for Improved Oscillator. U/D amplifier to give a nominal output impedance of 75 ohms.

The method of setting up is as follows:

1. Set the U/D amplifier to minimum gain, and the D/U amplifier to about 20 db gain.

2. Listening with a telephone receiver connected to D/U OUT, increase the gain of the U/D amplifier in 1½ db steps until oscillation commences. If tone is not heard before a gain of about 10 db is reached, or if only a very high frequency "singing" is heard, reverse the U/D IN connections as indicated in Fig. 2.

3. Increase the gain of the U/D amplifier 3 steps (4½ db.) beyond the step at which oscillation commenced.

4. Adjust the gain of the D/U amplifier to give +5 db. of 1 milliwatt in a 600Ω decibelmeter connected to the output terminals, i.e. +5 db. "terminated level" at the line side of the output transformer. With this adjustment, the arrangement is approximately equivalent to a source having 1 V internal E.M.F. and 80 Ω impedance.

Although it has not been possible to carry out a comprehensive series of tests, it may be taken that the harmonic content and stability of frequency and amplitude of the output under normal working conditions are entirely satisfactory for such a purpose as pip-tone supply.

Notes and Comments

Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:

**1943 October**

<table>
<thead>
<tr>
<th>Region</th>
<th>Name</th>
<th>Rank</th>
<th>Years of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>London Telecommunications</td>
<td>Boddie, C. C.</td>
<td>Unestablished Skilled Workman</td>
<td>2 years</td>
</tr>
<tr>
<td>London Telecommunications</td>
<td>Burden, R. E.</td>
<td>Unestablished Skilled Workman</td>
<td>1 year</td>
</tr>
<tr>
<td>London Telecommunications</td>
<td>Cornish, C. H.</td>
<td>Unestablished Skilled Workman</td>
<td>3 years</td>
</tr>
<tr>
<td>London Telecommunications</td>
<td>Dalton, T.</td>
<td>Unestablished Skilled Workman</td>
<td>4 years</td>
</tr>
<tr>
<td>London Telecommunications</td>
<td>Davy, H.</td>
<td>Unestablished Skilled Workman</td>
<td>5 years</td>
</tr>
<tr>
<td>London Telecommunications</td>
<td>Fransham, A. J.</td>
<td>Unestablished Skilled Workman</td>
<td>6 years</td>
</tr>
<tr>
<td>London Telecommunications</td>
<td>Harris, F.</td>
<td>Unestablished Skilled Workman</td>
<td>7 years</td>
</tr>
<tr>
<td>London Telecommunications</td>
<td>Hunt, H. J.</td>
<td>Unestablished Skilled Workman</td>
<td>8 years</td>
</tr>
<tr>
<td>London Telecommunications</td>
<td>Joel, D. C.</td>
<td>Unestablished Skilled Workman</td>
<td>9 years</td>
</tr>
<tr>
<td>London Telecommunications</td>
<td>Kelly, P.</td>
<td>Unestablished Skilled Workman</td>
<td>10 years</td>
</tr>
<tr>
<td>London Telecommunications</td>
<td>Mason, D. C.</td>
<td>Unestablished Skilled Workman</td>
<td>11 years</td>
</tr>
<tr>
<td>London Telecommunications</td>
<td>Melhuish, J. W.</td>
<td>Unestablished Skilled Workman</td>
<td>12 years</td>
</tr>
<tr>
<td>London Telecommunications</td>
<td>Morrison, D.</td>
<td>Unestablished Skilled Workman</td>
<td>13 years</td>
</tr>
<tr>
<td>London Telecommunications</td>
<td>Munday, H. A.</td>
<td>Unestablished Skilled Workman</td>
<td>14 years</td>
</tr>
<tr>
<td>London Telecommunications</td>
<td>Russell, F. J.</td>
<td>Unestablished Skilled Workman</td>
<td>15 years</td>
</tr>
</tbody>
</table>
1943 October

Newcastle Telephone Area .... Johnson, J. .................. Unestablished Skilled Workman
Newcastle-on-Tyne Tele- .... Eades, A. B. ................. Unestablished Skilled Workman
phone Area ........................................ Unestablished Skilled Workman
Northall Telephone Area .... Rawson, L. V. .................. Skilled Workman, Class II
Oxford Telephone Area ...... Haynes, H. ....................... Skilled Worker, Class II
Oxford Telephone Area ...... Simmons, P. W. .................. Unestablished Skilled Workman
Southland West Telephone Area ......................... Unestablished Skilled Workman
Southland West Telephone Area .... Mackay, A. H. ................ Unestablished Skilled Workman
Shrewsbury Telephone Area .... Allport, P. A. .................... Unestablished Draughtsman
Southampton Telephone Area .... Harris, D. L. .................... Draughtsman, Class II
Southend Telephone Area ...... Potts, G. H. ....................... Skilled Worker, Class II
Tunbridge Wells Telephone Area .... Ellis, R. W. .................... Unestablished Skilled Workman
Tunbridge Wells Telephone Area .... Vinzani, D. R. ............... Skilled Worker, Class II
While serving with the Civil Defence Forces or on Post Office duty 
Brighton Telephone Area ........ Ockendon, L. A. .................. Skilled Workman, Class II
Post Office (London) Railway .... Everett, C. W. .................... Skilled Workman, Class I

Recent Awards:
The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:

While serving with the Armed Forces, including Home Guard

London Telephone Communications

Allendale, S. D. ....................... Unestablished Sergeant, Royal Corps of Signals

Region ............... Unestablished Sergeant, Royal Corps of Signals

Tayler, W. J. ......................... Unestablished Chief Petty Officer, British Empire Medal

London Telephone Communications .... Willis, R. H. .................. Unestablished Pilot Officer, Royal Air Force

Region ............... Unestablished Pilot Officer, Royal Air Force

Yeats, H. J. ......................... Unestablished Flying Officer, Royal Air Force

London Telephone Communications

Region ............... Unestablished Able Seaman, Royal Air Force

Mr. A. R. GIBBON
It is with very great regret that we record the death on 2 May of Mr. A. R. GIBBON which occurred at tragic suddenness at Sohe, Farnham, on 19th January, 1943, in his sixty-ninth year. His death will be shared not only by Mr. GIBBON's former colleagues in the Post Office Engineering Department whom he served so well and long, but by many other officers in the Post Office and in other departments of State. He gave many years of able and devoted service to the Society of Post Office Engineers and as the Society representative on Committees of the Institution of Royal Naval Volunteers. This work was widely known and appreciated but his buoyant and even helpful personality secured him an even wider circle of friends.

Gibbon was interested also in educational subjects, and was a member of the Manchester Telephone Area of the I.P.O.E.E. to which he gave valuable assistance. He was sometime Assistant Editor of this Journal.

IN RECOGNITION of his services to the Institution he was elected Honorary Member in 1935.
The possessor of a fine voice, Gibbon was an ardent lover of music, particularly of choral music, and was for some years Chairman of the Otter Madrigal Society and of the Whitstburn Singers and Players founded by Gustav Holst.

Mr. Gibbon leaves a widow and three daughters, to whom our deepest sympathy is extended.

NEW APPOINTMENTS

We offer our congratulations to Mr. J. H. Watkinson, who succeeds Mr. Harvey Smith as Chief Regional Engineer of the Western Region. Mr. Watkinson needs no introduction to his staff as he has been Regional Engineer at Sheffield since the inception of the Southern Region. Watkinson is a graduate of the University of Manchester and has been a member of the I.P.O.E.E. to which he was elected in 1935.

Regional Notes

Welsh and Border Counties Region

RETIREMENT of MR. HARVEY SMITH

The retirement of Mr. Harvey Smith from the position of Chief Engineer at Shrewsbury at the end of June last was suitably recognised by a presentation from his many friends for the important work he has done in the region. Mr. Harvey Smith has been associated with the Post Office for 34 years and during that time he has been a valuable member of the staff. He has been one of the most efficient engineers the Post Office has at Shrewsbury for many years, and his services have been invaluable. The Post Office is grateful for the work he has done in the region, and he is much regretted by all who have had the pleasure of associating with him.

Mr. Harvey Smith has been associated with the Post Office for 34 years, and during that time he has been one of the most efficient engineers the Post Office has at Shrewsbury for many years, and his services have been invaluable. The Post Office is grateful for the work he has done in the region, and he is much regretted by all who have had the pleasure of associating with him.

North-Eastern Region

DIVERSION OF THE MANCHESTER-SHEFFIELD Railway Line

An extensive and unusual cable diversion, necessitated by the construction of a large reservoir, has just been completed in the Sheffield Telephone Area of the North-Eastern Region.

The reservoir was planned to collect water from three valleys by the construction of a dam which was completed in 1935 and the demolition of two villages to clear the bed of the reservoir. A length of 3,840 yards of new line was added to the existing cable, making it possible to use the new line for the work of the Post Office.

The cable was laid in the middle of the road with the roadway on the other side of the dam. The cable was then laid in the existing cable, making it possible to use the new line for the work of the Post Office.

The cost of the reservoir was £80,000, and the cable was laid in the middle of the road with the roadway on the other side of the dam. The cable was then laid in the existing cable, making it possible to use the new line for the work of the Post Office.

Mr. H. W. Gibbon

GROUN D WATER LOWERING

The Moretrench method of ground water lowering has been described in Vol. XXXV, part 1, April, 1942, of this Journal, and a similar application, the property of Millars Machine Co., Ltd., in Welsh and Border Counties notes, Vol. XXXV, part 3, October, 1942. On account of the difficulties associated with the hire of these appliances complete with pump and operator it was decided to make up a well-point of modified design and use a 1 1/2 H.P. Homonite pump to operate it.

The pipe used in the Moretrench well points is 1 1/2 inches in diameter and is made of vitrified clay pipe. The well points are sunk to a depth of 8 ft. 6 in. and three of the 1 1/2 inch pipes are used to drain the well point. The well water is then collected by a 3,000 gals./hr. and 4,000 gals./hr.

The well points are made of vitrified clay pipe and are sunk to a depth of 8 ft. 6 in. Three of the 1 1/2 inch pipes are used to drain the well point, and the well water is collected by a 3,000 gals./hr. and 4,000 gals./hr. pump.

The results obtained with this new design were encouraging and it is expected that the well points will be used more frequently in the future.
sheath would satisfy the observed values of P.D. between cable sheath and rails, it would not agree with the P.D. between cable sheath and local earth. It is apparent that, if current leaks on to the cable sheath near the terminus and leaks off in the vicinity of the substation, the cable must be negative to earth at the former point and positive to earth at the latter. A potential distribution as indicated by Curve D of Fig. 4 would satisfy the observed values of P.D. between cable and local earth, but would conflict with the observed values of P.D. between cable and rail. Furthermore, for both the suggested potential distributions (Curves C and D in Fig. 4), the P.D. between the ends of the cable sheath would have to be so small that it would require a very large current indeed to account for this drop—a current much larger in fact than would leak away from the tramway track. This confusion arises from the fact that the earth potential is assumed to remain fixed at its normal value, an assumption which would imply the earth to be a perfect conductor, whereas it is the cable sheath, by virtue of its low resistance to earth in those parts outside the influence of the voltage gradient around the rails, which approximates to non-earth potential throughout its length and of which the current leaks off the cable and causes potential. The resistance, its distribution on this basis is shown in Fig. 5.

![Fig. 5: Simplified Representation of Potential Distribution in Tramway System](image)

Some actual results from tests made on a route in Liverpool, which were undertaken to determine the position for insulating gaps in the cable sheaths, are shown in Fig. 6. An accurate determination of the normal earth potential was not made as it was unnecessary for the purpose of the tests at the time. The approximate potential, therefore, has been shown dotted in the diagram. The cable potential approximates to a straight line on the scale of Fig. 6, but actually small variations were observed. The marked variation in the local earth potential is a point worth noticing. This is due largely to the fact that the earth potentials were measured in the manholes of the cable route all of which were not at the same distance from the tramway rails. In a homogeneous earth the decrease in the earth potential as the distance from the rails in a transverse direction increases is similar to the observed with other earth electrodes, and is shown diagrammatically in Fig. 7. Thus, if the earth potential at various points along the track at a constant distance from the rail were measured, it would be the same proportion of the local potential of the rail wherever the test was made, and the earth potential curve would, therefore, have the same shape as the rail potential curve. If, however, the earth potential is measured at varying distances from the rail, the shape of the earth potential curve bears no fixed relation to the rail potential curve. The decrease in earth potential at the distance from the rail increases an important effect upon cables branching from a main cable paralleling the tramway rail. The potential of the branch cable sheath is practically uniform throughout its length and is equal to that of the sheath of the main cable. For this reason, the branch cable sheath will in one place be negative to the surrounding earth and at a point remote from the rail it may be positive to the surrounding earth, which conditions are conducive to current leaking off and off the cable and causing corrosion. To avoid damage due to this cause, it is very practice to fit the sheaths of all cables branching from a route paralleling a tramway track.

**Conclusion.**

It is hoped that this simple presentation of some typical cases of the behaviour of the earth as an indifferent electrical conductor will stimulate interest in a subject which is often more obscure than may be commonly supposed.
Sir Stanley Angwin's I.E.E. Presidential Address

Our readers will have noted with gratification that the Engineer-in-Chief, Col. Sir Stanley Angwin, D.S.O., M.C., has been elected President of the Institution of Electrical Engineers for the current session, 1945-46. Sir Stanley is the sixth Engineer-in-Chief of the Post Office to be elected to this post, which is acknowledged to be the highest form of technical recognition which can be accorded to an electrical engineer.

Sir Stanley delivered his Presidential Address to the Institution on October 7th, 1945, and chose as his subject: "Electrical Communications."

In view of the difficulties attending at the present time, any attempt at a review of current practice, Sir Stanley developed his subject in the form of a survey of the possibilities and developments of tele-communications in the international field, dealing in particular with the subject of International Control and Regulation and its repercussions on post-war developments in this country.

Pointing out that telecommunications more than any other branch of engineering demanded an ever-increasing measure of international regulation and standardisation, Sir Stanley emphasised the work of British engineers in framing the regulations and standards, and the necessity of their playing a full part in work of this kind in the future. He also emphasised the need for this country to keep in advance in the science and to take a lead in research in the field of international communication in the future, if the interests of British trade are to be safeguarded.

After outlining the development and international work of the Post Office in telecommunications commencing with the first International Telegraph Convention of Paris, 1865, down to the present day, and the gradual increase in scope to cover the developments of telephony and radio, Sir Stanley made special reference to the difficult subject of radio frequency allocations—a matter on which he is an acknowledged expert of world wide reputation. Special reference was made to the need for dealing with this problem on a rational engineering basis unhindered by political considerations if the mistakes of the past are to be eliminated or reduced in the future.

The address then proceeded to outline some possible developments in the future. In connection with possible developments in submarine cable telephony, the normal conception of the continents of America and Australia being separated from Europe by vast stretches of ocean is not necessarily correct, and routes exist whereby the longest submarine cable link could be reduced to about 200 miles in each case. In the case of America, this would involve traversing Russia, the Aleutian islands and the Arctic. It is of the highest importance to note in this connection that a telephone route from the United States to Alaska is now being built by the United States Army and 2,500 miles of this, from Edmonton to Fairbanks, has already been opened. The possibilities of the submarine repeater were next discussed and after mention of the proposals contained in Dr. Buckley's Kelvin Lecture before the Institution for deep sea repeaters, Sir Stanley described briefly the work carried out by the Post Office in the design, manufacture and laying of a submarine repeater in the Irish Sea. The repeater consists of a three stage amplifier having an overall gain of 50 db, at 504 kc/s, and is provided with three alternative valves at each stage which can be changed either automatically on a valve failure or deliberately by switching from a distant end of the cable. Power of 0.6 A at 200 V is supplied along the cable from the end remote from that from which rolling is effected. The repeater is housed in a cylindrical steel case with a cast steel end cover containing glands for the "in" and "out" cables. The repeater case has been tested to a pressure of 50 lbs. per sq. in. corresponding to a depth of 270 fathoms; the actual depth at which the repeater is lying is 32 fathoms. The results of this experiment are awaited with a good deal of interest and it is anticipated that with further improvements it should go far to meet the requirement of providing long distance telephony circuits by submarine cable where it has not been possible to do so before.

Passing to the subject of telegraphy the work of standardisation which has already been carried out by the C.C.I.T.T. was outlined and the standardisation of methods which has been achieved in connection with the transmission of photographs over the public services between European countries was cited as an example of such successful international collaboration.

We regret that it is not possible to give a fuller abstract of this interesting address, but no abstract could do full justice to the wealth of material which is to be present at its delivery are recommended to study it in full from the printed proceedings of the I.E.E.

The fact that the address did not deal to any great extent specifically with the work of the Post Office Engineering Department but with matters of a much wider scope in which Post Office engineers have to play their part, endows it with an importance which a mere restricted treatment would have lacked, and at the same time will enhance its interest to telecommunications engineers generally as well as to Post Office readers.

Recent Appointments

We offer our sincere congratulations to Mr. A. J. Gill on his appointment as Deputy Engineer-in-Chief in succession to Mr. P. J. Ridd, who retired from the service on 31st December, 1943; to Mr. R. Watkinson, who succeeds Mr. Gill as Assistant Engineer-in-Chief.

Another appointment which we are pleased to note is that of Mr. L. G. Semple as Deputy Regional Director, North Eastern Region. We offer Mr. Semple our best wishes for continued success in his new sphere.

Sir William Noble

We regret to have to record the death, at the age of 82, of Sir William Noble, who, during the difficult years following the last war, held the post of Engineer-in-Chief to the Post Office. On retiring in 1932, Sir William became a director of the General Electric Company, a post which he held until his death.
Notes and Comments

1944 April

Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:

While serving with the Armed Forces, including Home Guard.

Bedford Telephone Area  Fletcher, J. S.  Skilled Workman, Class I  Sergeant, Royal Air Force
Belfast Telephone Area  Haldane, R.  Labourer  Unestablished Skilled Workman
Birmingham Telephone Area  Martin, C. F.  Skilled Workman, Class II  Sergeant Navigator, Royal Air Force
Birmingham Telephone Area  Shelvington, W. H. A.  Unestablished Skilled Workman  Sergeant, Royal Air Force
Bournemouth Telephone Area  Downey, R. J.  Skilled Workman, Class II  Corporal, Corps of Military Police
Bradford Telephone Area  Lamb, H. J.  Skilled Workman, Class II  Flying Officer, Royal Air Force
Brighton Telephone Area  Collier, A.  Skilled Workman, Class II  Acting Lance Bombarider, Royal Artillery
Brighton Telephone Area  Laker, W. J.  Labourer  Sergeant, Royal Air Force
Brighton Telephone Area  Rudd, L. A.  Skilled Workman, Class II  Gunnier, Royal Artillery
Bristol Telephone Area  Godfrey, R. S. T.  Skilled Workman, Class II  Lance Sergeant, Royal Corps of Signals
Engineering Department  Ellis, C. P.  Skilled Workman, Class I  Pilot Officer, Royal Air Force
Engineering Department  Maxwell, H. B.  Clerical Officer  Sergeant, Royal Air Force
Exeter Telephone Area  Mappin H.  Unestablished Skilled Workman  Flying Officer, Royal Air Force
Leeds Telephone Area  Holdsworth, B.  Unestablished Skilled Workman  Flight Sergeant, Royal Air Force
Liverpool Telephone Area  Brade, F. V.  Skilled Workman, Class II  Leading Aircraftman, Royal Air Force
London Telecommunications Region  Bolsworth, J. H.  Youth-in-Training  Midsman, Royal Navy
London Telecommunications Region  Burbridge, L. E. W.  Unestablished Skilled Workman
London Telecommunications Region  Croke, H.  Skilled Workman, Class II  Signalman, Royal Corps of Signals
London Telecommunications Region  Doe, J. H.  Skilled Workman, Class II  Major, Auxiliary Military Pioneer Corps
London Telecommunications Region  Eyles, C. T.  Labourer  Sergeant, Queen's Royal Regiment (West Surrey)
London Telecommunications Region  Grove, E. G.  Unestablished Skilled Workman  Flying Officer, Royal Air Force
London Telecommunications Region  Kessock-Phillip, H. E.  Skilled Workman, Class II  Flying Officer, Royal Air Force
London Telecommunications Region  Palmer, T. H. E.  Labourer  Aircraftman, Class II, Royal Air Force
London Telecommunications Region  Patric, A. G.  Skilled Workman, Class II  Lance Corporal, Royal Corps of Signals
London Telecommunications Region  Simmonds, H. R.  Unestablished Skilled Workman  Flight Sergeant, Royal Air Force
London Telecommunications Region  Smith, W. T.  Skilled Workman, Class II  Lance Sergeant, Royal West Kent Regiment
London Telecommunications Region  Tolleth, J. A.  Skilled Workman, Class II  Sergeant,Scotts Guards
London Telecommunications Region  Ware, W. H.  Labourer  Private, Dorsetshire Regiment
London Telecommunications Region  Williams, C.  Skilled Workman, Class II  Corporal, Royal Corps of Signals
London Telecommunications Region  Williamson, J. F. R.  Skilled Workman, Class II  Signalman, Royal Corps of Signals

Manchester Telephone Area  Biddulph, S.  Skilled Workman, Class II  Sergeant Observer, Royal Air Force
Manchester Telephone Area  Hadfield, J. H.  Unestablished Skilled Workman  Sergeant, Royal Corps of Signals
Manchester Telephone Area  Sherwin, R. D.  Unestablished Skilled Workman  Private, Manchester Regiment
Nottingham Telephone Area  Rumsny, W. P.  Skilled Workman, Class II  Flight Sergeant, Royal Air Force
Oxford Telephone Area  Welford, W. B.  Unestablished Skilled Workman  Private, Oxford and Bucks Light Infantry
Reading Telephone Area  Penfold, D. J.  Unestablished Skilled Workman  Sergeant, Royal Air Force
Swansea Telephone Area  Bates, J. H.  Skilled Workman, Class I  Company Quartermaster Sergeant, Royal Corps of Signals
Swansea Telephone Area  Water, T. W.  Inspector  Sergeant Navigator, Royal Air Force

Recent Awards

The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:

While serving with the Armed Forces, including Home Guard.

Belfast Telephone Area  Brannan, R.  Skilled Workman, Class II  Company Sergeant Major, Sherwood Foresters
Bournemouth Telephone Area  Clater, J. W.  Skilled Workman, Class II  Company Sergeant-Major, Royal Corps of Signals
Brighton Telephone Area  Hope, G. W.  Draughtsman, Class II  Company Quarter-Master Sergeant, Royal Corps of Signals
Lincoln Telephone Area  Wilkes, W. D. G.  Skilled Workman, Class II  Flight Sergeant, Royal Air Force
London Telecommunications Region  Davis, C. V.  Skilled Workman, Class I  Company Sergeant-Major, Royal Corps of Signals
London Telecommunications Region  Lawrence, W. S.  Skilled Workman, Class II  Regimental Quarter-Master Sergeant, Royal Corps of Signals
London Telecommunications Region  Ware, E. T.  Unestablished Skilled Workman  Flight Lieutenant, Royal Air Force

New Year's Honours

The Board of Editors offers its sincere congratulations to the following members of the Engineering Staff who have been honoured by H.M. the King in the New Year's Honours List:

Bradford Telephone Area  Downward, F.  Draughtsman, Class I  British Empire Medal
Engineering Department  Nancarrow, F. E.  Staff Engineer  Officer of the Order of the British Empire
Engineering Department  Parker, P. N.  Inspector  British Empire Medal
London Telecommunications Region  Merrill, W. V.  Skilled Workman, Class I  British Empire Medal
London Telecommunications Region  Walton, W. R.  Assistant Engineer  Member of the Order of the British Empire
Northern Ireland Region  McCrossan, A.  Inspector  British Empire Medal
Notes and Comments

Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:

While serving with the Armee Forces, including Home Guard.

Bedford Telephone Area... Fletcher, J. S. Skilled Workman, Class II Sergeant, Royal Air Force
Belfast Telephone Area... Haldane, R. Labourer. Sergeant, Royal Artillery
Birmingham Telephone Area... Martin, C. F. Unestablished Skilled Workman Sergeant, Royal Engineer, Royal Air Force
Birmingham Telephone Area... Sholvin, W. H. A. Unestablished Skilled Workman Sergeant, Royal Air Force
Bournemouth Telephone Area... Downey, R. J. Skilled Workman, Class II Corporal, Corps of Military Police
Bradford Telephone Area... Lamb, H. J. Skilled Workman, Class II Flying Officer, Royal Air Force
Brighton Telephone Area... Collier, A. Skilled Workman, Class II Acting Lance Bombardier, Royal Artillery
Brighton Telephone Area... Laker, W. J. Labourer... Sergeant, Royal Air Force
Brighton Telephone Area... Rudd, L. A. Skilled Workman, Class II Gunner, Royal Artillery
Bristol Telephone Area... Godfrey, R. S. T. Skilled Workman, Class II Lance Sergeant, Royal Corps of Signals
Engineering Department... Ellis, C. P. Skilled Workman, Class I Pilot Officer, Royal Air Force
Engineering Department... Maxwell, H. B. Clerical Officer Sergeant, Royal Air Force
Exeter Telephone Area... Mappin H. Skilled Workman, Class II Flying Officer, Royal Air Force
Leeds Telephone Area... Holdsworth, R. Unestablished Skilled Workman Flight Sergeant, Royal Air Force
Liverpool Telephone Area... Brad, F. V. Skilled Workman, Class II Flight Sergeant, Royal Air Force
London Telecommunications Region... Bolsworth, J. H. Youth in Training Leading Aircraftman, Royal Air Force
London Telecommunications Region... Burbridge, L. E. W. Unestablished Skilled Workman Midshipman, Royal Navy
London Telecommunications Region... Croke, H. Skilled Workman, Class II Signalman, Royal Corps of Signals
London Telecommunications Region... Doe, J. H. Skilled Workman, Class II Major, Auxiliary Military Pioneer Corps
London Telecommunications Region... Eyles, C. T. Labourer. Sergeant, Queen’s Royal Regiment (West Surrey)
London Telecommunications Region... Grove, E. G. Unestablished Skilled Workman Flying Officer, Royal Air Force
London Telecommunications Region... Kessock-Phillip, H. E. Skilled Workman, Class II Flying Officer, Royal Air Force
London Telecommunications Region... Palmer, T. H. E. Labourer... Aircraftman, Class II, Royal Air Force
London Telecommunications Region... Patrick, A. G. Skilled Workman, Class II Lance Corporal, Royal Corps of Signals
London Telecommunications Region... Simmonds, H. R. Unestablished Skilled Workman Flight Sergeant, Royal Air Force
London Telecommunications Region... Smith, W. T. Skilled Workman, Class II Lance Sergeant, Royal West Kent Regiment
London Telecommunications Region... Tolleth, J. A. Skilled Workman, Class II Sergeant, Scots Guards
London Telecommunications Region... Ware, W. H. Labourer... Private, Dorsetshire Regiment
London Telecommunications Region... Williams, C. Skilled Workman, Class II Corporate, Royal Corps of Signals
London Telecommunications Region... Williamson, J. F. R. Skilled Workman, Class II Signalman, Royal Corps of Signals

Recent Awards

The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:

While serving with the Armee Forces, including Home Guard.

Belfast Telephone Area... Brannen, R. Skilled Workman, Class II Company Sergeant Major, Sherwood Foresters
Bournemouth Telephone Area... Clater, J. W. Skilled Workman, Class II Company Sergeant Captain, Royal Corps of Signals
Brighton Telephone Area... Hope, G. W. Draughtsman, Class II Company Sergeant, Royal Corps of Signals
Lincoln Telephone Area... Wilkes, W. D. G. Skilled Workman, Class II Flight Sergeant, Royal Air Force
London Telecommunications Region... Davis, C. V. Skilled Workman, Class II Company Sergeant, Major, Royal Corps of Signals
London Telecommunications Region... Lawrence, W. S. Skilled Workman, Class II Regimental Sergeant Major, Royal Corps of Signals
London Telecommunications Region... Ware, E. T. Unestablished Skilled Workman Flight Lieutenant, Royal Air Force

New Year’s Honours

The Board of Editors offers its sincere congratulations to the following members of the Engineering Staff who have been honoured by H.M. the King in the New Year’s Honours List:

Bradford Telephone Area... Downward, F. Draughtsman, Class I British Empire Medal
Engineering Department... Nancarrow, F. E. Staff Engineer, British Empire Medal
Engineering Department... Parker, P. N. Inspector, British Empire Medal
London Telecommunications Region... Merrill, W. V. Skilled Workman, Class I British Empire Medal
London Telecommunications Region... Walton, W. R. Assistant Engineer, Member of the Order of the British Empire
Northern Ireland... McCreary, A. Inspector, British Empire Medal

1944 April
show the result of crosstalk measurements made with the artificial fault at the near and far end of the line and (b) gives similar curves for a good pair from which the cable constant can be calculated. As the curves are irregular, a better frequency interval is obtained by making measurements with an artificial fault first between two A wires and then between the A wire of one pair and the B of the other. The points of interception give the frequency interval. The value of the capacitance for the artificial fault is chosen so as to give the same crosstalk/frequency slope on a good pair as the real fault gives on its own. The mean of the two locations shown in Fig. 5 was 3.4 miles from the testing end.

The only length replaced near this point was approximately 3-4 miles away. On investigation, this length was found to be P.C.Q.T. cable.

If it is ascertained that the wrong type of cable has been used, and an approximate localisation has been made, it can be confirmed without opening a joint, as the circumference of 24/40 copper cable is about 1 in. greater than that of 24/40 P.C.Q.T. cable.

(2) Crossed Wires.

After repairs it is sometimes found that the A and B wires of a pair have been crossed. This gives rise to high crosstalk. Assume the simple condition of an AB cross introduced at the balancing frame. The worst value of crosstalk on the cable alone is of the order of 60 db. To neutralise this, a condenser of 0.001 nF will have been fitted. The introduction of the AB cross will mean that these two crosstalk paths add instead of opposing, and the resultant interference will be 64 db. The most probable value due to a cross at this point will be about 63 db. In practice crosstalk may occur at any joint in the cable. The resultant crosstalk is likely to be somewhat better than in the above example, but a worst value of 60 db is not abnormal. As rebalance is carried out only after at least three repairs, the need for avoiding crosstalk can readily be seen. If a cross is found during the tap-throughs, it should be taken out at the joint where the mistake has been made.

(3) Incorrect Connection of Test Circuits.

Intermediate repeater stations are usually unattended, and test and alarm circuits are extended to attended repeater stations. This is usually done by the phantom circuit derived from one pair and earth. On one repeater section the cable had been rebalanced with both the disturbing and disturbed pairs freed from all equipment. Crosstalk measurements were then made with the disturbed pair working normally, and were found to have deteriorated by about 20 db. Investigations showed that the trouble was due to the test circuit arrangements. The crosstalk paths are shown in Fig. 6. Interference takes place between the disturbing pair and the circuit made up of the test phantom and earth. This by-passes the repeater and a crosstalk path exists to any other pair at the low level side of the repeaters. The interference is amplified.

Note: In the diagram, the section 1 and section 2 are connected through a phantom connection.
Manchester Telephone
Tunbridge Wells
Southampton
Recent Awards
London Telecommunications Region
Pettis, L. A. H. ... Unestablished Skilled Workman
Sergeant, Royal Air Force
Powell, H. G. C. ... Unestablished Skilled Workman
Sergeant Flight Engineer, Royal Air Force
Puddopot, L. T. ... Unestablished Skilled Workman
Pilot Officer, Royal Air Force
Randolph, W. ... Skilled Workman, Class II
Flying Officer, Royal Air Force
Rogers, D. R. ... Unestablished Skilled Workman
Pilot Officer, Royal Air Force
Shattock, J. L. ... Skilled Workman, Class II
Flying Officer, Royal Air Force
Stewart, W. T. ... Skilled Workman, Class II
2nd Lieutenant, Army Air Corps
Watts, T. R. ... Skilled Workman, Class II
Bombardier, Royal Artillery
Willett, F. J. ... Skilled Workman, Class II
Sergeant, Royal Air Force
Bates, J. ... Skilled Workman, Class II
Lance Sergeant, Royal Corps of Signals
Wood, F. E. ... Unestablished Skilled Workman
Signalsman, Royal Corps of Signals
Liebmann, W. C. ... Unestablished Skilled Workman
Pilot Officer, Royal Air Force
Peterborough Telephone Area
Maxey, H. ... Skilled Workman, Class II
Sergeant, Royal Army Service Corps
Rowland, G. R. ... Skilled Workman, Class I
Flight Officer, Royal Air Force
Preston Telephone Area
Robinson, H. ... Unestablished Skilled Workman
Lance Sergeant, Royal Corps of Signals
Shrewsbury Telephone Area
Marshall, H. ... Labourer
Sergeant, Royal Artillery
Spence, K. H. Y. ... Skilled Workman, Class II
Signalman, Royal Corps of Signals
Garner, W. F. ... Unestablished Skilled Workman
Sergeant, Royal Air Force

Recent Awards
The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of The Engineering Department:

While serving with the Armed Forces, including Home Guard:
Birmingham Telephone Area
Thirks, R. D. ... Inspector
Engineering Department
Ogaben, R. S. I. ... Inspector
Engineering Department
Wood, G. H. ... Mechanic LC, Grade III
Liverpool Telephone Area
Urrin, R. L. ... Unestablished Force
Leicester Telephone Area
Graham, J. W. ... Labourer
London Telecommunications Region
Ball, D. A. W. ... Unestablished Skilled Workman
Fleet Sergeant, Royal Air Force
Bullock, D. S. ... Unestablished Skilled Workman
Flying Officer, Royal Air Force
London Telecommunications Region
Howes, E. J. ... Skilled Workman, Class II
Flight Sergeant, Royal Air Force
London Telecommunications Region
Mitchell, E. A. ... Skilled Workman, Class II
Air Officer, Royal Air Force
London Telecommunications Region
Nicholls, J. E. ... Skilled Workman, Class II
Sergeant, Royal Corps of Signals

1944 July

Middlesbrough Telephone Area
Dobson, R. S. L. ... Skilled Workman, Class II
Major, Corps of Military Police
Newcastle-on-Tyne Telephone Area
Petrice, W. ... Skilled Workman, Class I
Sergeant, Royal Corps of Signals
Plymouth Telephone Area
Stokes, E. F. J. ... Skilled Workman, Class II
Sergeant, Royal Air Force
Scottish Region
Wood, E. W. ... Regional Motor Transport Officer
Tunbridge Wells Telephone Area
Rae, H. S. ... Skilled Workman, Unestablished
Sergeant, Coldstream Guards
Stoke-on-Trent Telephone Area
Savage, G. H. R. ... Skilled Workman
Corporal, Royal Corps of Signals

Regional Notes
Home Counties Region
ERECTING DOUBLE-SKILLED 113-FT POLES.
An interesting job has just been completed in the Bedford Area which involved the erection of four poles 105 ft in height above ground level, to carry a radio aerial.
The poles were specially requisitioned as 113 ft from the Stores Department, via the Engineer-in-Chief. This height allowed for 8 ft. in the ground, leaving the required 105 ft. in height. Three poles matched and ready cut for splicing were supplied for each mast. Three single and double tackles were made up of:
One 55 S, one 45 M, and one 24 L.
The poles were scarred and bored at pole top before dispatch and each half of the scarf was marked with a number so that the poles could be readily assembled on site. It was found, after assembling that, partly owing to war-time poles and partly to the angle at which the scarfs had been cut, some of the poles presented a rather crooked appearance. Part of this crookedness was taken out by careful adjustment at the splicings and in one case by changing the 24 ft. top pole for a belt pole from one local pole stack, which had been scarred locally to match.
Each mast was bolted together on the ground, pole fitted to be 10 ft. of the ground-line, and aerial attachment and stays fixed. Three stays were fixed at about 30 ft. above ground level at 120°, with four stays at the top of the mast, the additional stay being used to take the aerial strain. The splices were arranged so that the single and double tackles were made up with the two splices and the man signalled to the bottom and the tackles between the bottom splice and the derrick and a 3-in double and treble tackle between the pole and the derrick. The tackles were then arranged as a number of tackles with a snatch-block to the derrick via snatch-blocks to luff tackle. The falls of these tackles were best to the louver, which were operated in reverse gear for hauling.
As soon as the weight was taken by the second derrick, the first derrick was cleared and the mast was taken into position under the control of one man signalling to the louver. The top stays were used as guy lines as the pole went up. All the stays were broken up into 20 to 30 ft lengths by W.T. insulators, U-bolt clips being used for making-off the wire at each insulator. 7/4-strand G. I. wire was used for the stays, and normal terminations on the poles were made.
Very careful adjustments were necessary to individual tensions of each of the ten stays to keep the masts as straight as possible. It was found that the masts would easily buckle at tension not correct and the final job would not have been shipped and Bristol fashion.

After an interesting week and one which demonstrates the versatility of the Post Office staff and the ability to cope with any demand on their services.

E. H. P. T. G.

ERECTING OF 4/40 SP + 400/20 AERIAL CABLE.
To meet demands for defence circuits in the Oxford Area it was necessary to provide quickly 100 miles of 4/40 SP + 400/20 cable. Only 40 miles of data space was available and in view of the urgency of the requirement it was decided to lay 45 miles of tape-protected cable in the ground and to the remaining 15 miles on existing pole line. The cable has a diameter of 0.25 in. and weighs 30-47 cwt per 100 yards. As this cable was larger than any which had been erected before, the following notes may be of interest.
## Notes and Comments

**Roll of Honour**

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:

**While serving with the Armistice Forces**

<table>
<thead>
<tr>
<th>Region</th>
<th>Name</th>
<th>Rank</th>
<th>Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liverpool ....</td>
<td>Trinder, T. H.</td>
<td>Skilled Workman, Class I</td>
<td>Sergeant, Royal Air Force</td>
</tr>
<tr>
<td>Belfast ....</td>
<td>Sargent, W. L.</td>
<td>Skilled Workman, Class I</td>
<td>Sergeant, Royal Air Force</td>
</tr>
<tr>
<td>Birmingham ....</td>
<td>Jordan, G. W.</td>
<td>Skilled Workman, Class II</td>
<td>Signalman, Royal Signals</td>
</tr>
<tr>
<td>Birmingham ....</td>
<td>Matthews, D. G.</td>
<td>Skilled Workman, Class II</td>
<td>Flight Sergeant, Royal Air Force</td>
</tr>
<tr>
<td>Birmingham ....</td>
<td>Mylneham, F. H.</td>
<td>Unestablished Skilled Workman</td>
<td>Flying Officer, Royal Air Force</td>
</tr>
<tr>
<td>Birmingham ....</td>
<td>Selwyn, H.</td>
<td>Unestablished Skilled Workman</td>
<td>Signalman, Royal Signals</td>
</tr>
<tr>
<td>Brighton ....</td>
<td>Pullan, H.</td>
<td>Unestablished Skilled Workman</td>
<td>Flight Sergeant, Royal Air Force</td>
</tr>
<tr>
<td>Brighton ....</td>
<td>Bowley, A. C.</td>
<td>Skilled Workman, Class II</td>
<td>Gunner, Royal Artillery</td>
</tr>
<tr>
<td>Canterbury ....</td>
<td>Tye, A.</td>
<td>Skilled Workman, Class II</td>
<td>Flight Sergeant, Royal Air Force</td>
</tr>
<tr>
<td>Edinburgh ....</td>
<td>Simmonds, F. T.</td>
<td>Skilled Workman, Class II</td>
<td>Corporal, Royal Signals</td>
</tr>
<tr>
<td>Edinburgh ....</td>
<td>Simpson, R.</td>
<td>Skilled Workman, Class II</td>
<td>A.C. Class II, Royal Air Force</td>
</tr>
<tr>
<td>Engineering ....</td>
<td>Brewer, B. M.</td>
<td>Clerical Officer</td>
<td>Lieutenant, Duke of Wellington's Regiment</td>
</tr>
<tr>
<td>Engineering ....</td>
<td>Cunningham, J. A.</td>
<td>Quartermaster</td>
<td>On Post Office Duty</td>
</tr>
<tr>
<td>Engineering ....</td>
<td>Hicks, K. A.</td>
<td>Skilled Workman, Class I</td>
<td>Sergeant, Royal Air Force</td>
</tr>
<tr>
<td>Engineering ....</td>
<td>Overna, A.</td>
<td>Skilled Workman, Class I</td>
<td>Seaman, Royal Navy</td>
</tr>
<tr>
<td>Engineering ....</td>
<td>Parr, J. W.</td>
<td>Skilled Workman, Class I</td>
<td>On Post Office Duty</td>
</tr>
<tr>
<td>Engineering ....</td>
<td>Troops, A. E.</td>
<td>Skilled Workman, Class I</td>
<td>On Post Office Duty</td>
</tr>
<tr>
<td>Engineering ....</td>
<td>Wood, R.</td>
<td>Skilled Workman, Class I</td>
<td>Chief Engineer</td>
</tr>
<tr>
<td>Exeter Telephone Area</td>
<td>Vicary, R. G. T.</td>
<td>Unestablished Skilled Workman</td>
<td>Private, Devonshire Regiment</td>
</tr>
<tr>
<td>Glasgow Telephone Area</td>
<td>Beveridge, H.</td>
<td>Skilled Workman, Class II</td>
<td>Sergeant, Armv Air Corps</td>
</tr>
<tr>
<td>Glasgow Telephone Area</td>
<td>Lindsay, D. S.</td>
<td>Skilled Workman, Class II</td>
<td>Flying Officer, Royal Air Force</td>
</tr>
<tr>
<td>Glasgow Telephone Area</td>
<td>Mooney, R. L. (D.F.M.)</td>
<td>Unestablished Skilled Workman</td>
<td>Sergeant, Royal Air Force</td>
</tr>
<tr>
<td>Lancaster Telephone Area</td>
<td>Beattie, W. H. T.</td>
<td>Skilled Workman, Class II</td>
<td>Flight Sergeant, Royal Air Force</td>
</tr>
<tr>
<td>Lincoln Telephone Area</td>
<td>Harris, J.</td>
<td>Unestablished Skilled Workman</td>
<td>Sergeant, Royal Air Force</td>
</tr>
<tr>
<td>Liverpool Telephone Area</td>
<td>Corson, L.</td>
<td>Skilled Workman, Class I</td>
<td>Sub-Lieutenant, Fleet Air Arm</td>
</tr>
<tr>
<td>Liverpool Telephone Area</td>
<td>Hardy, L. T.</td>
<td>Unestablished Skilled Workman</td>
<td>Sub-Lieutenant, Fleet Air Arm</td>
</tr>
<tr>
<td>London Postal Region</td>
<td>Hawke, A. J.</td>
<td>Skilled Workman, Class I</td>
<td>On Post Office Duty</td>
</tr>
<tr>
<td>London Postal Region</td>
<td>Smith, C. W.</td>
<td>Labourer</td>
<td>On Post Office Duty</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Apps, D. W.</td>
<td>Skilled Workman, Class II</td>
<td>Signalman, Royal Signals</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Baldry, J. J.</td>
<td>Unestablished Skilled Workman</td>
<td>Signalman, Royal Signals</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Cooper, J. W. E.</td>
<td>Unestablished Skilled Workman</td>
<td>Sergeant, Royal Air Force</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Craig, A. V.</td>
<td>Unestablished Skilled Workman</td>
<td>On Post Office duty</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Ellis, P. H.</td>
<td>Unestablished Skilled Workman</td>
<td>Signalman, Royal Signals</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Kennedy, W. E.</td>
<td>Skilled Workman, Class II</td>
<td>2nd Lieutenant, Royal Air Force</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Lamsley, G. F.</td>
<td>Labourer</td>
<td>Private, Royal Fusiliers</td>
</tr>
</tbody>
</table>

---

**Recent Awards**

The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:

**While serving with the Armistice Forces, including Home Guard**

<table>
<thead>
<tr>
<th>Region</th>
<th>Name</th>
<th>Rank</th>
<th>Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen ....</td>
<td>Smith, R.</td>
<td>Skilled Workman</td>
<td>Petty Officer, Royal Air Force</td>
</tr>
<tr>
<td>Engineering ....</td>
<td>Hickox, A. J.</td>
<td>Skilled Workman</td>
<td>Distinguished Flying Cross</td>
</tr>
<tr>
<td>Leicester Telephone Area</td>
<td>Kersey, A. G.</td>
<td>Skilled Workman, Class I</td>
<td>Sergeant, Royal Artillery</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Boys, C. E.</td>
<td>Inspector</td>
<td>Major, Royal Signals</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Bull, W. T.</td>
<td>Labourer</td>
<td>Chief Petty Officer, Royal Air Force</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Cox, K. R.</td>
<td>Unestablished Skilled Workman</td>
<td>Flying Officer, Royal Air Force</td>
</tr>
</tbody>
</table>
Notes and Comments

Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:

While serving with the Armed Forces or on Post Office Duty.

Bedford Telephone Area Trinder, T. H. Unestablished Skilled Workman Sergeant, Royal Air Force
Belfast Telephone Area Sargent, W. L. Skilled Workman, Class I Sergeant, Royal Air Force
Birmingham Telephone Area Jordan, G. W. Skilled Workman, Class II Signalman, Royal Signals
Birmingham Telephone Area Matthews, D. G. Skilled Workman, Class II Flight Sergeant, Royal Air Force
Birmingham Telephone Area Moynihan, P. H. Unestablished Skilled Workman Flying Officer, Royal Air Force
Bournemouth Telephone Area Selwyn, H. Unestablished Skilled Workman Signalman, Royal Signals
Bradford Telephone Area Pullan, H. Unestablished Skilled Workman Flying Officer, Royal Air Force
Brighton Telephone Area Bowley, A. C. Skilled Workman, Class II Gunner, Royal Artillery
Brighton Telephone Area Hogwood, A. R. Unestablished Skilled Workman Flight Sergeant, Royal Air Force
Canterbury Telephone Area Tyre, A. Unestablished Skilled Workman Corporal, Royal Signals
Edinburgh Telephone Area Simmonds, F. T. Skilled Workman, Class II Regimental Q.M.S., Royal Signals
Engineering Department Brewer, B. M. Skilled Workman, Class II A.C., Class II, Royal Air Force
Engineering Department Cumming, J. A. Quartermaster On Post Office Duty
Engineering Department Hicks, K. A. Skilled Workman, Class I Sergeant, Royal Air Force
Engineering Department Purr, J. W. Skilled Workman, Class I Seaman On Post Office Duty
Engineering Department Troops, A. E. Skilled Workman, Class I Pilot Officer
Exeter Telephone Area Vicary, R. G. T. Unestablished Skilled Workman Private, Devonshire Regiment
Glasgow Telephone Area Bevridge, H. Skilled Workman, Class II Sergeant, Royal Air Force
Glasgow Telephone Area Lindsay, D. S. Skilled Workman, Class II Sergeant, Royal Air Force
Glasgow Telephone Area Mooney, R. L. Unestablished Skilled Workman Flying Officer, Royal Air Force
Lincoln Telephone Area Beattie, W. H. T. Skilled Workman, Class II Flight Sergeant, Royal Air Force
Liverpool Telephone Area Harris, J. Unestablished Skilled Workman Sergeant, Royal Air Force
Liverpool Telephone Area Corson, L. Skilled Workman, Class II Ordinary Telegraphist, Royal Navy
London Telephone Area Hardy, L. T. Unestablished Skilled Workman Sub-Lieutenant, Fleet Air Arm
London Postal Region Hawke, A. J. Skilled Workman, Class I On Post Office Duty
London Postal Region Smith, C. W. Labourer On Post Office Duty
London Telecommunications Region Apps, D. W. Skilled Workman, Class II Signalman, Royal Signals
London Telecommunications Region Baldry, J. J. Unestablished Skilled Workman Signalman, Royal Signals
London Telecommunications Region Cooper, J. W. E. Unestablished Skilled Workman Sergeant, Royal Air Force
London Telecommunications Region Craig, A. V. Unestablished Skilled Workman On Post Office duty
London Telecommunications Region Ellis, P. H. Unestablished Skilled Workman Signalman, Royal Signals
London Telecommunications Region Kennedy, W. E. Skilled Workman, Class II 2nd Lieutenant, Royal Navy
London Telecommunications Region Lansley, G. F. Labourer Private, Royal Fusiliers

London Telecommunications Baldry, J. J. Unestablished Skilled Workman Signalman, Royal Signals
London Telecommunications Cooper, J. W. E. Unestablished Skilled Workman Sergeant, Royal Air Force
London Telecommunications Craig, A. V. Unestablished Skilled Workman On Post Office duty
London Telecommunications Ellis, P. H. Unestablished Skilled Workman Signalman, Royal Signals
London Telecommunications Kennedy, W. E. Skilled Workman, Class II 2nd Lieutenant, Royal Navy
London Telecommunications Lansley, G. F. Labourer Private, Royal Fusiliers

London Telecommunications Mair, A. Unestablished Skilled Workman
London Telecommunications Morgan, F. P. Skilled Workman, Class II
London Telecommunications Newton, E. C. W. Unestablished Skilled Workman
London Telecommunications Phillips, C. E. Skilled Workman, Class II
London Telecommunications Phillips, C. J. Labourer
London Telecommunications Porter, K. L. Youth-in-Training
London Telecommunications Roberts, J. Skilled Workman, Class II
London Telecommunications Sibley, G. W. Unestablished Skilled Workman
London Telecommunications Shapely, E. H. Unestablished Skilled Workman
London Telecommunications Smeaton, D. G. Unestablished Skilled Workman
London Telecommunications Spearman, A. A. F. Labourer
London Telecommunications Taylor, W. H. Unestablished Skilled Workman
London Telecommunications Vaughan, K. R. Unestablished Skilled Workman
London Telecommunications Wheeler, R. W. Unestablished Skilled Workman
London Telecommunications Middlesbrough Telephone Area Hornsby, J. S. Unestablished Skilled Workman
Newcastle on Tyne Telephone Area Peel, P. H. Unestablished Draughtsman
Nottingham Telephone Area Edmonds, C. R. Unestablished Skilled Workman
Nottingham Telephone Area Morell, G. C. Unestablished Skilled Workman
Nottingham Telephone Area Staines, B. W. Unestablished Skilled Workman
Reading Telephone Area Raggett, A. E. Unestablished Skilled Workman
Scotland West Telephone Area Couper, A. C. Unestablished Skilled Workman
Sheffield Telephone Area Stafford, W. A. Unestablished Skilled Workman
Tunbridge Wells Telephone Area Scott, A. J. Unestablished Skilled Workman

Pilot Officer, Royal Air Force
Signalman, Royal Signals
Flight Sergeant, Royal Air Force
Signalman, Royal Signals
Private, Border Regiment
Pilot Officer, Royal Air Force
Driver, Royal Army Service Corps
Signalman, Royal Signals
Sergeant, Royal Air Force
Private, Argyll and Sutherland Highlanders
Sapper, Royal Engineers
Sergeant, Royal Air Force
Flying Officer, Royal Air Force
Pilot Officer, Royal Air Force
Sub-Lieutenant, Fleet Air Arm
Pilot Officer, Royal Air Force
Trooper, Nottinghamshire Yeomanry
3rd Officer, Air Transport Auxiliary
Signalman, Royal Signals
Pilot Officer, Royal Air Force

Recent Awards

The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:

While serving with the Armed Forces, including Home Guard

Aberdeen Telephone Area Smith, R. Skilled Workman, Class I
Engineering Department Hickox, A. J. Skilled Workman, Class I
Leicester Telephone Area Kersey, A. G. Unestablished Skilled Workman
London Telecommunications Boos, C. E. Inspector
London Telecommunications Bull, W. T. Labourer
London Telecommunications Cox, K. R. Unestablished Skilled Workman

Pilot Officer, Royal Air Force
Flying Officer, Royal Air Force
Pilot Officer, Royal Air Force
Pilot Officer, Royal Air Force
Inspector, Royal Artillery
Chief Petty Officer, Royal Navy
Sub-Lieutenant, Fleet Air Arm
Indian Officer, Royal Artillery

British Empire Medal
Distinguished Flying Cross
Mentioned in Despatches
Military Cross
George Medal

Notes and Comments

Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:

While serving with the Armed Forces

Bradford Telephone Area: Anthony, H. R. Skilled Workman, Class II
Birmingham Telephone Area: Chawin, F. R. Skilled Workman, Class II
Bristol Telephone Area: Curtis, F. A. V. Skilled Workman, Class II
Bristol Telephone Area: Gee, F. H. Skilled Workman, Class II
Cambridge Telephone Area: Powell, I. W. Skilled Workman, Class II
Cambridge Telephone Area: Robertson, P. I. N. Skilled Workman, Class II
Cambridge Telephone Area: Snye, J. H. Skilled Workman, Class II
Cardiff Telephone Area: Gale, E. G. Skilled Workman, Class II
Cardiff Telephone Area: Maxwell, G. Skilled Workman, Class II
Engineering Department: Clark, H. S. Skilled Workman, Class II
Engineering Department: Hannah, J. A. Unestablished Skilled Workman
Engineering Department: Harrison, J. H. Staff Officer
Engineering Department: Parker, J. A. T. Executive Officer
Engineering Department: Row, L. N. Inspector
Gloucester Telephone Area: Soutar, R. A. Unestablished Skilled Workman
Gloucester Telephone Area: Emerson, B. F. Labourer
Liverpool Telephone Area: Courtney, W. J. Skilled Workman, Class II
Liverpool Telephone Area: Parkinson, C. R. Skilled Workman, Class II
Liverpool Telephone Area: Osley, A. F. Skilled Workman, Class II
Lord in Telecommunications Region: Atkinson, C. W. Skilled Workman, Class II
Lord in Telecommunications Region: Beeman, M. H. Skilled Workman, Class II
Lord in Telecommunications Region: Brown, J. Unestablished Skilled Workman
Lord in Telecommunications Region: Dinn, R. W. Skilled Workman, Class II
Lord in Telecommunications Region: Hewer, P. S. Labourer
Lord in Telecommunications Region: Hobbs, R. H. Skilled Workman, Class II
Lord in Telecommunications Region: Loveland, A. W. Skilled Workman, Class II
Lord in Telecommunications Region: Mcgarrick, S. E. Unestablished Skilled Workman
Lord in Telecommunications Region: Mcgory, P. Skilled Workman, Class II
Lord in Telecommunications Region: Milburn, D. J. Skilled Workman, Class II
Lord in Telecommunications Region: Newell, H. F. J. Unestablished Skilled Workman
Lord in Telecommunications Region: Pemberton, D. W. Labourer
Lord in Telecommunications Region: Preston, G. Unestablished Skilled Workman

London Telephone Communications: Thorne, F. A. Unestablished Skilled Workman
London Telephone Communications: Williams, A. R. Unestablished Skilled Workman
London Telephone Communications: Wilson, E. G. Unestablished Skilled Workman
Newcastle-on-Tyne Telephone Area: Telford, R. Unestablished Skilled Workman
Norwich Telephone Area: Hogg, B. J. Skilled Workman, Class II
Taunton Telephone Area: Marney, L. T. Unestablished Skilled Workman

Recent Awards

The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:

While serving with the Armed Forces

Belfast Telephone Area: Johnston, J. H. Skilled Workman, Class II
Engineering Department: Andrew, P. A. Skilled Workman, Class II
Engineering Department: Murphy, D. J. Unestablished Skilled Workman
Exeter Telephone Area: Thomas, M. G. N. Skilled Workman, Class II
Lancaster Telephone Area: Gilpin, F. A. Unestablished Skilled Workman
London Telephone Communications: Nelson, D. Unestablished Skilled Workman
London Telephone Communications: White, R. J. Labourer
Reading Telephone Area: Bavin, B. E. E. Skilled Workman, Class II

New Year Honours

The Board of Editors was particularly pleased to note among the recipients of honours in the New Year's List the name of the Engineer-in-Chief, Sir A. Stanley Angwin, who was made a Knight Commander of the Most Excellent Order of the British Empire for his services to telecommunications during the war years. Other members of the Engineering Department who were honoured included — Mr. L. Anderson, Inspector, Welsh and Border Counties Region; Mr. W. V. Greenwood, Skilled Workman, Class I, North Eastern Region.

Mr. C. J. Reading, Skilled Workman, Class I, London Telecommunications Region, and Mr. L. H. Wallis, Chief Inspector, Home Counties Region, who were awarded the British Empire Medal.

Mr. J. Darke, late of the Engineering Department and now Regional Director, North Western Region, was created a Commander of the Order of the British Empire, and Mr. G. Casemore, who is now Telephone Manager, Telford Wells, was appointed a Member of the same Order.

Regional Notes

North-Eastern Region

With reference to the notes in the July, 1944, issue of the Journal from the Home Counties Region entitled "Erection of Double-Spliced 13 ft. Poles," which must have been of general interest to engineers, work which has recently been carried out in the Leeds area which necessitated the erection of six poles of a similar height.

The method of assembling the poles was very similar to the one used in the Bedford area, but the erection was carried out in a different manner. Only one 6 ft. derrick pole was used, and this was erected approximately two yards from the back of the hole which had been excavated ready to receive the pole. Siding boards were placed in the hole and projected above ground level to enable access to similar pieces of wood to be placed between the siding boards and the base of the derrick pole, to take the initial weight at the base of the pole on the commencement of lift.

The main lift of the pole was taken at the first splice by a double and tackle of rope tackle attached to the derrick pole and a chain sling at the splice, lift tackle (i.e. small blocks and tackle, to obtain a mechanical advantage) being attached to the pulling rope. At the second splice a 3-lift rope was attached to a sling and
Notes and Comments

Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:—

**While serving with the Armed Forces**

<table>
<thead>
<tr>
<th>Region</th>
<th>Name</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berkshire</td>
<td>Row, L. N.</td>
<td>Sub-Lieutenant, Royal Navy V.R.</td>
</tr>
<tr>
<td>Buckingham</td>
<td>Lindsey, H. E.</td>
<td>Private, Royal Air Force</td>
</tr>
<tr>
<td>Cambridge</td>
<td>Calvert, C. E.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>Cambridge</td>
<td>Appleby, F. O.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>Cheshire</td>
<td>Stone, F.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>Cheshire</td>
<td>Winch, B. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>Cheshire</td>
<td>Riches, F. W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>Cheshire</td>
<td>White, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Rice, W. H.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Moore, J.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Price, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Bassett, W. F.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Austin, R. W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Day, F. W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Finney, J. A.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Smith, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jackson, W. F.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Taylor, R. G.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Page, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Watling, J.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Brown, J.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Smith, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Brown, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jones, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Booth, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Wilson, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jackson, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Smith, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Brown, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jones, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Booth, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Wilson, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jackson, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Smith, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Brown, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jones, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Booth, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Wilson, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jackson, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Smith, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Brown, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jones, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Booth, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Wilson, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jackson, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Smith, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Brown, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jones, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Booth, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Wilson, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jackson, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Smith, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Brown, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jones, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Booth, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Wilson, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jackson, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Smith, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Brown, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jones, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Booth, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Wilson, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jackson, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Smith, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Brown, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jones, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Booth, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Wilson, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jackson, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Smith, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Brown, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jones, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Booth, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Wilson, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jackson, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Smith, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Brown, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jones, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Booth, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Wilson, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jackson, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Smith, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Brown, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jones, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Booth, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Wilson, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jackson, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Smith, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Brown, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jones, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Booth, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Wilson, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jackson, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Smith, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Brown, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jones, W.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Booth, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Wilson, R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
<tr>
<td>City of London</td>
<td>Jackson, W. R.</td>
<td>Flight Lieutenant, Royal Air  Force</td>
</tr>
</tbody>
</table>

New Year Honours

The Board of Editors was particularly pleased to note among the recipients of honours in the New Year’s List the name of the Engineer-in-Chief, Sir A. Stanley Angwin, who is made a Knight Commander of the Most Excellent Order of the British Empire for his services to telecommunications during the war years. Other members of the Engineering Department who were honoured included —

Mr. L. Anderson, Inspector, Welsh and Border Counties Region.
Mr. W. V. Greenwood, Skilled Workman, Class I, North Eastern Region.
Mr. C. J. Reading, Skilled Workman, Class I, London Telecommunications Region, and Mr. I. H. Wallis, Chief Inspector, Home Counties Region, who were awarded the British Empire Medal.

Mr. J. Darke, late of the Engineering Department and now Regional Director, North Western Region, was created a Commander of the Order of the British Empire, and Mr. G. Casemore, who is now Telephone Manager, Towcester, was appointed a Member of the same Order.

Regional Notes

North-Eastern Region

With reference to the notes in the July, 1944, issue of the Journal from the Home Counties Region entitled "Erection of Double-Spanned 60 ft. Poles," which must have been of general interest to engineers, work was recently carried out in the Leeds area which necessitated the erection of six poles of similar height. The method of assembling the poles was very similar to the one used in the Stafford area, but the erection of the six poles was accomplished in a different manner.

Only one 60 ft. dumping pole was used, and this was erected approximately two years from the back of the hole which had been excavated ready to receive the pole. Siding boards were placed in the hole and projected above-ground level to enable small-diameter pieces of wood to be placed between the siding boards and the base of the derrick pole to take the initial weight of the pole on the commencement of lift.

The main lift of the pole was taken at the first splice by a double adjustable set of rope tackles attached to the derrick pole and a chain sling at the splice, half tackle or double books being made on the pole in a conventional manner.

The second splice was lifted by two books and tackle, one in the joint and the other in the splice, and then the pole was set in the final position by tensioning the book and head end.
The sleeve is brushed with soapy lather and a special tool, namely, a swage, made of boxwood or lignum-vineum (Fig. 8), clamped to it. When spirally rotated along the tube this tool reduces the external diameter of the sheath by extending its length. When the desired dimension is reached the surplus sheathing at the unfixed end is removed, leaving about half-inch for welding, lead sheet cut into thin strips being used for this purpose. As both drums

are placed at right angles to the jointing position is it possible to jack them up and carefully rotate through an angle of 180°, so that the welding can be completed all round the joint. The method used in making the spliced joint secures that lead burning is kept to a minimum, thus reducing the liability to fracture. The lead burning process, which is adopted for all the operations involved in this class of work, has also enabled a considerable saving in plumbing metal to be effected.

The method of jointing used at the Birmingham depot is similar to that described above, except that they prefer to use a split sleeve as, in their opinion, the swaging process does not give such a good mechanical joint.

After jointing, the cable is wound upon one drum, namely, the one containing the shorter of the two lengths, to limit the strain on the joint during the drawing-in operations. After this a pressure test of 40 lb. per square inch is applied for 24 hours. If the pressure test is satisfactory, insulation and conductivity tests are made, after which both ends are sealed and a lead label burnt on to one end. This label indicates the size and length of the spliced joint with the distance of the splice from the running end. The clockwise end of the length is painted red and three red rings are painted at each end to indicate that it contains a spliced joint.

The smallest joint undertaken is that for 24 pair 40 lb. carrier type cable. Successful results have been obtained on all sizes up to and including 1,400 pair 6 lb. cables, together with joints on protected cables.

A careful record has been kept of the location of all spliced lengths drawn in and very few have failed to withstand the strain of the cabling operations.

General.

In addition to reconditioning and splicing, the depots have undertaken experimental work for the Engineer-in-Chief in connection with the desication of joints, the fitting of sealing ends to coaxial cable lengths and the examination and minor repairs to loading pots. The value to date of cable reconditioned and brought into stock in the London Region alone is approximately £180,000 and the total weight of cable condemned as unsuitable for further use is nearly 600 tons.

The organisation of the work has been interesting and generally the staff, which includes several Belgian refugees, has shown great initiative in introducing labour-saving devices to build up reserve stocks of cable.

A recent detailed cost investigation has shown that the work is being carried out on sound economic lines.

---


### Notes and Comments

#### Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department —

<table>
<thead>
<tr>
<th>Region</th>
<th>Name</th>
<th>Class</th>
<th>Trade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen Telephone Area</td>
<td>Johnson, P.</td>
<td>Skilled Workman, Class II</td>
<td>Skilled Workman, Class II</td>
</tr>
<tr>
<td>Bellfield Telephone Area</td>
<td>Johnston, J. O.</td>
<td>Skilled Workman, Class II</td>
<td>Signalman, Royal Signals</td>
</tr>
<tr>
<td>Birmingham Telephone Area</td>
<td>Addington, J. T.</td>
<td>Skilled Workman, Class II</td>
<td>Pilot Officer, R.A.F.</td>
</tr>
<tr>
<td>Birmingham Telephone Area</td>
<td>Chatwin, F. R.</td>
<td>Skilled Workman, Class II</td>
<td>Flight Sergeant, R.A.F.</td>
</tr>
<tr>
<td>Birmingham Telephone Area</td>
<td>Hands, E.</td>
<td>Skilled Workman, Class II</td>
<td>Sergeant, R.A.F.</td>
</tr>
<tr>
<td>Birmingham Telephone Area</td>
<td>Purvey, H. A.</td>
<td>Skilled Workman, Class II</td>
<td>Flight Sergeant, R.A.F.</td>
</tr>
<tr>
<td>Blackburn Telephone Area</td>
<td>Jackson, A. C.</td>
<td>Skilled Workman, Class II</td>
<td>Sergeant, R.A.F.</td>
</tr>
<tr>
<td>Blackburn Telephone Area</td>
<td>West, R. A.</td>
<td>Unestablished Skilled Workman</td>
<td>Signalman, Royal Signals</td>
</tr>
<tr>
<td>Bradford Telephone Area</td>
<td>Forrell, J.</td>
<td>Skilled Workman, Class II</td>
<td>Sergeant Pilot, R.A.F.</td>
</tr>
<tr>
<td>Bristol Telephone Area</td>
<td>Siddle, F. V.</td>
<td>Unestablished Skilled Workman</td>
<td>Lance Corporal, Beds. and Herts. Regt.</td>
</tr>
<tr>
<td>Cambridge Telephone Area</td>
<td>Hooper, L. W.</td>
<td>Unestablished Skilled Workman</td>
<td>Sub-Lieutenant, Fleet Air Arm</td>
</tr>
<tr>
<td>Cardiff Telephone Area</td>
<td>Crane, G. C.</td>
<td>Labourer</td>
<td>Corporal, Welsh Guards</td>
</tr>
<tr>
<td>Chester Telephone Area</td>
<td>Cocks, P.</td>
<td>Skilled Workman, Class II</td>
<td>Flight Sergeant Navigator, R.A.F.</td>
</tr>
<tr>
<td>Chester Telephone Area</td>
<td>Golding, R.</td>
<td>Skilled Workman, Class II</td>
<td>Sergeant, R.A.F.</td>
</tr>
<tr>
<td>Dundee Telephone Area</td>
<td>McKillop, J.</td>
<td>Skilled Workman, Class II</td>
<td>Lieutenant, Black Watch</td>
</tr>
<tr>
<td>Edinburgh Telephone Area</td>
<td>Finlayson, W. D.</td>
<td>Skilled Workman, Class II</td>
<td>Signalman, Royal Signals</td>
</tr>
<tr>
<td>Edinburgh Telephone Area</td>
<td>Russell, J. A. C.</td>
<td>Skilled Workman, Class II</td>
<td>Warrant Officer, R.A.F.</td>
</tr>
<tr>
<td>Engineering Department</td>
<td>Cody, J.</td>
<td>Cleaner</td>
<td>Private, South Wales Borderers</td>
</tr>
<tr>
<td>Engineering Department</td>
<td>Gardner, J. W.</td>
<td>Mechanic-in-Charge, Grade I</td>
<td>Major, Royal Electrical and Mechanical Engineers</td>
</tr>
<tr>
<td>Engineering Department</td>
<td>Harrison, J. H.</td>
<td>Staff Officer</td>
<td>Lieutenant, Grenadier Guards</td>
</tr>
<tr>
<td>Engineering Department</td>
<td>Levens, E. D.</td>
<td>Unestablished Skilled Workman</td>
<td>Flight Officer, R.A.F.</td>
</tr>
<tr>
<td>Engineering Department</td>
<td>Peacock, F. J.</td>
<td>Unestablished Skilled Workman</td>
<td>Surgeon, R.A.F.</td>
</tr>
<tr>
<td>Engineering Department</td>
<td>Timpay, K. A.</td>
<td>Skilled Workman, Class II</td>
<td>Leading Aircraftman, R.A.F.</td>
</tr>
<tr>
<td>Glasgow Telephone Area</td>
<td>Clark, D.</td>
<td>Skilled Workman, Class II</td>
<td>Signalman, Royal Signals</td>
</tr>
<tr>
<td>Glasgow Telephone Area</td>
<td>Sheridan, C. H.</td>
<td>Unestablished Skilled Workman</td>
<td>Warrant Officer, R.A.F.</td>
</tr>
<tr>
<td>Glasgow Telephone Area</td>
<td>Soutar, R. A.</td>
<td>Unestablished Skilled Workman</td>
<td>Sergeant, R.A.F.</td>
</tr>
<tr>
<td>Guildford Telephone Area</td>
<td>Keeney, R. W.</td>
<td>Skilled Workman, Class II</td>
<td>Sergeant Air Gunner, R.A.F.</td>
</tr>
<tr>
<td>Lincoln Telephone Area</td>
<td>Pratt, D.</td>
<td>Unestablished Skilled Workman</td>
<td>Signalman, Royal Signals</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Faragher, C. R.</td>
<td>Skilled Workman, Class II</td>
<td>Flight Sergeant, R.A.F.</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Lewis, A.</td>
<td>Skilled Workman, Class II</td>
<td>Sergeant, R.A.F.</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Bright, R. W.</td>
<td>Skilled Wo kman, Class I</td>
<td>Private, Highland Regiment</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Cocks, W. E.</td>
<td>Unestablished Skilled Workman</td>
<td>Sergeant, R.A.F.</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Harman, J. H.</td>
<td>Skilled Workman, Class II</td>
<td>Private, Highland Regiment</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Jackson, D. H.</td>
<td>Unestablished Skilled Workman</td>
<td>Sergeant, R.A.F.</td>
</tr>
<tr>
<td>London Telecommunications Region</td>
<td>Jacques, M. B.</td>
<td>Skilled Workman, Class II</td>
<td>Private, South Wales Borderers</td>
</tr>
</tbody>
</table>
1945 April

London Telecommunications Region
Padddison, J. E. ... Tradesman Wiremen ... Flight Sergeant, R.A.F.

London Telecommunications Region
Pemberton, D.W. ... Labourer ... Bombardier, Maritime R.A.

London Telecommunications Region
Rowe, J. E. ... Skilled Workman, Class II ... Sergeant, Essex Regiment

London Telecommunications Region
Taylor, E. C. ... Labourer ... Private, South Wales Borderers

London Telecommunications Region
Vince, D. T. ... Unestablished skilled Workman ... Sergeant, R.A.F.

London Telecommunications Region
Waters, V. A. ... Unestablished Skilled Workman ... Sergeant, R.A.F.

Manchester Telephone Area
Kenyan, A. T. ... Unestablished Skilled Workman ... Pilot Officer, R.A.F.

Middlesbrough Telephone Area
Cotton, E. R. ... Skilled Workman, Class II ... Sergeant, R.A.F.

Newcastle-on-Tyne Telephone Area
Fender, J. D. ... Unestablished Skilled Workman ... Lance Corporal, Royal Signals

Nottingham Telephone Area
Casajuna, R. D. ... Unestablished Skilled Workman ... Sergeant, Flight R.A.F.

Peterborough Telephone Area
Thorne, N. W. ... Unestablished Skilled Workman ... Pilot Officer, R.A.F.

Scotland West Telephone Area
Davidson, A. B. ... Skilled Workman, Class II ... Sergeant, Royal Signals

Scotland West Telephone Area
Midleston, D. ... Skilled Workman, Class II ... Captain, Royal Artillery

Southampton Telephone Area
Poyner, H. R. ... Youth-in-Training ... Sub-Lieutenant, Fleet Air Arm

Stoke-on-Trent Telephone Area
Genno, E. N. ... Unestablished Skilled Workman ... Sergeant Air Gunner, R.A.F.

Tunbridge Wells Telephone Area
Seaward, G. L. ... Unestablished Skilled Workman ... Driver, Royal Signals

York Telephone Area
Townshend, E. ... Inspector ... Commissioned Gunner, R.N.

Recent Awards
The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:—

While serving with the Armed Forces, including Home Guard, or on Post Office Duty.

Aberdeen Telephone Area ... Byres, W. S. ... Skilled Workman, Class II ... Sergeant (now Lt.) ... Mentioned in Despatches

Birmingham Telephone Area ... Parker, F. G. ... Skilled Workman, Class II ... Royal Signals 

Bradford Telephone Area ... Askew, E. A. ... Skilled Workman, Class II ... R.A.F.

Brighton Telephone Area ... Laker, W. J. J. ... Draughtsman, Class II ... Flying Officer, R.A.F.

Bristol Telephone Area ... Frampton, H. J. ... Skilled Workman, Class II ... Staff Sergeant, Home Guard

Engineering Department ... Calverley, C. E. ... Executive Engineer ... Sergeant, Royal Signals

H.M.T.S. ... Lerech, W. H. ... Commander ... Member of the Order of the British Empire

H.M.T.S. ... Nairne, I. U. D. ... Second Officer ... Service Cross

H.M.T.S. ... Oates, J. G. B. ... Commander ... Service Cross

Hull Telephone Area ... Thompson, W. H. ... Inspector ... Member of the Order of the British Empire

Lancaster Telephone Area ... Gilpin, F. A. ... Unestablished Draughtsman ... Sub-Lieut., R.N.V.R.

London Telephone Communications Region
White, R. J. ... Skilled Workman, Class II ... Sergeant, Royal Signals

Manchester Telephone Area
Conolly, C. F. ... Chief Inspector ... Major, Home Guard

Norwich Telephone Area ... Ball, H. J. ... Skilled Workman, Class I ... Sergeant, Home Guard

Oxford Telephone Area ... Gilles, J. J. ... Skilled Workman, Class I ... Major, Home Guard

Portsmouth Telephone Area
Neill, H. F. ... Skilled Workman, Class I ... Flight Lieutenant, R.A.F.

Taunton Telephone Area ... Canever, R. B. ... Skilled Workman, Class II ... Major, Home Guard

York Telephone Area ... Jones, F. ... Telephone Manager ... Brigadier, Royal Signals

Lancaster Telephone Area ... Twaddle, W. D. ... Skilled Workman, Class I ... Distinguished Flying Officer, R.A.F.

London Telephone Communications Region
Coomly, C. F. ... Chief Inspector ... Major, Home Guard

Norwich Telephone Area ... Ball, H. J. ... Chief Inspector ... Sergeant, Royal Signals

Oxford Telephone Area ... Gilles, J. J. ... Skilled Workman, Class II ... Sergeant, Home Guard

Portsmouth Telephone Area
Neill, H. F. ... Skilled Workman, Class I ... Major, Home Guard

Taunton Telephone Area ... Canever, R. B. ... Flight Lieutenant, R.A.F.

York Telephone Area ... Jones, F. ... Telephone Manager ... Brigadier, Royal Signals

Regional Notes

Home Counties Region

LEAD COVERED CABLE ATTACKED BY WOOD WASP.

An interesting and somewhat unusual cause of faults in underground cables occurred during December, 1944, in the locality of Rackheath, near Norwich. The larva of the wood wasp (Sirex gigas) had bored three holes in the lead sheath of a piece of 14/20 lead cable, causing a low insulation fault.

The construction was non-standard inasmuch as the 14/20 cable was buried direct in the soil and terminated at about 3 ft. above ground level on a terminal block fixed to an unsocketed larch pole which had probably been felled 12 months previously, and the larva eating its way from within the larch pole eventually reached the lead cable 3 in. below ground where it was touching the polythene. The lead sheath was pierced and the fault developed.

The female wood wasp is equipped with an ovipositor about 4 in. long and two minute saws with which it is able to saw into the wood and deposit its eggs, generally five to seven. It takes about four weeks for the larva to eat its way out of the eggs and after which they proceed to bore a tunnel at right angles to the original egg tunnel, and in approximately 24 to 3 years each grub will eat a tunnel from 6 to 12 in. long.

From the larval stage it enters the pupal stage, and for the last five or six weeks occupies a pupal cell about 4 in. beneath the surface.

In the particular case in question it appears that the larva had reached the surface late in the year due to its being below ground, and carried on gnawing into the lead. The surface of 9 ft. of pole had holes at 3 or 4 in. spacing throughout its entire area.

The photographs (Figs. 1 and 2) show very clearly the effect of the larva on timber and lead, but do not show one of the main characteristics of the larva which is a sharp point at the tail end, which is sketched in Fig. 3.

This case is not isolated as a similar incident occurred when the Norwich-Goldthill-North Walsham cable was laid in June, 1939. The contractors had to use wood boxers as a temporary measure, and by chance a wood wasp was emerging from the pupal stage and gnawed its way from the wood through the lead sheath of the cable, and was carrying on into the copper conductors where its presence was detected by the low insulation. It was killed by electrocution when the conductor was charged.

FIG. 1—EFFECT OF LARVA ON TIMBER.

FIG. 2—EFFECT OF LARVA ON LEAD.
Notes and Comments

1945 July

Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:

While serving with the Armed Forces, or on Post Office Duty:

Belfast Telephone Area
- Kelly, J. (Unestablished Skilled Workman, Class II)
- Unestablished Skilled Workman, Class II

Birmingham Telephone Area
- Hanson, L. P. (Skilled Workman, Class II)
- Staff Sergeant, Royal Signals
- Unestablished Skilled Workman, Class II

Bradford Telephone Area
- Berry, M. W. (Skilled Workman, Class II)
- Signalman, Royal Signals
- Sergeant Navigator, R.A.F.

Brighton Telephone Area
- Dyer, W. A. (Unestablished Skilled Workman, Class II)
- Pilot Officer, R.A.F.

Bristol Telephone Area
- Walker, J. D. (Skilled Workman, Class II)
- Pilot Officer, R.A.F.
- Lance Corporal, Royal Signals

Cambridge Telephone Area
- Jones, E. S. (Unestablished Draughtsman, Class II)
- Flight Sergeant, R.A.F.

Billing Telephone Area
- Thount, J. (Skilled Workman, Class II)
- Pilot Officer, R.A.F.

Edinburgh Telephone Area
- Younger, J. W. (Unestablished Skilled Workman, Class II)
- Flight Sergeant, R.A.F.
- Sergeant Pilot, R.A.F.

Engineering Department
- Arthur, J. J. (Unestablished Skilled Workman, Class II)
- On Post Office Duty
- Captain, Decean Horse, R.A.F.

Engineering Department
- Grigson, G. W. (Chief Cook)
- On Post Office Duty
- Sergeant, R.A.F.

Engineering Department
- McCallum, D. A. (Leading Stoker)
- On Post Office Duty
- Pilot Officer, R.A.F.

Engineering Department
- Richardson, F. J. (Unestablished Skilled Workman, Class II)
- Flight Lieutenant, R.A.F.

Engineering Department
- Silverman, A. L. (Clerical Officer)
- Lieutenant, R.N.V.R.

Engineering Department
- Squires, F. W. (Unestablished Skilled Workman, Class II)
- Flight Sergeant, R.A.F.

Engineering Department
- Thomas, R. J. (Fourth Engineer)
- On Post Office Duty
- Corporal, Highland Light Infantry

Glasgow Telephone Area
- Blackie, C. M. (Labourer)
- On Post Office Duty
- Lance Corporal, Royal Corps of Signals

London Telecommunications Region
- Assell, F. N. (Skilled Workman, Class II)
- Sergeant, Royal Air Force

London Telecommunications Region
- Ball, D. A. J. W. (Skilled Workman, Class II)
- Pilot Officer, R.A.F.

London Telecommunications Region
- Benton, D. (Skilled Workman, Class II)
- Pilot Officer, R.A.F.

London Telecommunications Region
- Broadby, J. R. (Unestablished Skilled Workman, Class II)
- Flying Officer, R.A.F.

London Telecommunications Region
- Cooke, L. A. (Unestablished Skilled Workman, Class II)
- Sergeant, R.A.F.

London Telecommunications Region
- Enderer, L. H. (Skilled Workman, Class II)
- Flying Officer, R.A.F.

London Telecommunications Region
- Hosier, F. (Unestablished Skilled Workman, Class II)
- Pilot Officer, R.A.F.

London Telecommunications Region
- Marshall, W. C. (Skilled Workman, Class II)
- Flight Officer, Yeomanry

London Telecommunications Region
- Noyes, P. R. (Unestablished Skilled Workman, Class II)
- Pilot Officer, R.A.F.

London Telecommunications Region
- Potter, R. G. (Unestablished Skilled Workman, Class II)
- Sergeant, R.A.F.

London Telecommunications Region
- Purcell, S. H. (Skilled Workman, Class II)
- Signalman, Royal Signals

Recent Awards

The Board of Editors has with great pleasure announced the honours recently conferred on the following members of the Engineering Department:

While serving with the Armed Forces, including the Home Guard, or on Post Office Duty:

Aberdeen Telephone Area
- Duguid, R. M. (Skilled Workman, Class II)
- Corporal, Royal Signals
- American Bronze Star

Belfast Telephone Area
- Butten, J. T. (Skilled Workman, Class II)
- Corporal, R.A.F.
- Mentioned in Despatches

Belfast Telephone Area
- O'Brien, E. (Unestablished Skilled Workman, Class II)
- Flying Officer, R.A.F.

Belfast Telephone Area
- O'Brien, E. (Unestablished Skilled Workman, Class II)
- Service Engineer, R.N.V.R.

Belfast Telephone Area
- Ware, D. (Assistant Engineer, Royal Signals)
- Member of the Order of the British Empire

Birmingham Telephone Area
- Morvan, C. A. (Unestablished Skilled Workman, Class II)
- Air Fitter (I), Fleet Air Arm
- Member of the Order of the British Empire

Blackburn Telephone Area
- Laycock, E. F. (Unestablished Skilled Workman, Class II)
- Signalman, Royal Signals

Blackburn Telephone Area
- Pilkington, H. (Unestablished Skilled Workman, Class II)
- Flying Officer, R.A.F.

Blackburn Telephone Area
- Stott, J. (Skilled Workman, Class II)
- Lieutenant, Royal Signals

Canterbury Telephone Area
- Chilton, C. C. H. (Inspector)
- On Post Office Duty

Canterbury Telephone Area
- Cornford, R. J. P. (Skilled Workman, Class II)
- Chief Inspector

Canterbury Telephone Area
- Pritchard, D.W.G. (Unestablished Skilled Workman, Class II)
- On Post Office Duty

Canterbury Telephone Area
- Scott, R. S. (Chief Inspector)
- On Post Office Duty

Cardiff Telephone Area
- Rymer, N. B. (Inspector)
- Major, Royal Signals

London Telecommunications Region
- Roads, G. H. (Unestablished Skilled Workman, Class II)
- Aircraftman, Class II

London Telecommunications Region
- Shepherd, P. A. (Unestablished Skilled Workman, Class II)
- Flight Sergeant, R.A.F.

London Telecommunications Region
- Thomas, K. V. (Skilled Workman, Class II)
- Warrant Officer, R.A.F.

Newcastle - on - Tyne Tele­phone Area
- Cusworth, F. H. (Unestablished Skilled Workman, Class II)
- Flying Officer, R.A.F.
Notes and Comments

Roll of Honour
The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:

While serving with the Armed Forces, or on Post Office Duty.

Belfast Telephone Area... Kelly, J. ... Unestablished Skilled Workman ... Pilot, Royal Signals... R.A.F.
Birmingham Telephone Area... Thoild, J. ... Unestablished Skilled Workman ... Captain, Royal Signals... R.A.F.
Birmingham Telephone Area... Wimpson, L. ... Skilled Workman, Class II ... Officer, Royal Signals... R.A.F.
Birmingham Telephone Area... Dyer, W. A. ... Unestablished Skilled Workman ... Sergeant, Royal Signals... R.A.F.
Bristol Telephone Area... Walker, J. D. ... Skilled Workman, Class II ... Pilot, Royal Air Force... R.A.F.
Bristol Telephone Area... Wardraper, J. D. ... Skilled Workman, Class II ... Lance Corporal, Royal Signals... R.A.F.
Cambridge Telephone Area... Jones, E. S. ... Unestablished Draughtsman ... Flight Sergeant, R.A.F.
Colchester Telephone Area... Whale, H. E. ... Skilled Workman, Class II ... Flight Engineer, R.A.F.
Dundee Telephone Area... Younger, J. W. ... Unestablished Skilled Workman ... Sergeant, R.A.F.
Edinburgh Telephone Area... Stewartfield, A. ... Unestablished Skilled Workman ... Flight Sergeant, R.A.F.
Edinburgh Telephone Area... Grigson, G. W. ... Chief Cook ... On Post Office Duty...
Engineering Department... McCallum, D. A. ... Leading Stoker ... On Post Office Duty...
Engineering Department... Richardson, P. J. ... Clerical Officer ... On Post Office Duty ...
Engineering Department... Thomas, R. J. ... Unestablished Skilled Workman ... Flight Sergeant, R.A.F.
Engineering Department... Thornburrow, W. ... Fourth Engineer ... On Post Office Duty...
Glasgow Telephone Area... Blackie, C. M. ... Labourer ... Corporal, Highland Light Infantry...
Glasgow Telephone Area... McFadyen, J. M. ... Skilled Workman, Class II ... Lance Corporal, Royal Signals... R.A.F.
Gloucester Telephone Area... Bray, D. ... Unestablished Skilled Workman ... Pilot, Royal Air Force...
Leeds Telephone Area... Tatham, K. R. ... Skilled Workman, Class II ... Pilot, Royal Air Force...
Liverpool Telephone Area... Baker, W. S. ... Unestablished Skilled Workman ... Flight Lieutenant, R.A.F.
Liverpool Telephone Area... Blythe, W. J. ... Skilled Workman, Class II ... Lance Corporal, Royal Signals... R.A.F.
Liverpool Telephone Area... Jackson, F. ... Unestablished Skilled Workman ... Aircraftman, Class II... R.A.F.
London Telecommunications Region... Ansell, F. N. ... Skilled Workman, Class II ... Sergeant, Royal Air Force...
London Telecommunications Region... Ball, D. A. J. W. ... Skilled Workman, Class II ... Flying Officer, R.A.F.
London Telecommunications Region... Benton, D. ... Skilled Workman, Class II ... Lieutenant, Royal Signals... R.A.F.
London Telecommunications Region... Brodby, J. R. ... Unestablished Skilled Workman ... Flying Officer, R.A.F.
London Telecommunications Region... Cooke, L. A. ... Unestablished Skilled Workman ... Sergeant, R.A.F.
London Telecommunications Region... Ellerker, L. H. ... Skilled Workman, Class II ... Flying Officer, R.A.F.
London Telecommunications Region... Hosier, F. ... Unestablished Skilled Workman ... Flying Officer, R.A.F.
London Telecommunications Region... Marshall, W. C. ... Skilled Workman, Class II ... Trooper, Staffordshire Yeomanry... R.A.F.
London Telecommunications Region... Noyes, P. R. ... Unestablished Skilled Workman ... Pilot, Royal Air Force...
London Telecommunications Region... Potter, R. G. ... Unestablished Skilled Workman ... Sergeant, R.A.F.
London Telecommunications Region... Pursell, S. H. ... Skilled Workman, Class II ... Signalman, Royal Signals... R.A.F.
London Telecommunications Region... Roads, G. H. ... Unestablished Skilled Workman ... Aircraftman, Class II... R.A.F.
London Telecommunications Region... Shepherd, P. A. ... Unestablished Skilled Workman ... Flight Sergeant, R.A.F.
London Telecommunications Region... Thomas, K. V. ... Skilled Workman, Class II ... Warrant Officer, R.A.F.
London Telecommunications Region... Foster, A. J. ... Skilled Workman, Class II ... Flight Sergeant, R.A.F.
London Telecommunications Region... Greening, E. T. ... Unestablished Skilled Workman ... Flight Sergeant, R.A.F.
London Telecommunications Region... Elliott, G. H. ... Skilled Workman, Class II ... Flight Sergeant, R.A.F.
London Telecommunications Region... Munford, M. G. ... Unestablished Skilled Workman ... Flight Sergeant, R.A.F.
London Telecommunications Region... Clement, C. R. ... Skilled Workman, Class II ... Flight Sergeant, R.A.F.
London Telecommunications Region... Hunter, E. ... Skilled Workman, Class II ... Flight Sergeant, R.A.F.
London Telecommunications Region... Preston Telephone Area... Roach, W. ... Skilled Workman, Class II ... Flight Sergeant, R.A.F.
London Telecommunications Region... Dunstone, F. V. J. ... Skilled Workman, Class II ... Flight Sergeant, R.A.F.
London Telecommunications Region... Jones, R. R. ... Skilled Workman, Class II ... Flight Sergeant, R.A.F.
London Telecommunications Region... Cadman, J. ... Skilled Workman, Class II ... Private, Royal Army Ordinance Corps...
London Telecommunications Region... Green, B. G. ... Unestablished Skilled Workman ... Flight Sergeant, R.A.F.
London Telecommunications Region... Heenan, J. P. ... Chief Inspector ... Lieutenant, Royal Signals... R.A.F.
London Telecommunications Region... Evans, E. J. ... Unestablished Skilled Workman ... Corporal, Royal Signals... R.A.F.
London Telecommunications Region... Elickington, G. F. ... Skilled Workman, Class I ... Flying Officer, R.A.F.
London Telecommunications Region... Cornell, R. P. ... Skilled Workman, Class I ... Flying Officer, R.A.F.
London Telecommunications Region... Pritchard, D.W.G. ... Unestablished Skilled Workman ... Flying Officer, R.A.F.
London Telecommunications Region... Scott, R. S. ... Chief Inspector ... On Post Office Duty...
London Telecommunications Region... Rymer, N. B. ... Inspector ... Major, Royal Signals... R.A.F.

1945 July

Recent Awards
The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:

While serving with the Armed Forces, including the Home Guard, or on Post Office Duty.

Aberdeen Telephone Area... Duguid, R. M. ... Skilled Workman, Class II ... American Bronze Star...
Belfast Telephone Area... Butten, J. T. ... Skilled Workman, Class II ... Corporal, R.A.F...
Belfast Telephone Area... O'Brien, E. ... Unestablished Skilled Workman ... Flying Officer, R.A.F.
Belfast Telephone Area... O'Brien, E. ... Unestablished Skilled Workman ... Service Order...
Belfast Telephone Area... Warde, D. ... Assistant Engineer ... Major, Royal Signals... R.A.F.
Birmingham Telephone Area... Morvan, C. A. ... Unestablished Skilled Workman ... Air Fitter (I), Fleet Air Arm...
Birmingham Telephone Area... Morvan, C. A. ... Unestablished ... Signalman, Royal Signals...
Blackburn Telephone Area... Laycock, E. F. ... Unestablished Skilled Workman ... Flying Officer, R.A.F.
Blackburn Telephone Area... Pickington, H. ... Unestablished Skilled Workman ... Sergeant, Royal Signals... R.A.F.
Blackburn Telephone Area... Stott, J. ... Skilled Workman, Class II ... Sergeant, R.A.F.
Blackburn Telephone Area... Törn, J. ... Skilled Workman, Class II ... Lieutenant, Royal Signals... R.A.F.
Canterbury Telephone Area... Chilton, C. C. H. ... Inspector ... On Post Office Duty ...
Canterbury Telephone Area... Cornford, R. J. P. ... Skilled Workman, Class I ... H.M. the King ...
Canterbury Telephone Area... Törn, J. ... Skilled Workman ... On Post Office Duty ...
Canterbury Telephone Area... Scutt, R. S. ... Chief Inspector ... On Post Office Duty ...
Cardiff Telephone Area... Rymer, N. B. ... Inspector ... Major, Royal Signals... R.A.F.
Cardiff Telephone Area... H. M. the King ...
Cardiff Telephone Area... H. M. the King ... Member of the Order of the British Empire... R.A.F.
Notes and Comments

1945 October

Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:—

While serving with the Armed Forces.

Bedford Telephone Area
Patmore, G. H. Unestablished Skilled Workman Gunner, Royal Artillery

Birmingham Telephone Area
Bishop, A. W. Skilled Workman, Class II Pilot Officer, R.A.F.

Birmingham Telephone Area
Dawson, F. J. Unestablished Skilled Workman Sergeant, R.A.F.

Birmingham Telephone Area
Green, T. W. Skilled Workman, Class II Sergeant, R.A.F.

Birmingham Telephone Area
Lewis, J. F. Skilled Workman, Class II Flight Sergeant, R.A.F.

Birmingham Telephone Area
Sandall, B. Unestablished Skilled Workman Pilot Officer, R.A.F.

Birmingham Telephone Area
Twining, S. G. Unestablished Skilled Workman Petty Officer Airman, R.R.

Bournemouth Telephone Area
Patch, J. W. Unestablished Skilled Workman Signalman, Royal Signals

Brighton Telephone Area
Rolinson, C. F. Skilled Workman, Class II Captain, Royal Signals

Bristol Telephone Area
Appley, W. W. Skilled Workman, Class II Driver, R.A.S.C.

Bristol Telephone Area
Curtis, W. F. T. Unestablished Skilled Workman Signalman, Royal Signals

Canterbury Telephone Area
Coleman, R. F. Skilled Workman, Class II Sergeant, R.A.F.

Engineering Department
Frobisher, E. F. H. Skilled Workman, Class II Lieutenant, Royal Signals

Engineering Department
Stringer, R. Unestablished Skilled Workman Flying Officer, R.A.F.

Glasgow Telephone Area
Winter, J. Skilled Workman, Class II Sergeant, R.A.F.

Guildford Telephone Area
James, A. E. Skilled Workman, Class II Lance Corporal, Royal Signals

Guildford Telephone Area
King, R. J. Skilled Workman, Class II Flight Sergeant, R.A.F.

Liverpool Telephone Area
Davey, J. E. Skilled Workman, Class I Signalman, Royal Signals

Liverpool Telephone Area
Hall, L. A. Unestablished Skilled Workman Aircraftman, Class II, R.A.F.

London Telecommunications Region
Turner, L. C. Skilled Workman, Class II Flying Officer, R.A.F.

London Telecommunications Region
Armitage, H. Skilled Workman, Class II Signalman, Royal Signals

London Telecommunications Region
Bailey, F. C. Skilled Workman, Class II Sub-Lieutenant, Fleet Air Arm, R.N.

London Telecommunications Region
Butcher, K. H. Skilled Workman, Class II Sergeant, R.A.F.

London Telecommunications Region
Cullen, E. R. Unestablished Skilled Workman Driver, R.A.S.C.

London Telecommunications Region
Derrett, D. S. B. Skilled Workman, Class II Flight Sergeant, R.A.F.

London Telecommunications Region
Dibsdall, W. J. L. Skilled Workman, Class II Signalman, Royal Signals

London Telecommunications Region
Evans, W. R. Skilled Workman, Class II Signalman, Royal Signals

London Telecommunications Region
Harrison, E. H. Skilled Workman, Class I Flying Officer, R.A.F.

London Telecommunications Region
Herbert, F. W. Unestablished Skilled Workman Sergeant, R.A.F.

London Telecommunications Region
Hollow, G. S. Unestablished Skilled Workman Driver, R.A.S.C.

London Telecommunications Region
Langston, F. A. Skilled Workman, Class II Sergeant, Beds. & Herts. Regiment

London Telecommunications Region
Lindsay, J. J. Labourer Private, Essex Regiment

London Telecommunications Region
Marjoram, W. A. Skilled Workman, Class II Lieutenant, King’s African Rifles

London Telecommunications Region
Mooring, K. A. Skilled Workman, Class II Flight Lieutenant, R.A.F.

London Telecommunications Region
Parker, E. W. Youth-in-Training Sergeant, R.A.F.

London Telecommunications Region
Trant, A. D. Unestablished Skilled Workman Signalman, Royal Signals

London Telecommunications Region
Wors, R. J. Unestablished Skilled Workman Leading Aircraftman, R.A.F.

Newcastle on Tyne Telephone Area
Browne, W. N. Skilled Workman, Class II Leading Aircraftman, R.A.F.

Norwich Telephone Area
Bryant, P. Skilled Workman, Class II Sergeant, R.A.F.

Norwich Telephone Area
Waddington, S. A. Inspector On Post Office Duty

Portsmouth Telephone Area
Morrison, R. M. Unestablished Skilled Workman Flying Officer, R.A.F.

Scotland West Telephone Area
Murray, G. A. B. Skilled Workman, Class II Signalman, Royal Signals

Sheffield Telephone Area
Hardy, L. Unestablished Draughtsman Sub-Lieutenant, R.N.

Tunbridge Wells Telephone Area
Fayers, R. C. Skilled Workman, Class II Flight Sergeant, R.A.F.

Recent Awards

The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:—

While serving with the Armed Forces, or on Post Office Duty.

Aberdeen Telephone Area
Leith, W. F. Unestablished Skilled Workman Lance Corporal, Royal Signals

Aberdeen Telephone Area
Neilson, J. D. Skilled Workman, Class I Skilled Workman, Class I

Belfast Telephone Area
Ferguson, C. H. Draughtsman, Class II Corporal, Royal Signals

Belfast Telephone Area
McKee, R. M. Skilled Workman, Class II Sergeant, R.E.

Birmingham Telephone Area
Cooper, H. Chief Inspector On Post Office Duty

Birmingham Telephone Area
Yerbury, R. A. Skilled Workman, Class II Signalman, Royal Signals

Bournemouth Telephone Area
Faithful, A. J. Inspector On Post Office Duty

Bradford Telephone Area
Speckley, E. Inspector Major, Royal Signals

Canterbury Telephone Area
Martin, L. J. R.E.M. Skilled Workman, Class I Skilled Workman, Class I

Cardiff Telephone Area
McCarthy, A. L. Skilled Workman, Class I Flying Officer, R.A.F.

Cardiff Telephone Area
Rowell, P. D. Skilled Workman, Class II Sergeant, Royal Signals

Colchester Telephone Area
Williams, N. R. Inspector Captain, Royal Signals

Edinburgh Telephone Area
Macpherson, C. J. Skilled Workman, Class I Signalman, Royal Signals

Edinburgh Telephone Area
Mann, J. Skilled Workman, Class II Flight Sergeant, R.A.F.

Engineering Department
King, R. E. Skilled Workman, Class II Corporal, Royal Signals

Engineering Department
Leckenby, A. J. Executive Engineer Major, Royal Signals

Engineering Department
Robbins, R. A. D. Inspector Captain, Royal Signals

Lancaster Telephone Area
Chew, T. E. Skilled Workman, Class II Sergeant, Royal Signals

Lancaster Telephone Area
Grundy, F. E. Skilled Workman, Class II Skilled Workman, Class II

Leeds Telephone Area
Smith, C. D. Skilled Workman, Class II Flying Officer, R.A.F.

Leeds Telephone Area
Taylor, G. N. Skilled Workman, Class I Captain, Royal Signals

Lincoln Telephone Area
Wilkes, W. D. G. Skilled Workman, Class II Flight Lieutenant, R.A.F.

...
Notes and Comments

Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:—

While serving with the Armed Forces.

Bedford Telephone Area
- Patmore, G. H. Unestablished Skilled Workman
- Gunner, Royal Artillery
- Pilot Officer, R.A.F.

Birmingham Telephone Area
- Bishop, A. W. Skilled Workman, Class II
- Sergeant, R.A.F.

Birmingham Telephone Area
- Dawson, P. J. Unestablished Skilled Workman
- Pilot Officer, R.A.F.

Birmingham Telephone Area
- Green, T. W. Skilled Workman, Class II
- Flight Sergeant, R.A.F.

Birmingham Telephone Area
- Lewis, J. F. Skilled Workman, Class II
- Sergeant, R.A.F.

Birmingham Telephone Area
- Sandall, B. Unestablished Skilled Workman
- Pilot Officer, R.A.F.

Birmingham Telephone Area
- Twining, S. G. Unestablished Skilled Workman
- Petty Officer Airman, R.N.

Bournemouth Telephone Area
- Patch, J. W. Unestablished Skilled Workman
- Captain, Royal Signals

Brighton Telephone Area
- Rollison, C. F. Skilled Workman, Class II
- Driver, R.A.C.

Bristol Telephone Area
- Appleye, W. W. Skilled Workman, Class II
- Signalman, Royal Signals

Bristol Telephone Area
- Curtis, W. F. T. Unestablished Skilled Workman
- Signalman, Royal Signals

Canterbury Telephone Area
- Coleman, R. F. Skilled Workman, Class II
- Sergeant, R.A.F.

Engineering Department
- Froebisher, E. F. H. Skilled Workman, Class II
- Lieutenant, Royal Signals

Engineering Department
- Stringer, R. Unestablished Skilled Workman
- Flying Officer, R.A.F.

Glasgow Telephone Area
- Winter, J. Skilled Workman, Class II
- Sergeant, R.A.F.

Glasgow Telephone Area
- James, A. E. Skilled Workman, Class II
- Lance Corporal, Royal Signals

Glasgow Telephone Area
- King, R. J. Skilled Workman, Class II
- Flight Sergeant, R.A.F.

Liverpool Telephone Area
- Davey, J. E. Skilled Workman, Class I
- Signalman, Royal Signals

Liverpool Telephone Area
- Hail, A. A. Unestablished Skilled Workman
- Aircraftsman, Class II

Liverpool Telephone Area
- Turner, L. C. Skilled Workman, Class II
- Flying Officer, R.A.F.

Liverpool Telephone Area
- Armitage, H. Skilled Workman, Class II
- Signalman, Royal Signals

London Telecommunications
- Bailey, F. C. Skilled Workman, Class II
- Sub-Lieutenant, Fleet Air Arm.

London Telecommunications
- Butcher, K. H. Skilled Workman, Class II
- Sergeant, R.A.F.

London Telecommunications
- Cullen, E. R. Unestablished Skilled Workman
- Driver, R.A.S.C.

London Telecommunications
- Derrett, D. S. B. Skilled Workman, Class II
- Flight Sergeant, R.A.F.

London Telecommunications
- Dibsdall, W. J. L. Skilled Workman, Class II
- Signalman, Royal Signals

London Telecommunications
- Evans, W. R. Skilled Workman, Class II
- Signalman, Royal Signals

London Telecommunications
- Harrison, E. H. Skilled Workman, Class I
- Flying Officer, R.A.F.

London Telecommunications
- Herbert, F. W. Unestablished Skilled Workman
- Sergeant, R.A.F.

London Telecommunications
- Hollow, G. S. Unestablished Skilled Workman
- Driver, R.A.S.C.

London Telecommunications
- Langston, F. A. Skilled Workman, Class II
- Sergeant, Beds & Herts. Regiment

London Telecommunications
- Lindsay, J. J. Labourer
- Private, Essex Regiment

London Telecommunications
- Marjorcan, W. A. Skilled Workman, Class II
- Lieutenant, King’s African Rifles

London Telecommunications
- Mooring, K. A. Skilled Workman, Class II
- Flight Lieutenant, R.A.F.

London Telecommunications
- Parker, E. W. Youth-in-Training
- Sergeant, R.A.F.

London Telecommunications
- Pratt, A. D. Unestablished Skilled Workman
- Signalman, Royal Signals

London Telecommunications
- Worts, R. J. Unestablished Skilled Workman
- Leading Aircraftsman, R.A.F.

Newcastle - on - Tyne Telephone Area
- Browne, W. N. Skilled Workman, Class II
- Flight Sergeant, R.A.F.

Norwich Telephone Area
- Bryant, P. Skilled Workman, Class II
- Sergeant, R.A.F.

Norwich Telephone Area
- Waddington, S. A. Inspector
- Flight Lieutenant, R.A.F.

Portsmouth Telephone Area
- Morrison, R. M. Unestablished Skilled Workman
- Warrant Officer, Pilot, R.A.F.

Scotland West Telephone Area
- Murray, G. A. B. Skilled Workman, Class II
- Signalman, Royal Signals

Sheffield Telephone Area
- Hardy, L. Unestablished Draughtsman
- Sub-Lieutenant, R.N.

Tunbridge Wells Telephone Area
- Fayers, R. C. Skilled Workman, Class II
- Flight Sergeant, R.A.F.

Recent Awards

The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:—

While serving with the Armed Forces, or on Post Office Duty.

Aberdeen Telephone Area
- Leith, W. F. Unestablished Skilled Workman
- Lance Corporal, Royal Signals
- Mentioned in Despatches

Aberdeen Telephone Area
- Neilson, J. D. Skilled Workman, Class I
- Skilled Workman
- On Post Office Duty

Belfast Telephone Area
- Ferguson, C. H. Draughtsman, Class II
- Corporal, Royal Signals
- Mentioned in Despatches

Belfast Telephone Area
- McKewen, R. M. Skilled Workman, Class II
- Lieutenant, Royal Signals

Birmingham Telephone Area
- Cooper, H. Chief Inspector
- On Post Office Duty

Birmingham Telephone Area
- Yerbury, R. A. Skilled Workman, Class II
- Signalman, Royal Signals
- On Post Office Duty

Bournemouth Telephone Area
- Faithful, A. J. Inspector
- On Post Office Duty

Bradford Telephone Area
- Speechley, E. Inspector
- Major, Royal Signals
- Mentioned in Despatches

Canterbury Telephone Area
- Martin, L. J., R.E.M. Skilled Workman, Class I
- Unestablished Skilled Workman
- On Post Office Duty

Cardiff Telephone Area
- McCarthy, A. L. Skilled Workman, Class I
- Unestablished Skilled Workman
- On Post Office Duty

Cardiff Telephone Area
- Rowell, P. D. Skilled Workman, Class II
- Skilled Workman
- On Post Office Duty

Cardiff Telephone Area
- Williams, N. R. Inspector
- Captain, Royal Signals

Edinburgh Telephone Area
- Macpherson, C. J. Skilled Workman, Class II
- Inspector

Edinburgh Telephone Area
- Mann, J. Skilled Workman, Class II
- Flight Sergeant, R.A.F.

Engineering Department
- King, R. E. Skilled Workman, Class II
- Corporal, Royal Signals
- Mentioned in Despatches

Engineering Department
- Lecock, A. J. Executive Engineer Major, Royal Signals
- Member of the Order of the British Empire

Engineering Department
- Robbins, R. A. D. Inspector
- Captain, Royal Signals
- Mentioned in Despatches

Lancaster Telephone Area
- Chew, T. E. Skilled Workman, Class II
- Sergeant, Royal Signals
- British Empire Medal

Lancaster Telephone Area
- Grundy, F. E. Skilled Workman, Class II
- Skilled Workman
- On Post Office Duty

Leeds Telephone Area
- Smith, C. D. Skilled Workman, Class II
- Flying Officer, R.A.F.

Leeds Telephone Area
- Taylor, G. N. Skilled Workman, Class I
- Captain, Royal Signals
- Mentioned in Despatches

Lincoln Telephone Area
- Wilkes, W. D. G. Skilled Workman, Class II
- Flight Lieutenant, R.A.F.

1945 October
### 1946 January

#### Notes and Comments

**Roll of Honour**

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:

**While serving with the Armed Forces or on Post Office Duty.**

<table>
<thead>
<tr>
<th>Aberdeen Telephone Area</th>
<th>Erskine, R. C.</th>
<th>H.M.T.S. Alert</th>
<th>Skilled Workman, Class II</th>
<th>Signalman, Royal Signals</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Birmingham Telephone Area</em></td>
<td>Dawson, P. J.</td>
<td>H.M.T.S. Alert</td>
<td>Unemployed Skilled Workman</td>
<td>Flying Officer, R.A.F.</td>
</tr>
<tr>
<td><em>Birmingham Telephone Area</em></td>
<td>Oldbury, G. T.</td>
<td>H.M.T.S. Alert</td>
<td>Unemployed Skilled Workman</td>
<td>Flight Sergeant, R.A.F.</td>
</tr>
<tr>
<td><em>Birmingham Telephone Area</em></td>
<td>Perry, J. W.</td>
<td>H.M.T.S. Alert</td>
<td>Skilled Workman, Class II</td>
<td>Lieutenant, R.E.M.E.</td>
</tr>
<tr>
<td>Canterbury Telephone Area</td>
<td>Stevens, W. H. R.</td>
<td>H.M.T.S. Alert</td>
<td>Skilled Workman, Class II</td>
<td>Signalman, Royal Signals</td>
</tr>
<tr>
<td>Chester Telephone Area</td>
<td>Davies, J. E.</td>
<td>H.M.T.S. Alert</td>
<td>Unemployed Skilled Workman</td>
<td>Sergeant, R.A.F.</td>
</tr>
<tr>
<td>Dundee Telephone Area</td>
<td>Smith, A. R.</td>
<td>H.M.T.S. Alert</td>
<td>Skilled Workman, Class II</td>
<td>Signalman, Royal Signals</td>
</tr>
<tr>
<td>Edinburgh Telephone Area</td>
<td>Macfie, A. B.</td>
<td>H.M.T.S. Alert</td>
<td>Skilled Workman, Class II</td>
<td>Sergeant Major, R.E.M.E.</td>
</tr>
<tr>
<td>Engineering Department</td>
<td>Nowell, C. E.</td>
<td>H.M.T.S. Alert</td>
<td>Motor Mechanic</td>
<td>Sergeant Navigator, R.A.F.</td>
</tr>
<tr>
<td>Engineering Department</td>
<td>Phean, F.</td>
<td>H.M.T.S. Alert</td>
<td>Unemployed Skilled Workman</td>
<td>Asst. Engineer</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Voss, L. C.</td>
<td>H.M.T.S. Alert</td>
<td>Seaman Cable Hand</td>
<td>Seaman Cable Hand</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Blainey, R. P.</td>
<td>H.M.T.S. Alert</td>
<td>Chief Steward</td>
<td>Asst. Steward</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Brookshaw, J. C.</td>
<td>H.M.T.S. Alert</td>
<td>Seaman Cable Hand</td>
<td>Seaman Cable Hand</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Booker, E. E.</td>
<td>H.M.T.S. Alert</td>
<td>Stoker</td>
<td>Stoker</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Hutton, G. S.</td>
<td>H.M.T.S. Alert</td>
<td>Seaman Cable Hand</td>
<td>Seaman Cable Hand</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Cawdridge, J.</td>
<td>H.M.T.S. Alert</td>
<td>Third Engineer</td>
<td>Third Engineer</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Cornwall, W. F.</td>
<td>H.M.T.S. Alert</td>
<td>Seaman Cable Hand</td>
<td>Seaman Cable Hand</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Cronin, H. T.</td>
<td>H.M.T.S. Alert</td>
<td>Purser</td>
<td>Purser</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Dellow, E. G. N.</td>
<td>H.M.T.S. Alert</td>
<td>Second Officer</td>
<td>Second Officer</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Demmille, E. J.</td>
<td>H.M.T.S. Alert</td>
<td>Stoker</td>
<td>Stoker</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Dixon, J.</td>
<td>H.M.T.S. Alert</td>
<td>Second Officer</td>
<td>Second Officer</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Dowle, C. J.</td>
<td>H.M.T.S. Alert</td>
<td>Storekeeper</td>
<td>Storekeeper</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Drury, F. A.</td>
<td>H.M.T.S. Alert</td>
<td>Quartermaster</td>
<td>Quartermaster</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Ellis, F. W.</td>
<td>H.M.T.S. Alert</td>
<td>Seaman Cable Hand</td>
<td>Seaman Cable Hand</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Everall, F. F.</td>
<td>H.M.T.S. Alert</td>
<td>Seaman Cable Hand</td>
<td>Seaman Cable Hand</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Fisher, H. C.</td>
<td>H.M.T.S. Alert</td>
<td>Chief Engineer</td>
<td>Chief Engineer</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Gill, F. A.</td>
<td>H.M.T.S. Alert</td>
<td>Seaman Cable Hand</td>
<td>Seaman Cable Hand</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Goddard, A. W.</td>
<td>H.M.T.S. Alert</td>
<td>Seaman Cable Hand</td>
<td>Seaman Cable Hand</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Gregory, A.</td>
<td>H.M.T.S. Alert</td>
<td>Quartermaster</td>
<td>Quartermaster</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Henshaw, F. A.</td>
<td>H.M.T.S. Alert</td>
<td>Carpenter</td>
<td>Carpenter</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Hunter, W. T.</td>
<td>H.M.T.S. Alert</td>
<td>Seaman Cable Hand</td>
<td>Seaman Cable Hand</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Hurford, H. F.</td>
<td>H.M.T.S. Alert</td>
<td>Seaman Cable Hand</td>
<td>Seaman Cable Hand</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Insole, A.</td>
<td>H.M.T.S. Alert</td>
<td>Seaman Cable Hand</td>
<td>Seaman Cable Hand</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Jones, G. H.</td>
<td>H.M.T.S. Alert</td>
<td>Seaman Cable Hand</td>
<td>Seaman Cable Hand</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>King, W. T.</td>
<td>H.M.T.S. Alert</td>
<td>Leading Stoker</td>
<td>Leading Stoker</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Mackey, W. V.</td>
<td>H.M.T.S. Alert</td>
<td>Leading Stoker</td>
<td>Leading Stoker</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>MacLeod, N. A.</td>
<td>H.M.T.S. Alert</td>
<td>Wireless Operator</td>
<td>Wireless Operator</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Mapie, W. J.</td>
<td>H.M.T.S. Alert</td>
<td>Donkeyman</td>
<td>Donkeyman</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Martin, L. G.</td>
<td>H.M.T.S. Alert</td>
<td>Asst. Steward</td>
<td>Asst. Steward</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Miller, J. G.</td>
<td>H.M.T.S. Alert</td>
<td>Ship's Doctor</td>
<td>Ship's Doctor</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Millard, G. H.</td>
<td>H.M.T.S. Alert</td>
<td>Seaman Cable Hand</td>
<td>Seaman Cable Hand</td>
</tr>
<tr>
<td>H.M.T.S. Alert</td>
<td>Myles, J. K.</td>
<td>H.M.T.S. Alert</td>
<td>Commander</td>
<td>Commander</td>
</tr>
</tbody>
</table>

* Rank incorrectly shown as Sergeant in October, 1945, issue.

#### Recent Awards

The Board of Editors has been greatly pleased to record the honours recently conferred on the following members of the Engineering Department:

* Rank incorrectly shown as Sergeant in October, 1945, issue.

**While serving with the Armed Forces.**

<table>
<thead>
<tr>
<th>Bedford Telephone Area</th>
<th>Armour, F. J.</th>
<th>Unemployed Skilled Workman</th>
<th>Class II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chester Telephone Area</td>
<td>Davies, J. E.</td>
<td>Unemployed Skilled Workman</td>
<td>Fourth Engineer</td>
</tr>
<tr>
<td>London Telephone Area</td>
<td>Millward, W. C.</td>
<td>Unemployed Skilled Workman</td>
<td>Second Engineer</td>
</tr>
<tr>
<td>London Telephone Area</td>
<td>Smith, J.</td>
<td>Unemployed Skilled Workman</td>
<td>Third Engineer</td>
</tr>
<tr>
<td>London Telephone Area</td>
<td>Smith, J.</td>
<td>Unemployed Skilled Workman</td>
<td>Fourth Engineer</td>
</tr>
<tr>
<td>London Telephone Area</td>
<td>Smith, J.</td>
<td>Unemployed Skilled Workman</td>
<td>Third Engineer</td>
</tr>
<tr>
<td>London Telephone Area</td>
<td>Smith, J.</td>
<td>Unemployed Skilled Workman</td>
<td>Second Engineer</td>
</tr>
<tr>
<td>London Telephone Area</td>
<td>Smith, J.</td>
<td>Unemployed Skilled Workman</td>
<td>First Engineer</td>
</tr>
<tr>
<td>London Telephone Area</td>
<td>Smith, J.</td>
<td>Unemployed Skilled Workman</td>
<td>Fourth Engineer</td>
</tr>
<tr>
<td>London Telephone Area</td>
<td>Smith, J.</td>
<td>Unemployed Skilled Workman</td>
<td>Third Engineer</td>
</tr>
<tr>
<td>London Telephone Area</td>
<td>Smith, J.</td>
<td>Unemployed Skilled Workman</td>
<td>Fourth Engineer</td>
</tr>
<tr>
<td>London Telephone Area</td>
<td>Smith, J.</td>
<td>Unemployed Skilled Workman</td>
<td>Fourth Engineer</td>
</tr>
</tbody>
</table>

* Mentioned in Despatches.
**Notes and Comments**

**Roll of Honour**

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:

<table>
<thead>
<tr>
<th>Department:</th>
<th>Name</th>
<th>Rank</th>
<th>Category</th>
<th>Date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>H.M.T.S.</td>
<td>Enskine, E. C.</td>
<td>Skilled Workman, Class II</td>
<td>Signalman, Royal Signals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Dawson, P. J.</td>
<td>Unestablished Skilled Workman</td>
<td>Flying Officer, R.A.F.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Oldbury, G. T.</td>
<td>Skilled Workman, Class II</td>
<td>Flight Sergeant, R.A.F.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Perry, J. W.</td>
<td>Skilled Workman, Class II</td>
<td>Lieutenant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Stevens, W. H. R.</td>
<td>Skilled Workman, Class II</td>
<td>Flight Sergeant, R.A.F.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Davies, J. E.</td>
<td>Unestablished Skilled Workman</td>
<td>Signalman, Royal Signals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Smith, A.</td>
<td>Skilled Workman, Class II</td>
<td>Member of the Corps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Coventry, D. K.</td>
<td>Clerical Officer</td>
<td>Lance Corporal, Royal Signals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Perks, F.</td>
<td>Unestablished Skilled Workman</td>
<td>Assistant Engineer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Blakemore, R. F.</td>
<td>Seaman Hand</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Brookshaw, J. C.</td>
<td>Seaman Hand</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Booker, R. E.</td>
<td>Stoker</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Manton, R. S.</td>
<td>Seaman Hand</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Cast, P. W.</td>
<td>Steward</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Cassingham, J.</td>
<td>Third Engineer</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Cornwall, W. F.</td>
<td>Seaman Hand</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Croxin, H. T.</td>
<td>Purser</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Dellow, E. G. N.</td>
<td>Second Officer</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Dernie, E. J.</td>
<td>Stoker</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Diney, J.</td>
<td>Second Officer</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Dowle, C. J.</td>
<td>Stoker</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Drury, F. A.</td>
<td>Quartermaster</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Ellis, P. W.</td>
<td>Seaman Hand</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Everall, P. J.</td>
<td>Seaman Hand</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Fisher, H. C.</td>
<td>Chief Engineer</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Glanfield, H. A.</td>
<td>Seaman Hand</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Godden, A. V.</td>
<td>Seaman Hand</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Gregory, A.</td>
<td>Quartermaster</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Hempsall, F. A.</td>
<td>Carpenter</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Hunter, W. T. C.</td>
<td>Seaman Hand</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Hurford, H. F.</td>
<td>Seaman Hand</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Insole, A.</td>
<td>Service</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Jones, G. H.</td>
<td>Seaman Hand</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>King, W. T.</td>
<td>Leading Stoker</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Mackey, W. Y.</td>
<td>Leading Stoker</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>MacLeod, N. A.</td>
<td>Wireless Operator</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Maple, W. J.</td>
<td>Donkeyman</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Martin, L. S.</td>
<td>Steward</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Millar, J. G.</td>
<td>Ship’s Doctor</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Millard, G. H.</td>
<td>Seaman Hand</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Oates, J. K.</td>
<td>Commander</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Payne, F. W.</td>
<td>Second Cook and Baker</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Peters, G. W.</td>
<td>Seaman Cable Hand</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Phillips, D. C.</td>
<td>Seaman Cable Hand</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Prince, E.</td>
<td>Third Engineer</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Robinson, R. A.</td>
<td>Fourth Engineer</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Sharp, F. G.</td>
<td>Signalman, Royal Signals</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Shepherd, W. E. S.</td>
<td>Seaman Hand</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Skelton, W. G.</td>
<td>Quartermaster</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Smith, E. J.</td>
<td>Stoker</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Smith, W.</td>
<td>Cable Foreman</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Stivey, J. C.</td>
<td>Fourth Officer</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Taws, J. C.</td>
<td>Stoker</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Toner, W. J.</td>
<td>Officer</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Wade, A. G.</td>
<td>Stoker</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Wallsfield, R. C.</td>
<td>Asst. Steward</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Williams, E. H.</td>
<td>Stoker</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Leadbeater, J.</td>
<td>Unestablished Skilled Workman</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Lewis, J. F.</td>
<td>Skilled Workman, Class II</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Davenport, G. G.</td>
<td>Skilled Workman, Class II</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Ready, D. W.</td>
<td>Unestablished Skilled Workman</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.M.T.S.</td>
<td>Bradley, A. A.</td>
<td>Skilled Workman, Class II</td>
<td>On Post Office Duty</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Rank incorrectly shown as Sergeant in October, 1945, issue.

**Recent Awards**

The Board of Editors has learnt with great pleasure of the honours recently conferred on the following members of the Engineering Department:

- *While serving with the Armed Forces.*

**Bedford Telephone Area**
- Armour, F. J.
  - Skilled Workman, Class II
  - Staff Sergeant, R.E.
  - British Empire Medal
  - Mentioned in Despatches

**Brighton Telephone Area**
- Talbot, T. H.
  - Unestablished Skilled Workman
  - Lieutenant, Royal Navy V.R.
  - Mentioned in Despatches
## Staff Changes

<table>
<thead>
<tr>
<th>Name</th>
<th>Region</th>
<th>Date</th>
<th>Name</th>
<th>Region</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.W.1 to Ingr.</td>
<td></td>
<td></td>
<td>S.W.1 to Ingr.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior, E.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
<td>Interior, E.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
</tr>
</tbody>
</table>

## Supplement

The demands of the Victory Number and the amount of paper available have necessitated the suspension of the Supplement for this issue. The Supplement will be supplied as usual with the April 1046 and subsequent Journals.

## Appointment

The Board of Editors offers its congratulations to Col. A. G. McDonald on his promotion from Assistant Staff Engineer to Chief Motor Transport Officer.

## 1946 January

<table>
<thead>
<tr>
<th>Bristol Telephone Area</th>
<th>..</th>
<th>Ricketts, H.</th>
<th>..</th>
<th>Skilled Workman, Class II</th>
<th>Sergeant, Royal Signals</th>
<th>British Empire Medal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambridge Telephone Area</td>
<td>..</td>
<td>Cooper, H. B., D.F.C.</td>
<td>..</td>
<td>Skilled Workman, Class II</td>
<td>Flight Lieutenant, R.A.F.</td>
<td>Distinguished Service Order</td>
</tr>
<tr>
<td>Chester Telephone Area</td>
<td>..</td>
<td>Jones, W. R. M.</td>
<td>..</td>
<td>Skilled Workman, Class II</td>
<td>Sergeant, Royal Signals</td>
<td>Mentioned in Despatches</td>
</tr>
<tr>
<td>Dundee Telephone Area</td>
<td>..</td>
<td>Blyth, W.</td>
<td>..</td>
<td>Skilled Workman, Class II</td>
<td>Sergeant, Royal Signals</td>
<td>Military Medal</td>
</tr>
<tr>
<td>Edinburgh Telephone Area</td>
<td>..</td>
<td>Ferguson, D. D. S.</td>
<td>..</td>
<td>Skilled Workman, Class II</td>
<td>Flying Officer, R.A.F.</td>
<td>Distinguished Flying Cross</td>
</tr>
<tr>
<td>Engineering Department</td>
<td>..</td>
<td>Edwards, H. W. F.</td>
<td>..</td>
<td>Inspector, Class II</td>
<td>Squadron Leader, R.A.F.</td>
<td>Air Force Cross</td>
</tr>
<tr>
<td>Engineering Department</td>
<td>..</td>
<td>Flitt, C. C.</td>
<td>..</td>
<td>Motor Mechanic, Class II</td>
<td>Flight Sergeant, R.A.F.</td>
<td>British Empire Medal</td>
</tr>
<tr>
<td>Engineering Department</td>
<td>..</td>
<td>Kriegel, A. A.</td>
<td>..</td>
<td>Inspector</td>
<td>Major, Royal Signals</td>
<td>Mentioned in Despatches</td>
</tr>
<tr>
<td>Engineering Department</td>
<td>..</td>
<td>Lee, F.</td>
<td>..</td>
<td>Motor Mechanic, Class II</td>
<td>Conductor, R.E.M.E.</td>
<td>British Empire Medal</td>
</tr>
<tr>
<td>Engineering Department</td>
<td>..</td>
<td>Reynolds, E. G.</td>
<td>..</td>
<td>Executive Officer</td>
<td>Company Sergeant</td>
<td>Mentioned in Major, Royal Signals Despatches</td>
</tr>
<tr>
<td>Guildford Telephone Area</td>
<td>..</td>
<td>Hack, J. G. W.</td>
<td>..</td>
<td>Skilled Workman, Class II</td>
<td>Corporal, Royal Signals</td>
<td>Military Medal</td>
</tr>
<tr>
<td>Lancaster Telephone Area</td>
<td>..</td>
<td>Richardson, A.</td>
<td>..</td>
<td>Skilled Workman, Class II</td>
<td>Lance Sergeant, Royal Signals</td>
<td>British Empire Medal</td>
</tr>
<tr>
<td>London Telegraphic Miles, G. E.</td>
<td>..</td>
<td>Richardson, A.</td>
<td>..</td>
<td>Skilled Workman, Class II</td>
<td>Lance Sergeant, Royal Signals</td>
<td>British Empire Medal</td>
</tr>
<tr>
<td>London Telegraphic</td>
<td>..</td>
<td>Stares, W. H.</td>
<td>..</td>
<td>Skilled Workman, Class II</td>
<td>Corporal, Royal Signals</td>
<td>British Empire Medal</td>
</tr>
<tr>
<td>Manchester Telephone Area</td>
<td>..</td>
<td>Carson, L. B.</td>
<td>..</td>
<td>Inspector</td>
<td>Captain, Royal Signals</td>
<td>Member of the Order of the British Empire</td>
</tr>
<tr>
<td>Manchester Telephone Area</td>
<td>..</td>
<td>Jones, F.</td>
<td>..</td>
<td>Skilled Workman, Class II</td>
<td>Corporal, Royal Signals</td>
<td>Military Medal</td>
</tr>
<tr>
<td>Manchester Telephone Area</td>
<td>..</td>
<td>Linfoot, R.</td>
<td>..</td>
<td>Skilled Workman, Class II</td>
<td>Lance Corporal, Royal Signals</td>
<td>Mentioned in Despatches</td>
</tr>
<tr>
<td>Middlesbrough Telephone Area</td>
<td>..</td>
<td>Firth, E.</td>
<td>..</td>
<td>Unestablished</td>
<td>Lance Corporal, Royal Signals</td>
<td>Military Medal</td>
</tr>
<tr>
<td>Northern Ireland Regional</td>
<td>..</td>
<td>Edwards, G. R.</td>
<td>..</td>
<td>Skilled Workman, Class I</td>
<td>Major, Royal Signals</td>
<td>Mentioned in Despatches</td>
</tr>
<tr>
<td>Scotland West Telephone</td>
<td>..</td>
<td>Dempster, H.</td>
<td>..</td>
<td>Skilled Workman, Class II</td>
<td>Flying Officer, R.A.F.</td>
<td>Distinguished Flying Cross</td>
</tr>
<tr>
<td>Southampton Telephone</td>
<td>..</td>
<td>Fielder, R. R.</td>
<td>..</td>
<td>Skilled Workman, Class II</td>
<td>Flying Officer, R.A.F.</td>
<td>Distinguished Flying Cross</td>
</tr>
<tr>
<td>Southend-on-Sea Telephone</td>
<td>..</td>
<td>Wooster, C. B.</td>
<td>..</td>
<td>Inspector</td>
<td>Lieut.-Colonel, Royal Signals</td>
<td>Member of the Order of the British Empire and twice Mentioned in Despatches</td>
</tr>
</tbody>
</table>

**On loan to other Government Departments**

<table>
<thead>
<tr>
<th>Name</th>
<th>Region</th>
<th>Date</th>
<th>Name</th>
<th>Region</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief M.T.O.</td>
<td>E-in-CO.</td>
<td>30.11.45</td>
<td>Chief M.T.O.</td>
<td>E-in-CO.</td>
<td>30.11.45</td>
</tr>
<tr>
<td>Burns, W.</td>
<td>E-in-CO.</td>
<td>30.11.45</td>
<td>Burns, W.</td>
<td>E-in-CO.</td>
<td>30.11.45</td>
</tr>
</tbody>
</table>

**Staff Changes**

<table>
<thead>
<tr>
<th>Name</th>
<th>Region</th>
<th>Date</th>
<th>Name</th>
<th>Region</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gummell, W.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
<td>Gummell, W.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
</tr>
<tr>
<td>Chief M.T.O.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
<td>Chief M.T.O.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
</tr>
<tr>
<td>McDonald, G. A.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
<td>McDonald, G. A.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
</tr>
<tr>
<td>Lloyd, S. L.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
<td>Lloyd, S. L.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
</tr>
<tr>
<td>Williams, J. F.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
<td>Williams, J. F.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
</tr>
<tr>
<td>Bandfield, D. F.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
<td>Bandfield, D. F.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
</tr>
<tr>
<td>Morgan, T. L.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
<td>Morgan, T. L.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
</tr>
<tr>
<td>Fawkes, E. W.</td>
<td>L.T. Reg.</td>
<td>1.1.45</td>
<td>Fawkes, E. W.</td>
<td>L.T. Reg.</td>
<td>1.1.45</td>
</tr>
<tr>
<td>Smith, G. S.</td>
<td>L.T. Reg.</td>
<td>1.1.45</td>
<td>Smith, G. S.</td>
<td>L.T. Reg.</td>
<td>1.1.45</td>
</tr>
<tr>
<td>Green, J.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
<td>Green, J.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Region</th>
<th>Date</th>
<th>Name</th>
<th>Region</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swind. to Ingr.</td>
<td></td>
<td></td>
<td>Swind. to Ingr.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>S.W.1 to Ingr.</strong></td>
<td></td>
<td></td>
<td><strong>S.W.1 to Ingr.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior, E.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
<td>Interior, E.</td>
<td>E-in-CO.</td>
<td>1.1.45</td>
</tr>
</tbody>
</table>

**Retirements**

<table>
<thead>
<tr>
<th>Name</th>
<th>Region</th>
<th>Date</th>
<th>Name</th>
<th>Region</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief M.T.O.</td>
<td>E-in-CO.</td>
<td>30.11.45</td>
<td>Chief M.T.O.</td>
<td>E-in-CO.</td>
<td>30.11.45</td>
</tr>
<tr>
<td>Blyth, C. W.</td>
<td>N.E. Reg.</td>
<td>10.11.45</td>
<td>Blyth, C. W.</td>
<td>N.E. Reg.</td>
<td>10.11.45</td>
</tr>
</tbody>
</table>

**On loan to other Government Departments**

<table>
<thead>
<tr>
<th>Name</th>
<th>Region</th>
<th>Date</th>
<th>Name</th>
<th>Region</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief M.T.O.</td>
<td>E-in-CO.</td>
<td>30.11.45</td>
<td>Chief M.T.O.</td>
<td>E-in-CO.</td>
<td>30.11.45</td>
</tr>
</tbody>
</table>

[106]
A Simple D.C. Method for Identifying Cables

U.D.C. 621.315.232 : 621.317.44

BEFORE the diversion or repair of a cable is undertaken it is, of course, necessary to confirm the identity of the cable. This may be difficult even when the cable is lying among several externally identical cables. It is also particularly important in multi-tube coaxial cables, to be able to distinguish the particular tube concerned. The outer conductors are all similar, and, being in metallic contact throughout, cannot be "snapped" by battery, or distinguished by an audio frequency test using the probe tester (S.A. 9005).

A satisfactory and simple method to achieve identification is to connect an earthed battery to the centre or a selected conductor within the required cable at a terminal station; this conductor is earthed at the far end. The current flowing in the inner conductor is divided on its return between the earth and all the cable sheaths on the route, as shown in Fig. 1. Most of the return current usually flows in the earth, and the current in the inner conductor therefore greatly preponderates over that in its own surrounding sheath. The magnetic field due to this current can, therefore, be detected at any point along the route without opening any of the cables or coastal tubes.

As shown in Fig. 2, a closed iron core, bearing a coil, is arranged to be hinged so that it can close around the cable or coastal tube being tested; the coil is connected to a sensitive moving-coil galvanometer.

The direct current is keyed very slowly while the iron core is closed around each cable in the route, in turn, and the galvanometer observed for one minute. When there is around the "wanted" cable, deflections result which are associated with each "make" and "break" in the current; no noticeable deflections result on the other cables.

In an actual test on the London-Birmingham 4-tube coaxial cable (two tubes were working with power on and could not be interrupted) 0.8 A was passed between stations eight miles apart, and momentary scale deflections of about 1 cm. were obtained when the core was around the coaxial tube required to be identified. This deflection was the result of a current surge in the galvanometer circuit, which calculation shows a maximum value of 150 mA attained in 1 μs with a tail lasting 100 μs. The iron core and coil were part of a Ferrostat standard 6-10-30 A size clip-on ammeter, and the galvanometer was of the portable Tinsley differential reflecting type (Post Office No. 27A).

This method of identifying one of a group of lead sheathed cables is capable of being utilised on coastal, balanced-pair or any other type of cable. The results are not seriously affected by light illumination. Insulating gaps in the sheath have no effect. Ordinary pairs, screened pairs and wires within cables can also be identified if necessary. The method has an important application when submarine cables are repaired at sea, where a sensitive detector than has been described would be required because of the very heavy armoring wires. It has been the practice of the Post Office Cable Ships to carry a "Scissors-type Cable Detector" to check whether the cable picked-up is working and carrying D.C. telegraphs or other L.F. signals. A two-valve amplifier is associated with a robust design of clip-on core. Although the accuracy of navigation now possible with radio aids is very high this device is well worth using especially in areas where a large number of cables of similar armoring are close together, or where cables are liable to movement, in view of the additional confidence obtained that the correct cable is being cut.

J. F.

Notes and Comments

Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department...

While serving with the Armored Forces.

Annex Telephone Area: Montgomery, J. S. (Skiid Worker, Class II) Signalman, Royal Signals

Belfast Telephone Area: George, D. R. (Unestablished Skilled Workman) Flight Sergeant, R.A.F.

Birmingham Telephone Area: Beck, J. T. (Skilled Worker, Class I) Unestablished Skilled Workman, R.A.F.

Blackpool Telephone Area: Hill, B. (Unestablished Skilled Workman) Unestablished Skilled Workman, R.A.F.

Bournemouth Telephone Area: Edmondson, R. W. (Unestablished Skilled Workman) Flight Sergeant, R.A.F.

Bradford Telephone Area: Redman, J. M. (Unestablished Skilled Workman) Skilled Worker, Class II

Brighton Telephone Area: Brown, W. J. (Skilled Worker, Class I) Unestablished Skilled Workman, R.A.F.

Brighton Telephone Area: Muggersidge, D. W. (Skilled Worker, Class II) Unestablished Skilled Workman, R.A.F.

Canterbury Telephone Area: Dean, W. T. (Skilled Worker, Class II) Labourer...

Canterbury Telephone Area: Patterson, A. F. (Skilled Worker, Class I) Unestablished Skilled Workman, R.A.F.

Engineering Department: Aylett, C. H. (Skilled Worker, Class II) Clerical Officer

Engineering Department: Jones, D. D. (Mechanic) Signalman, Royal Signals

Engineering Department: Jones, J. A. (Adult Messenger) Signa1man, Royal Signals

Engineering Department: Welch, H. (Motor Cleaner) Lance Bombardier, Royal Artillery

Engineering Department: Wilde, G. M. (Mechanic) Corporal, R.A.F.

Glasgow Telephone Area: Griffiths, G. (Unestablished Skilled Workman) Signalman, Royal Signals

Glasgow Telephone Area: O'Connell, E. J. (Unestablished Skilled Workman) Flight Sergeant, R.A.F.

Glasgow Telephone Area: Moulden, E. H. (Unestablished Skilled Workman) Flight Sergeant, R.A.F.

Glasgow Telephone Area: Jones, N. G. (Unestablished Skilled Workman) Clerical Officer

Leeds Telephone Area: Wood, T. A. (Unestablished Skilled Workman) Signalman, Royal Signals

Leicester Telephone Area: Ireland, P. (Unestablished Skilled Workman) Flying Officer, R.A.F.

Lincolnshire Telephone Area: Bradby, H. (Unestablished Skilled Workman) Signalman, Royal Signals

Liverpool Telephone Area: Dixon, J. F. (Unestablished Skilled Workman) Gunner, Royal Artillery

London Telephone Area: Morton, C. G. (Unestablished Skilled Workman) Flight Sergeant, R.A.F.

London Telecommunications Region: Barrett, G. P. (Unestablished Skilled Workman) Captain, Royal Signals


London Telecommunications Region: Boys, J. R. (Unestablished Skilled Workman) Able Seaman, R.N.

London Telecommunications Region: Bristow, F. G. (Unestablished Skilled Workman) Signalman, Royal Signals

London Telecommunications Region: Cameron, C. S. (Unestablished Skilled Workman) Flight Sergeant, R.A.F.

London Telecommunications Region: Carr, S. R. (Unestablished Skilled Workman) Signalman, Royal Signals

London Telecommunications Region: Derksen, H. G. (Skilled Worker, Class I) Corporal, Royal Signals

London Telecommunications Region: Farrance, D. A. (Unestablished Skilled Workman) Signalman, Royal Signals

London Telecommunications Region: Hill, B. (Unestablished Skilled Workman) Lance Corporal, Royal Signals

London Telecommunications Region: Howard, L. A. M. (Unestablished Skilled Workman) Signalman, Royal Signals

London Telecommunications Region: Howes, W. F. (Skilled Worker, Class II) Signalman, Royal Signals

London Telecommunications Region: Mayhew, H. J. (Unestablished Skilled Workman) Lance Bombardier, Royal Artillery

London Telecommunications Region: Mears, J. R. (Skilled Worker, Class II) Flight Sergeant, R.A.F.
1946 April

London Telecommunications Region

Bristol
Bradford
Bradford
Birmingham
Birmingham
Southampton
Sheffield
Scotland
Scotland
Peterborough Telephone Area
Portsmouth Telephone Area
Preston Telephone Area
Scotland West Telephone Area
Scotland West Telephone Area
Scotland West Telephone Area
Sheffield Telephone Area
Sheffield Telephone Area
Sheffield Telephone Area
Sheffield Telephone Area
South-Western Region
Stone-on-Trent Telephone Area

Recent Awards

The Board of Editors has learnt with great pleasure of the honours recently conferred upon the following members of the Engineering Department...

While serving with the Armies Forces.

Birmingham Telephone Area

Daffron, T. J. M. 
Skilled Workman, Class II
.signals
Flight Lieutenant, R.A.F.

Birmingham Telephone Area

Freeman, G. 
Skilled Workman, Class II
.signals
Sergeant, Royal Signals

Birmingham Telephone Area

Gosling, J. C. 
Skilled Workman, Class I
.signals
Sergeant, Royal Signals

Birmingham Telephone Area

Hammond, A. G. W. 
Inspector
.Lieut. Col., Royal Signals

Bradford Telephone Area

Crotty, T. C. 
Skilled Workman, Class II
.Bombardier, R.A.

Bradford Telephone Area

Speechley, E. 
Inspector
Major, Royal Signals

Bristol Telephone Area

Newman, H. F. A. J. 
Skilled Workman, Class II
.Lieutenant, Royal Signals

Cambridge Telephone Area

Allen, D. W. 
Skilled Workman, Class I
.Captain, Royal Signals

Cambridge Telephone Area

Higgins, J. C. 
Skilled Workman, Class II
.R.Q.M.S., R.A.

Canterbury Telephone Area

Walters, A. A. 
Skilled Workman, Class II
 сигналман, Royal Signals

Chester Telephone Area

Davey, W. A. T. 
Skilled Workman, Class II
 Signalman, Royal Signals

Edinburgh Telephone Area

Allan, R. 
Skilled Workman, Class I
 Sergeant, Royal Signals

Edinburgh Telephone Area

Hogart, J. F. 
Skilled Workman, Class I
.Lieutenant, Royal Signals

Edinburgh Telephone Area

Slater, W. 
Skilled Workman, Class II
.C.Q.M.S., Royal Signals

Edinburgh Telephone Area

Stevenson, H. C. 
Assistant Engineer
.Major, Royal Engineers

Engineering Department

Barnett, W. J. G. 
Inspector
Major, Royal Signals

Engineering Department

Biddlecombe, C. 
Skilled Workman, Class I
.Sergeant, Royal Signals

Engineering Department

Brookes, A. A. 
Assistant Photoprinter
.Lieutenant, R.A.S.C.

Engineering Department

Carr, H. 
Motor Cleaner
.Corporal, R.A.C.

Engineering Department

Chesney, C. E. 
Inspector
.Major, Royal Signals

Engineering Department

Cotes, G. H. 
Executive Engineer Major, Royal Signals

Engineering Department

Croisdall, A. C. 
Inspector
.Major, Royal Signals

Engineering Department

Dean, C. 
Skilled Workman, Class I
.Flying Officer, R.A.F. Distinguished Flying Cross

Engineering Department

Dibdale, A. T. D. 
Inspector
.Major, Royal Signals

Engineering Department

Franklin, R. H. 
Aust. Staff Engineer Major, Royal Signals

Engineering Department

Garnett, W. H. 
Inspector
.Wing Commander, R.A.F.

Engineering Department

Godwin, R. 
Motor Mechanic
.Sergeant, Queens Bays

Engineering Department

Hankins, B. D. 
Inspector
.Major, Royal Signals

Engineering Department

Harper, S. D. 
Assistant Engineer
.Lieut. Commander, R.N.

Engineering Department

Langfield, F. J. 
Clerical Officer
.Cadet Officer, Royal Signals

Engineering Department

Lecberly, A. J. 
Executive Engineer Major, Royal Signals

Engineering Department

Mitchell, M. 
Inspector
.Lieut. Colonel, Royal Signals

23
Test When No Good Wire is Available

In this test advantage is taken of the fact that in multiple or in star-quad cables the wires are maintained in quad formation from one station to the other. If the paper insulation of the cable is wet, and battery connected to the C and D wires of a quad, as in Fig. 8, will cause a small current to circulate in the A and B wires and milliammeters. Before using the milliammeters they should be checked to give identical readings when placed in series. Let \( d_0 \) = deflection in meter at Station 1 at a given instant. \( d_1 \) = deflection in meter at Station 2 at the same instant. \( p_1 \) = length of cable with same loop resistance as meter at Station 1. \( p_2 \) = length of cable with same loop resistance as meter at Station 2. L = length of cable. Then distance to fault from Station 1

\[
X = \frac{d_1 - d_2}{l + p_1 + p_2 - p_1} = p_2
\]

It is assumed that the gauge of the A and B wires is uniform between the stations. This test has the advantage that a large number of pairs of simultaneous readings can be noted to find the mean value of \( d_0 \). It has been found that milliammeters with maximum full scale deflection of 0.5 mA gives the most satisfactory results. The test is made inaccurate by leakage from other circuits as long as the leakage does not vary rapidly. If sufficient leakage is obtained, then the circuit of the C and D wires is not required.

Conclusion

The first method shows how, by careful selection of the good and faulty wires, a high insulation resistance fault can be localised from one end of the cable only, and without a core insulator. The test has the advantage of saving time in precise testing, and it is hoped that it will be of use to those engaged on this work. Although the second method depends upon two meters being identical, it has the advantage that no slide wire is required. The test, which is more accurate for short cables than for long ones, is useful when other tests become inaccurate because of polarisation and battery leakage.

Questions of signalling used to be dealt with by a permanent sub-committee, but the subject has become so extensive that a new C.R. has been created, and matters relating to signalling will henceforth be dealt with by the 3rd C.R. The 3rd C.R. met under the chairmanship of Mr. Hombroyd (B.T.C.) and a number of fruitful decisions were made. Further consideration of the proposals and recommendations in Tome I 7 opposite has been continued, and C.R. has resulted in a completely new set of proposals for the automatic setting up of calls over trunk circuits, with the object of saving line time. For instance, it is suggested that coded pulses transmitted from a key or register will be employed for setting up normal calls. To facilitate such mechanism each administration is recommended to introduce a national numbering scheme. No

Notes and Comments

Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:

While serving with the Armed Forces:

Birmingham Telephone Area
Birmingham Telephone Area
Birmingham Telephone Area
Canterbury Telephone Area
Canterbury Telephone Area
Chester Telephone Area
Engineering Department
Engineering Department
Engineering Department
Leeds Telephone Area
Liverpool Telephone Area
Liverpool Telephone Area
London Telegraphs. Region
London Telegraphs. Region
London Telegraphs. Region
London Telegraphs. Region
London Telegraphs. Region
London Telegraphs. Region
Manchester Telephone Area
Newcastle upon Tyne Telephone Area
Beeby, W. F.  
Hargreaves, W. H.  
James, D. V.  
Eglen, R.  
Cairns, J. D.  
Harris, A. E.  
Morris, W. E.  
Ede, A. J.  
Edwards, J. A.  
Palme, S. O.  
Wright, G. H.  
Churchill, T.  
Mawdsley, J. R.  
Blashcl, A. H.  
Blashcl, A. H.  
Burn, A. R.  
Mason, W. J. A.  
Prince, E. J.  
Raynham, J. S. I.  
Sonnerelle, H. J.  
Spalding, L. W.  
Strachan, J. P.  
Toadsdale, W. J.  
Harpur, A.  
Smith, W. E. N.  

Unestablished Skilled Workman  
Unestablished Skilled Workman  
Unestablished Skilled Workman  
Unestablished Skilled Workman  
Unestablished Skilled Workman

Flight Sergeant, R.A.F.  
Flight Sergeant, R.A.F.  
Flight Officer, R.A.F.  
Flight Sergeant, R.A.F.  
Flight Sergeant, R.A.F.  

Flying Officer, R.A.F.  
Warrant Officer, R.A.F.  
Warrant Officer, R.A.F.  
Corporal, Royal Signals  
Corporal, Royal Signals  
Corporal, Royal Signals

Signalman, Royal Signals  
Signalman, Royal Signals  
Signalman, Royal Signals  
Signalman, Royal Signals  
Signalman, Royal Signals  

Corp. Airman, Fleet Air Arm  
Corpsman, Royal Signals  
Warrant Officer, R.A.F.  
Warrant Officer, R.A.F.  

Corporal, Royal Signals

Chief Signalman, Royal Signals

Recent Awards

The Board of Editors has learned with great pleasure of the honours recently conferred upon the following members of the Engineering Department:

Birmingham Telephone Area
Birmingham Telephone Area
Birmingham Telephone Area
Birmingham Telephone Area
Bournemouth Telephone Area
Bradford Telephone Area
Bristol Telephone Area
Colchester Telephone Area
Colchester Telephone Area

Bristow, W. B.  
Carder, J. A.  
Finch, H. R.  
Howarth, N. J.  
Smallwood, W. G.  
Ingham, J.  
Seymour, W. H.  
Baldwin, R. W.  
Kerry, F. B.  

Skilled Workman, Class II  
Skilled Workman, Class II  
Skilled Workman, Class II  
Skilled Workman, Class II  
Skilled Workman, Class II  

Lance Corporal, Royal Signals  
Flight Lieutenant  
Class II  
Corporal, Royal Signals  

Class II  
Class II  
Skilled Workman  

Member of the Order of the British Empire  
Member of the Order of the British Empire  

Mentioned in Despatches  
Mentioned in Despatches  
Mentioned in Despatches  
Mentioned in Despatches  
Mentioned in Despatches
1947 January

Notes and Comments

Roll of Honour
The Board of Editors deeply regrets to record the deaths of the following members of the Engineering Department:

While serving with the Armed Forces:
- London Telegraph Area
  - Signalman, Royal Signals
  - Member of the Order of the British Empire
  - Mentioned in Despatches
- Chesterfield Telegraph Area
  - Signalman, Royal Signals
  - Mentioned in Despatches

Glasgow Telegraph Area
- Signalman, Royal Signals
- Mentioned in Despatches

Liverpool Telegraph Area
- Signalman, Royal Signals
- Mentioned in Despatches

Recent Awards
- Newcastle-on-Tyne Telephone Area
  - Signalman, Royal Signals
  - Mentioned in Despatches
- Sunderland Telephone Area
  - Signalman, Royal Signals
  - Mentioned in Despatches
- Warrington Telephone Area
  - Signalman, Royal Signals
  - Mentioned in Despatches

Notes
The Board of Editors has learnt with great pleasure of the honours recently conferred upon the following members of the Engineering Department:

- London Telegraph Area
  - Signalman, Royal Signals
  - Mentioned in Despatches
- Chesterfield Telegraph Area
  - Signalman, Royal Signals
  - Mentioned in Despatches

The Retirement of Mr. F. O. Barralet
Frank Owen Barralet entered the Post Office Engineering Department in January, 1909, and served with the Test Section of the Engineer-in-Chief's Office until 1910. After a short period in the Engineering Department he joined the Research Section in 1911. Among the work for which he will be chiefly remembered are the development and production during the first world war of hot wire microphones for gun-ranging; the introduction into the new Dollis Hill laboratories of many optical and spectrographic aids to aerial gun fire; his research on the metallurgy of lead and the development of the palladium chloride gas indicator. These achievements earned him the esteem of the Council, the Royal Society, the Institute of Electrical Engineers, and the Postmaster-General, and in 1935 the I.P.O.E.E. awarded its Senior Bronze Medal to him for a paper describing some of this. Mr. Barralet left Dollis Hill in 1933 to return to the Test and Inspection Branch as Staff Engineer. The second World War brought him many additional responsibilities and doubled the value of stores tested annually by his branch. Mr. Barralet represented the Post Office on a number of committees and is well known to engineers and scientists outside the Post Office. The good wishes of these, of his colleagues in the Post Office and particularly of his staff, in whose careers he always took a kindly interest, will be with him as he commences a well-earned retirement.

W. G. R.

Mr. S. Hanford, R.E., M.I.E.E.
Mr. S. Hanford, who succeeds Mr. F. O. Barralet as Staff Engineer of the Test Branch, is a native of Burton-on-Trent. Educated at the Grammar School there, and later at Birmingham University, he entered the Engineering Department by Open Competition as an Assistant Engineer in 1911. His first appointment was to the Engineer-in-Chief's office where he served successively in the Test and Lines Sections with a break for service in the R.E. Signals in the first World War. In 1919 he was transferred to the Canterburry Section, returning to the Chief's office in 1921 on promotion to Executive Engineer in the Research Section. Here he was in charge of the Cable Test Section and went with it on its transfer to the Test Branch in 1934, being promoted to Assistant Staff Engineer there in 1937. He rejoined the Royal Signals during the recent war, serving in France and Germany, being engaged mainly on the construction of main cable routes. Throughout his service Mr. Hanford has been closely connected with cable matters. His early years in the Test Section were largely occupied with the design and specification of the then rapidly developing paper-insulated cable. These, subjected to minor modification from time to time, have remained standard ever since. On his rejoining the Test Branch in 1934 it was his interest and enthusiasm which resulted in the Cable Test Section being installed in ample and suitable premises, and its equipment and personnel being built up to a level worthy of the Department.

As an Assistant Staff Engineer his interests widened
Notes and Comments

Roll of Honour

The Board of Editors deeply regrets to have to record the deaths of the following members of the Engineering Department:

While serving with the Armed Forces:

Engineering Department: Matthews, R. R.; Woodman, J. T.; Ainsworth, J. W.; Laybourne, G. W.

Leicester Telephone Area: Betts, D. H.; Jones, F. G.; Lyon, J. B.; Wade, S. J.

Preston Telephone Area: Bowers, F.; Stansfield, B. B.

Recent Awards

The Board of Editors has learnt with great pleasure of the honours recently conferred upon the following members of the Engineering Department:


Colchester Telephone Area: Todhunter, V. W.

Leeds Telephone Area: Smith, T. R.

London Telecoms. Region: Bernard, J.; Croasdale, L. H.

Skilled Workman: Class II

Corporate, Royal Signals

Pilot Officer, R.A.F.

R.O.M.S., Royal Signals

Signalman, Royal Signals

Sergeant Pilot, R.A.F.

Unestablished Skilled Workman: Class I


Distinguished Flying Cross

Member of the Order of the British Empire

Distinguished Despatches

Flying Officer, R.A.F.

Officer of the Legion of Merit (U.S.A.)

American Bronze Star

Military Medal

British Empire Medal

Member of the Order of the British Empire

Mr. H. Faulkner, B.Sc., M.I.E.E.

Few engineers can hope to obtain such a wide and varied experience of Post Office activities as has fallen to the lot of the new Deputy Engineer-in-Chief. Passing the Assistant Engineers' open competition in January 1943, Mr. Faulkner has made his first home in the Designs Section of the Engineer-in-Chief's Office, until he took up a commission with the Royal Engineers Signal Corps during the first world war. On his return from some two years and a half years' service he was transferred to the Radio Section where he became one of that body of pioneers who designed the Railway radio station, becoming its first officer-in-charge in 1920 with the rank of Executive Engineer. He returned to Headquarters in 1929 to take charge of the design and development group of the Radio Section, attending the C.C.I.R. meeting at Copenhagen and the International Convention at Madrid. Promoted to Assistant Staff Engineer in 1932, the next year Mr. Faulkner transferred to North Wales as Assistant Superintending Engineer, becoming Superintending Engineer, North Wales District, in 1935 and Deputy Regional Director in 1939. From 1941 until 1944 he was Controller of the Factories Department, neglecting no opportunities of extending and improving its facilities so that it could play its full and proper part in the war effort. Appointed Assistant Engineer-in-Chief in 1944 his interests became those of the Lines, Power, Construction and Motor Transport Branches together with staff matters; playing a major part in planning and negotiating the engineering staff reorganisation. Needless to say he is now actively supervising its implementation but with his latest promotion he has exchanged his Branch interests for those of the Radio Development and Radio Maintenance Branch.

Chairman of the South Midlands Centre of the Institution of Electrical Engineers for the 1938-39 session, Mr. Faulkner has been a member of Council since 1943.

Mr. G. J. S. Little, G.M., B.Sc., M.I.E.E.

The many friends of Mr. Little will all desire to convey their best wishes on his promotion to the rank of Assistant Engineer-in-Chief, on January 9th, 1947. Mr. Little entered the Engineering Department by open competitive examination in 1922, as Probationary Assistant Engineer, and spent the next eight years in a section of the Research Branch at Marsden Road. Although trained as a mechanical engineer, he soon became an authority on telephone transmission. In 1939 he was transferred to the Senior Branch, and two years later promoted to Executive Engineer in that Branch. While