

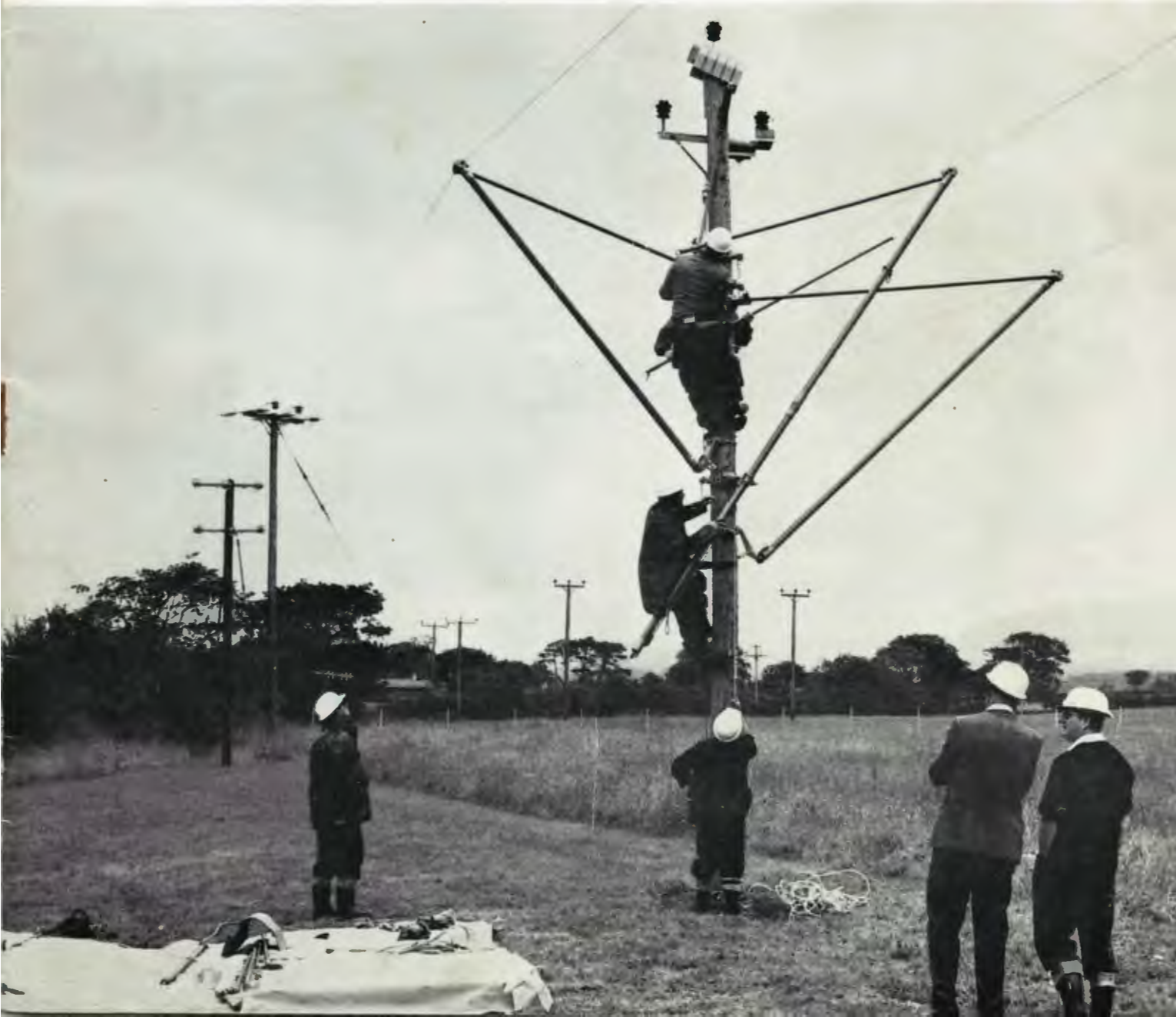
September

1963

**The Staff Magazine
of the
Merseyside and North Wales
Electricity Board**

Contact

A "HOT-LINE" TEAM IN ACTION (See pages 184-5)



WEDDINGS

EVANS - JENKINS

Best wishes for the future to Mr. R. M. Evans, a draughtsman at Blaenau



Mr. and Mrs. Evans

Ffestiniog, who married Miss E. Jenkins, a local schoolteacher, on July 29th.

ROWLEY—DAVIES

Best wishes for the future to Mr. John Rowley and Miss Enid Davies, members of the staff of the Cost



Mr. and Mrs. Rowley

Dept. at Area 4 Office, who were married on August 17th.

On behalf of their colleagues, they were presented with a canteen of cutlery.

BIRTHS

Congratulations to . . .

Mr. Raymond Twist, Assistant (Commercial Department), at St. Helens, and Mrs. Twist, on the birth of a daughter (Beverley) on August 27th.

Mr. Michael Hughes (assistant section engineer at St. Helens) and Mrs. Hughes, on the birth of a son (Laurence Michael) on August 21st.

BREVITIES

EXAM SUCCESSES

Congratulations to Mrs. I. M. Richardson, Accounts Department, Area 1, who has passed the final examination of the Chartered Institute of Secretaries, and Messrs. J. Whitehead and M. Steele of the same department, who have passed the Intermediate Examination of the Institute of Cost and Works Accountants.

Congratulations to Mr. S. D. Ferguson (fourth assistant engineer, Area 3), on gaining a First Class Honours Diploma in Technology.

Mr. Ferguson joined the Board as a craft apprentice in 1952, later transferring to a Student Apprenticeship when he obtained a Higher National Certificate in Electrical Engineering, with endorsements.

In 1960 he was awarded an Electricity Supply Scholarship for study at the Battersea College of

Technology, and his present academic success is the result of his studies.

ON THE MOVE

On leaving the Board's staff at Blaenau Ffestiniog to take up employment as a plant attendant at Trawsfynydd nuclear power station, Mr. Gwilym Morgan, storekeeper/clerk, was presented with a camera.

Mr. I. Nottingham, section engineer, was presented with a watch on leaving to take up the duties of assistant District Engineer at Caernarvon.

SUGGESTION SCHEME AWARDS

Awards under the Employees' Suggestion Scheme have been made to Messrs. F. G. Jefferies (contracting engineer, North Wirral District), R. Edgeley (records draughtsman, Northwich District), B. Phillips (electrician, St. Helens District), R. A. Cottle and G. O. Jones (Anglesey District), and D. W. Cooley (Contracting Department, Wallasey).

Obituary

MR. A. R. CHORLTON

It is with deep regret that we report the death of Arthur Robert Chorlton, Senior Assistant Commercial Engineer at Area 2, until his retirement on health grounds in 1961. He was 59.

Mr. Chorlton began his career in the drawing Office of a motor company, joining the Mid-Cheshire Electricity Supply Company in 1925.

With the nationalisation of the industry he joined the MANWEB staff, becoming Senior Assistant Commercial Engineer at Sandiway House in 1949.

He played an active part in the social life of Northwich, being associated with the Northwich Victory Memorial Committee, The Northwich Rotary Club, The Masonic movement, Northwich Congregational Church and the local committee of the National Savings Movement.

The funeral service at Northwich Congregational Church was attended by colleagues from Head Office, Area Office and Northwich and Warrington Districts.

Mr. Chorlton leaves a widow, a daughter and two sons, to whom we extend our sincere sympathy.

MR. CHARLES PEEL

We deeply regret to report the death of Mr. Charles Peel, pensioner of St. Helens District, who, until his retirement in 1952, was a substation attendant at Tolver Street.

The funeral, which took place at St. Helens, was preceded by Requiem Mass at St. Thomas of Canterbury Church.

MR. FRANK GRAHAM

It is with deep regret that we report the death of Mr. Frank Graham, electrician at Crewe until his recent retirement on health grounds. Mr. Graham had been with the Board since 1948.

At the funeral service at Crewe Crematorium Chapel the Board was represented by Messrs. T. V. Walley, H. Taylor, J. Burgess and H. Shingler (bearers) together with Messrs. H. T. McBride, L. Hanley and J. Thomas.

MRS. M. TIPPETT

We extend our sincere sympathy to Mr. J. A. Tippett, former First Assistant District Commercial Engineer at Wrexham (now retired), on the recent death of his wife.



Contact

*Edited by Keith Baldwin and published
monthly from the Board's Head Office,
Love Lane, Liverpool 3. NORTH 2681*

THE STAFF MAGAZINE OF THE
MERSEYSIDE AND NORTH WALES
ELECTRICITY BOARD

VOL. 15 No. 9

SEPTEMBER 1963

EDITORIAL

Spread the Facts

IRRRESPONSIBLE critics of every hue kick the nationalised industries. Those on the political Right interpret any weaknesses as the product of Socialist-conceived organisation. Those on the Left blame the Government of the day for allegedly mismanaging things. The "independents" leap on the bandwagon simply by abusing the industries' administrators. The Chairmen of nationalised Boards sit, indeed, in hot seats.

During the past few years MANWEB has come in for more than its share of criticism, ranging from downright mud-slinging over major issues to petty carping over trivialities. It is, we suppose, too much to expect that the self-appointed champions of the democratic rights of the community will ever entirely refrain from heaving bricks at such sitting ducks as the public services, though recently there has been a refreshing tendency for responsible voices to suggest that their fortunes are everybody's affair.

The best method of countering abuse and distortion of facts is the forceful presentation of the truth, and the Board's recently-published Report and Accounts for 1962-63 show yet another year of expansion on all fronts.

New Strides Forward

Overall consumption of electricity rose by 12.4% the biggest-ever increase since the nationalisation of the industry. Domestic use of current continued to soar, showing a 20% rise. Capital expenditure in reinforcement work amounted to £5.1 million, compared with £3.2 million during 1961-62.

More than 14,500 new consumers, including nearly 1,300 farms, were newly connected to the network. Reinforcement was pressed forward at an unprecedented pace, and more than 800 miles of mains and nearly 900 new ground-mounted substations, in addition to a large number of pole transformers, were added to the network.

On the financial side, we showed a Revenue balance of nearly £1,000,000 towards the £10 million we must raise by 1967. The full facts are set out in the illustrated summary of the Report, which is available to every member of the staff. Acquaint yourselves with them and make them as widely known as possible.

On other pages

"Live-Line" Maintenance	184
Salesmanship Courses	186
Talking Notes	187
The Cables return to Goodison Park	188
New Boys at Hoylake	190
Southport Flower Show	192
New Substations	194
Wires and Cables	195
Retirements	196
Photography	198
The Board's Business	199
Competition Page	200

“Live-Line” Maintenance on 11-kV Overhead Lines

FOR some considerable time it has been appreciated within the Electricity Supply Industry that some form of “live line” working technique would have to be introduced to reduce the considerable outage programme caused by the connection of new 11-kV lines to existing circuits, the erection and connection of in-line substations and for the maintenance of the overhead h.v. circuits.

With the rapid expansion of the overhead h.v. circuits which have taken place since Vesting Day, the problem of outages on the networks has become a major issue involving thousands of consumers annually, with a considerable loss of revenue, and an

appreciable increase in expenditure in administration charges involved in producing shutdown notices.

The problem will continue to increase because as the networks become older, more and more maintenance will be necessary. This is becoming evident by the increase in the numbers of rotten poles which are being discovered.

Our Area 4 engineering staff have developed a live line working technique for tapping in-line transformers and spurs on to existing 11-kV lines. It is intended to extend this to cater for disconnection and re-connection when transformer changes are required on the system. This, in itself, reduces the

Linesmen involved in a pole-changing exercise at Kinmel Bay



number of outages and the inconvenience caused to consumers in the loss of supply, but the major problem of extended outages required for maintenance work on the 11-kV system, particularly in Area 4, has of necessity given rise to the need for introducing live line maintenance technique.

Recently Mr. F. C. Neale, District Engineer at Clwyd, and Mr. G. B. Williams, of Area 4 Operations Department, paid a visit to the East Midlands Electricity Board to watch a series of live line maintenance demonstrations given by Mr. A. Anderson, the chief demonstrator of the A. B. Chance Co. of U.S.A., who are the suppliers of the "hot line" tools. The demonstrations were so impressive that they returned to North Wales convinced that this technique was the solution to most 11-kV line maintenance problems. As a result a set of "hot line" tools was bought and it was agreed that we should set up an experimental 11-kV overhead line at the Grid Substation at St. Asaph to gain experience in the application of the tools to various types of 11-kV construction, similar to those in service throughout the Area. A stub pole line on 9 ft. high poles was also erected on the same site, on which the initial training of staff could be carried out, using the tools from ground level. The experimental section of line included a BS.1320 Inter Pole, a BS.1320 inter-section pole, a Delta construction pole and a bird-proof bracket construction pole, similar to those in service in Area 4.

Arrangements were made for an instructor-demonstrator to instruct two teams of selected linesmen from Clwyd District in the use of the tools, and to give a series of demonstrations of actual live line working to members of the MANWEB staff during the second week in July.

The first two days of the week were devoted to training the Clwyd linesmen, and on the afternoon of the second day they carried out the replacement of a rotten pole in one of the 11-kV lines in Kinmel Bay under live conditions.

The demonstrations on July 10th, 11th and 12th were given under the supervision of Mr. C. Bosch, whilst Mr. G. B. Williams gave a running commentary on the techniques which were applied. During these three days a total of 123 members of the MANWEB engineering staff, representatives from Head Office and Areas 1 and 2, saw the demonstration.

During the first three days of the following week the demonstrations were continued under the supervision of Mr. J. L. Hughes, section engineer, Clwyd District. The total number of visitors during this period was 132, which included engineering staff from Areas 2, 3 and 4 and foremen from all Districts in Area 4.



Above: Pole-changing in progress

OUR COVER PICTURE shows the renewal of conductors and insulators on an 11kV Delta Construction Inter-Pole.

The programme was as follows:-

- (1) *A pole change of a B.S.1320 inter-pole on a 3 phase 11-kV line.*
- (2) *The replacement of an 11-kV tension insulator in a BS.1320 inter-section pole position.*
- (3) *The removal of conductors and insulators and re-assembling on a 3 phase 11-kV Delta formation construction line.*
- (4) *Discussions on site, and demonstrating the use of the tools on the 9 ft. stub pole line.*
- (5) *A film show on "hot line" working.*

The demonstrations were a great success and the wet weather which was experienced during the week, did not dampen the ardour of the team or the enthusiasm of the visitors.



A group of students trying to remember all they have learned as they sit for the written part of the examination.

Salesmanship Courses

As the demand for electricity from the homes of Britain continues to rise ever more steeply, so the sales of domestic electrical appliances increase.

Selling in the domestic appliance field grows increasingly competitive, with the Service Centres of the Electricity Boards in direct competition with private traders. This side of the Board's business is, relatively speaking, a highly profitable one, and it is in the interests of the industry and the consumer that revenue from the sales of appliances and installation work should be as high as possible, as activity in this vital sector can do much to help raise the large surpluses which the Boards are being called upon to earn to finance capital investment.

To help the staff in the industry make the most use of the activities, the British Electrical Development Association run regular training salesmanship courses, consisting of correspondence tuition and discussion groups organised in the Areas. At these group meetings problems can be raised and ironed out by experienced members of the staff. The courses last for six months and are split up

into monthly sections, students taking a test at the end of each month.

At the conclusion of the course there are written and oral examinations, and success in these brings the student the E.D.A. Salesmanship Certificate. After two years' sales experience in the industry, provided that the student passes his examinations with 'credit' or 'distinction', the E.D.A. Electricity Salesmanship Diploma is awarded.

The fee for the course to Electricity Board employees is £6 6s., of which the Board will refund half to members of our own staff immediately, and half of the balance when the student passes.

The next course starts on October 31st, and enrolments are starting now. This course is open to all of the Board's staff, and whether you are a member of the sales staff or not it may help you gain promotion in your career.

Details of enrolment can be obtained from your District Commercial Engineer, Area Commercial Officer or the Chief Commercial Officer's Department at Head Office.



During the oral part of the examination, a student answers questions from Mr. S. G. Griffiths (Senior Assistant Commercial Engineer) and Mr. H. E. Halliwell (E.D.A.)

Talking Notes

HOT POTATO!

It was just like any other working day for a MANWEB cable gang at Warrington, on August 1st, until a pick in the hands of 25-years-old-labourer **William Alfred Rothwell**, clanged on a buried metal object. Two or three times the same thing happened, and one of Bill's mates said jokingly "You have got a bomb there, mate".

The removal of a little more earth revealed that it was not a joke after all and that the object was, in fact, an unexploded 500-lb. bomb.

Bill hooked his pick in a depression at the nose of his discovery, levered it loose and, together with colleagues **Bill Bluck**, **Sam Dickenson** and **Joe Robinson**, lifted it clear.

Unconcerned!

They set it on its end, chalked "*Achtung*" on the side, put a red flag near it and went for lunch, after they'd informed Warrington District Office, who got in touch with the police. Then things started to happen. The lower section of London Road, Stockton Heath, was closed to traffic, the shopping centre was roped off, and shopkeepers were advised to evacuate the premises. Sight-seers were ordered off.

Later a team of bomb-disposal experts from Newton, Lincolnshire, arrived, found that the bomb had no fuse and was "safe", and loaded it into a truck to be detonated at their base.

Eisteddfod Honour

Mr. D. J. Williams, mains foreman at Llanrwst, a well-known local organist, was honoured by being selected as organ accompanist to the County of Caernarvon Congregationalist Annual Singing Festival, held at the Royal National Eisteddfod Pavilion, Llandudno, on August 17th.

A Record

A 47-years-old electric bulb which still works came to light recently when Mr. J. A. Gregory of West Park, Marbury, an I.C.I. tenant, produced the bulb which was installed in some corrugated iron bungalows built as a

local temporary housing measure during the first world war.

Our correspondent at Northwich, **Mr. C. P. Booth**, tells us that the bulb, which appears to be a carbon-filament lamp of about 20 watts, is still in working order and appears to be good for another 50 years service.

Right: The Warrington bomb stands in splendid isolation.

Below: The men who discovered it.





A minor adjustment to the tractor-drawn mole-plough during cable-laying operations at Goodison Park

The Cables return to Goodison Park

WHEN electric heating cables were laid beneath the turf at Goodison Park, home of Everton Football Club, during the summer of 1959, sporting history was made. The innovation attracted interest on a world scale, and enquiries about the tech-

niques employed and the results achieved poured in from all quarters. During the following winter, when hard frost made most grounds unplayable, it was "Soccer as usual" at Goodison, and a number of other clubs followed the Merseyside example.

The "wired" section of the pitch stands out clearly at this stage of the job—the grass was very thin at the time—but after the heavy roller had been used it was difficult to see where the cables had been laid. ▶

But a serious drainage problem at the ground made it necessary for the ground staff to resort to heavy forking, and soon the buried cables were falling casualties to the fork blades faster than they could be repaired. During 1960 the battered cables were taken up, and since then big improvements in the ground drainage system have been effected.

Early this year the Everton Directors, their faith in electric ground heating unshaken, gave the instruction—"put the cables in again", and recently a tractor-drawn plough, cutting a knife-slot through the turf, has been used to relay the cables—about 25 miles of them.

Increased Loading

The rubber and plastic sheathed cables have been laid nine inches apart at a depth of about five inches and will carry a total load of 850 kW. On the last occasion the ground was heated only within the touch lines, but this time the whole ground is being heated, and the loading is 90 kW more than previously.

While it is expected that the ground improvements will eliminate the need for heavy forking, steps have now been taken to protect the cables against possible future damage. The use of a high frequency impulse generating system, together with a specially-designed grid, is being considered to ensure that the ground can be forked, if necessary, without damaging the cables.

The system is thermostatically controlled in contrast to the original installation which came into operation when snow fell and the ground temperature fell below freezing point. The new installation is designed to prevent the soil temperature falling below 34—35°F., thus encouraging root growth during the winter months and helping to keep the turf tough and resilient.

Testing the "talls" of the cables ▶



New Boys at Hoyleake



Apprentices G. H. Nichols, S. A. Partington, R. G. Ball, G. Jones and D. J. Jones arriving at the Training Centre.

Travelling by car, train and bus from points in the Board's area as far afield as Southport, Aberystwyth, Holyhead and Crewe, 112 boys arrived at the Training Centre in Carr Lane, Hoyleake on September 2nd to begin their apprenticeships with MANWEB.

Starting early in the morning, Mr. R. Slack (Principal Assistant, Education and Training) told every boy personally what was expected of him during his stay at the Training Centre.

Soon after this, the boys met the staff of instructors at the work benches and in the lecture rooms. The youngest boy to report for training was John Critchley from St. Helens, who was 15 years old last month, and the oldest apprentice was Maurice Smith from Birkenhead who celebrated his 17th birthday a few weeks ago.

Mr. D. R. Woodhouse (temporary assistant) checks the contents of a tool box with apprentice D. Naylor. To the right of the picture is Mr. P. Smith (assistant instructor).

Most of the boys were apprehensive on their arrival, but as 16-year-old Dennis Grace said, "After the first hour, I felt settled". He then went back to filing a piece of metal—a job which seemingly is good for soothing one's nervous system.

Another boy who had made a good start was David Bedford from Widnes, who was wondering what 'boarding-out' would be like. David is one of the seventy apprentices who will spend the next few months with the various *foster mothers* in and around Hoyleake.

Since the Training Centre opened in 1956, including this year's intake, well over 700 boys have started on their apprenticeships with the Board.

Another newcomer to Hoyleake, Mr. S. R. Kenyon (instructor) talks to an apprentice in the workshop.



All in a day's work

Another lesson in filing technique given by Mr. W. K. Appleton (senior assistant instructor) while apprentice T. E. Deakin looks on.



Mr. W. S. Evans (instructor) demonstrates the correct way to handle a file.



Time to eat. Left to right, apprentices T. Faulkner, S. Birchenough, G. Towers, G. Peacock, C. Nuttall and D. Naylor tuck into a well earned lunch.

Hard at it in the workshop.

At the end of their first day the apprentices leave for home.





In Your GARDEN

by Joe Forrester



Southport Flower Show

While the Board's exhibit of electro-horticultural processes was primarily designed to illustrate to commercial growers the contribution that electricity can make to increased productivity, there was no lack of interest from the amateur visitors to the stand.

The outside exhibit of specimen tomato plants, which has now become a feature of the Board's Stand, was this year better than ever, as was clearly indicated by the crop record of the plants on show. The gale force winds on the days immediately preceding the opening of the Show gave the

staff responsible for erecting the display some disquieting moments but fortunately, the winds subsided sufficiently to avoid any material damage. The fact that each of the plants had been produced by different commercial growers did much to convince even the more sceptical visitor of the advantages of electrical methods of propagation.

The complete process of early tomato production is dependant on the use of Mercury Vapour lighting to assist in the bringing forward of flowers to produce early shedding of pollen combined with the use of heated benches, accurate control of the bench and air temperatures being provided electrically. The successive stages of growth from the seedling to the mature plant was clearly illustrated in the main greenhouse section, where examples of the type of equipment used were on display. In 1961 experiments were commenced by the North Western Electricity Board at Kendal on the use of trough heating by electricity. The results of their experiment have clearly indicated economy in the cost of sterilisation and the provision of cardboard containers, in addition to enabling early crops of tomatoes to be followed by a crop of cucumbers. Various examples of differing types of trough construction were on show; these were well within the capabilities of a good handyman. While this development was primarily intended for commercial growers, there are undoubtedly many



The familiar giant tomato plants draw their usual admiring crowd at Southport Flower Show's electricity stand.

advantages to be gained by adopting this method in amateur greenhouses.

Automatic ventilation of the main greenhouse provided much interest to many visitors; both commercial and amateur enquirers were highly appreciative of the fact that this aid took away the need for constant attention to opening and closing ventilators by hand. To the commercial grower this meant economy of labour, particularly at weekends, and to the amateur the need to rely on his wife or neighbour.

Another of the sections which attracted great interest from visitors was the mist propagation bench. This method of propagation is now an established practice by many growers, who are able to root cuttings of both hardwood and softwood plants with almost 100% success. The combination of the use of mist with adequate electrical bench warming is probably one of the most important aids to improved economic production available to the commercial grower.

Examples of the work done by the Forestry Commission Tree Breeding Propagation Centre at Grizedale in the Lake District were on display, to indicate various stages in the growth of trees from the rooting of cuttings to the established tree, with samples of the timber produced. The part that electricity plays in the work of the Forestry Commission was shown in the form of light irradiation and bench warming equipment.

Of undoubtedly great interest to the amateur grower was the school greenhouse, which gave a clear indication of the enlightened attitude of the Lancashire Institute of Agriculture towards the education of children in the subject of Rural Science. Their Horticultural Superintendent, Dr. A. H. Parkinson, B.Sc.(Hort.), M.S., Ph.D., D.I.C., F.L.S., explained to me his aim to use horticulture to teach children "how to think". Of the Secondary Modern Schools controlled by the Lancashire Education Committee, approximately 30 of them had been provided with greenhouses of the type on show—equipped with electricity for space heating and propagation. Experimental work was carried out in these houses to show the effect of light, size of pot, types of compost, etc., on the growth of a plant. In addition, the effect of control

of a plant by pruning is taught, and many of the subjects grown are used as biological material for laboratory experiments.

The glasshouse used for this work measures 25 ft. x 12 ft. and is divided into two sections, a propagation section and a larger section for growing on. For maximum safety and efficiency, the house is heated by Pyrotanax copper-sheathed, mineral-insulated heating cables controlled by thermostats of the rod type. Variable temperatures are provided by this method and the necessity for regular attention outside school hours is overcome.

An indication of the work done by children could be seen by examples of the following trials:—

Plants grown in three different light intensities.
Effect of amount of compost and nutrients on growth and development.

Differing rooting media and the use of hormone rooting powders.

The influence of depth of sowing on germination.
The importance of light and chlorophyll in the process of photosynthesis.

A comparison of tomatoes with and without auxiliary shoots.

Plant tropisms.

Growing habits of the Solanaceae group of plants including egg plants, winter cherries, peppers, chillies and wild foreign and unusual types of tomatoes.

Undoubtedly experiments of this kind must stimulate much thought on plant habits and requirements, and studies of this kind must train the mind to reason out problems outside the field of horticulture.

REMINDERS

- Order new shrubs and plants.
- Lift and store gladioli.
- Clear flower-beds of annuals.
- Take cuttings of bedding plants.
- Sow antirrhinums.
- Pot bulbs for house.
- Plant cabbages for spring.
- Lift main crop potatoes.

DESTINATION AFRICA

Mr. Dennis Rane, sales representative at North Wirral District, left the service of the Board recently to take up employment in Nigeria.

On behalf of his colleagues, he was presented with a travelling alarm clock and gold cuff-links by Mr. J. E. Evans, District Senior Clerk.

Mr. Rane had been with the Board for five years.

Colleagues gather round to see Mr. Rane (left) receive his farewell gifts



NEW SUBSTATIONS

at SOUTHPORT

and PORTMEIRION

With the acute shortage of land for substation sites, our engineers have been faced with all kinds of difficult situations in taking supplies to some of the most awkward sites imaginable. Sometimes a substation has been built below ground level and on other occasions switchgear and transformers have had to be taken to substations at rooftop level.

Fitting out a substation a mile out to sea however seems to cap the lot, but this is exactly what our Southport District engineering staff have done. Yes! one mile out to sea, at the end of Southport Pier, the Board erected a 200-kVA substation to supply power to the new cafe and bar in addition to the various amusements.

The tricky task of getting the transformer along the pier to the substation was overcome by modifying one of the bogeys from the pier train and riding the transformer along the track.

The cable feeding the substation is laid alongside the railway track to the end of the line, and then it is taken under the pier and into the substation. Here again, special consideration had to be given to the type of cable to be used because of the high degree of exposure and the problems of corrosion. Finally, the cable was specially made with a plastic-covered material to protect it from the weather. The section of cable running under the pier is held in position by galvanised metal hangers.

Provision has been made for strengthening the electricity supply to the bathing lake and to the Peter Pan playground, and later this year, the Board will carry out modifications to the pier cable to permit this reinforcement.

The new transformer being towed safely along the pier railway track on the specially designed bogey.



Mr. Clough Williams-Ellis, the well-known architect and owner of the Portmeirion hotel, Penrhyndeudraeth, and its attached "model village", has been steadily developing the gardens and designing and building new cottages for the past thirty years.

Intensive development has taken place in the last few years and the increased loading recently made it apparent that the existing pole-mounted substation situated on the outskirts of the grounds, together with the consumers' network, would require a system improvement scheme.

It was decided that it was advisable to erect a 300-kVA brick built substation and consumers' cubicle in the centre of the grounds, to serve all the buildings through the consumers network. Then came the problem of finding a suitable site in the centre of these beautiful grounds.

Mr. Clough Williams-Ellis agreed to provide a site and build the substation, and made plans for the main footpath to be excavated so that the substation concrete roof was level with the footpath, and designed a shelter to be built over the substation.

All the electrical installation work, including the floodlighting, was carried out by the Blaenau Ffestiniog sub-district staff.

The cleverly concealed substation situated below the specially designed shelter.





Treasure Hunts at

SANDIWAY . . .

The annual Treasure Hunt organised by the Sandiway House Sports and Social Club was held a few weeks ago, when a fleet of cars assembled at Sandiway House and started "hunting" at 7.00 p.m.

The route led the competitors through Sandiway, Winsford and Davenham into the wilds of Peover and Plumbley, and then back into Northwich where the final clue was in the MANWEB Service Centre windows. The rendezvous was at Gorstage,

and when everyone had arrived and eaten a buffet supper Mr. R. Thompson (third assistant engineer—planning), Treasurer of the Club and chief organiser of the hunt, awarded prizes to the winners.

Mr. W. R. Copeman, engineering draughtsman, and his crew won the Dixon Trophy for the best crew from Sandiway House, but the first prize, in the form of a shield, was presented to Mr. B. Livesley, senior Service Centre assistant, Northwich.

. . . ST. HELENS . . .

The first Treasure Hunt to be held in St. Helens was a resounding success. Organised by Mr. H. C. Barr, the District Engineer, and Mrs. L. Plumbley of the Drawing Office, a good run around Crank, Ashurst Beacon, Upholland and Crawford, terminated at a Rainford Hotel, where an excellent buffet supper was waiting.

The winners were Mr. H. I. Dumbell (assistant section engineer) and crew. The booby was won by

Mr. R. Twist (assistant, Commercial Clerical) and his crew.

The evening had been blessed with good weather which added much to the success of the venture. It was a pleasure to welcome visitors from Sandiway, Eversley, Warrington, Runcorn and Northwich.

During the evening presentations were made to Mr. R. Thompson and Mr. B. Barton of Sandiway House (Area 2), who are shortly to go on an intrepid fishing exploration.

. . . NORTH WIRRAL

North Wirral District's social club got off to a fine start with a motorised treasure hunt on Thursday, August 8th. Fifty-seven people in 23 cars lined up on the Lever Causeway at 7 p.m. and were helped on their way by Mr. J. Kellett, Manager, Area 3.

The route covered 16 miles of Wirral road, and 16 clues requiring answers were given.

The hunt ended at the Hotel Victoria, Heswall, where refreshments were served to the accompaniment of light music from a tape recorder.

The evening was concluded when Mr. Kellett presented prizes to Messrs. J. Ekbery (acting District Engineer), R. Leather (guest) and G. Warwick (electrician), who occupied first, second and third places.

Mr. Kellett (second from left) with the prizewinners.





Mr. Nash (right) receives his farewell gift from Mr. Anwyl.

MR. F. W. NASH

After 37 years' service to the industry Mr. Frank N. Nash, clerk at North Wirral District Office, retired on July 22nd.

On behalf of his colleagues, he was presented

with an electric drill by Mr. J. Anwyl (Assistant District Commercial Engineer). Frank is a keen handyman and gardener, and also numbers old-time dancing and reading among his hobbies.



Colleagues wish Mr. Thatcher (right) a happy retirement.

RETIREMENTS

MR. J. L. THATCHER

Best wishes for a long and happy retirement go with Mr. J. L. Thatcher, a storekeeper in the meter and test department at Legacy, Wrexham, since 1945, who retired a few weeks ago.

On behalf of his colleagues, he was presented with an electric shaver and other gifts by Mr. J. Jones (Senior Assistant, Technical).

MR. W. H. YATES

Mr. W. H. Yates, contracting electrician at North Wirral District, retired recently after ten years' service with the Board.

He was presented with an electric clock by

Mr. J. Anwyl, assistant District Commercial Engineer.

Mr. Yates is a keen gardener and bowls enthusiast.



Colleagues gather round for the presentation to Mr. Yates.

MR. R. S. JONES

After 39 years' service to the industry, Mr. R. S. (Sammy) Jones, section engineer at North Wirral district, retired prematurely on health grounds.

On behalf of his colleagues, he was presented with an electric fire, electric iron and Premium Bond, by Mr. J. S. Ekbery, acting District Engineer.

Mr. Jones is a keen fisherman and gardener.



Mr. Jones (left) accepts the tributes of his friends.

MR. A. HULL

The best wishes of his colleagues at St. Helens go with Mr. Alec Hull, a gatekeeper and security man, who retired recently.

Mr. Hull, who is an instructor in the St. Helens' Civil Defence Corps, recently took up fishing, and on behalf of his friends he was presented with a fishing rod as a retirement gift.

MR. D. PROWTING

After 40 years' service to the Electricity Supply Industry, Mr. D. Prowting, Section Engineer at Holyhead, retired recently.

Mr. Prowting began work as an apprentice with Holyhead Electricity Undertaking, later serving on the distribution side, being appointed Section Engineer on the nationalisation of the industry.

On behalf of his colleagues he was presented with a retirement gift by Mr. Ll. Lewis, District Manager.



Mr. Lewis (left) presents Mr. Prowting with his gift.

MRS. M. McDONNELL

After 29 years' service to the industry Mrs. Maisie McDonnell, typist at North Wirral Office, retired recently.

On behalf of her colleagues she was presented with a garden chair, a handbag and a bouquet, by Mr. G. A. White, District Commercial Engineer.

Mr. White wishes Mrs. McDonnell a happy retirement.





Photography

BY GEORGE GOULD

Preparing for the Winter Darkroom Sessions

THIS article will be read when for most of us our holidays will be behind us, and we are left with our memories of the pleasant times we had and, I hope, a wallet-full of good and interesting negatives to print. Winter, for the keen do-it-yourself amateur photographer is "printing time". Long hours are spent in the darkroom looking for the elusive exhibition print. To my keener readers this article is directed, and remember that if you have any darkroom or printing problems a letter to me, care of your Editor, will bring my help and advice by return of post.

In the chain of photographic quality there are many links commencing with the film, then the camera, followed by the film developing process and finally the enlarging and printing process. It is this latter link that I intend to discuss in this article.

Perhaps, as in the camera, the most important part of the enlarger is the lens, and I advise the best you can possibly afford. Its maximum aperture does not matter, but it should be capable of being "stopped down" at least three or four stops. Even more important it should be a coated lens to prevent "flare", and experts are agreed that it is better to have a coated enlarger lens than a coated camera lens.

Points to Check

Secondly your enlarger and enlarger stand or table should be rigid—a shaky enlarger leads to blurred prints. Tighten all screws and see that the baseboard fits firmly and evenly on the table. Check the lens rack and see that the movement of the lens panel is firm. If it slips after you have focused-up, an out-of-focus print will result. Before the season starts you may well consider changing the glass carrier in the negative stage for a glassless one. For the 35 mm camera user a glassless carrier is a "must".

If you intend to use a glass carrier make sure it is free from scratches or blemishes—these scratches will certainly show on your print when your lens is stopped down. Whether glass or glassless, make sure that the carrier is resting flat or parallel with the lens panel. Next check for light leaking from the lamphouse. Stray light will produce fogged highlights on your print. A yard of black plush or velvet from your local store can be cut into strips and stuck down with Evostick or some similar preparation, but don't block

the ventilation holes—the heat from the lamp must be allowed to escape. Just one interesting point—I am often asked "Can a Photoflood lamp be used in the enlarger? The answer is "yes"—it is quite safe, and for those really dense and over-exposed negatives the increased power from the Photoflood lamp is an advantage.

Whether you use condensers or a diffusion glass in the negative stage is one of personal choice. Condensers will give you increased brilliance of the image and will lead to increased contrast in your print. They will also increase negative faults or spots on the print, and they should be kept spotlessly clean. Very often those elusive white spots on the prints can be traced to dust on the condenser lenses—they come into sharp focus when the lens is stopped down for printing. The size of the condensers is important—the diameter of the condenser lens should be as large, or slightly larger than, the diagonal of the negative. Incidentally, a good tip to remember is that if you are printing a miniature negative and wish to use a lens of shorter focal length then a third condenser lens placed flat on top of the one in the lamphouse will also reduce the focal length of the condenser lens set in the lamphouse, thus providing better illumination and higher degrees of enlargement.

Finally we come to the lens itself. Many people use the lens from the camera—this is not good policy. You may drop it when transferring from the camera to the enlarger, and damage the thread. The heat from the lamphouse may damage the lens components, and the lens will be finished. These are the practical reasons—the technical ones are that the camera lens is designed for great subject-camera distances while the enlarging lens is designed for short lens-to-subject distances.

One final tip—when exposing your print keep your body or hands away from the enlarger or the stand. The slightest movement will cause the enlarger column to sway, and loss of print definition will result. A friend of mine had developed the habit of leaning on the enlarger during his printing sessions and the sharpness of his prints varied. He asked for my advice, and a visit to his darkroom to watch him at work provided the solution. Remember you have been warned. Good printing!

The Board's Business - July 1963

COMMERCIAL NOTES

The sale of thermal storage heating on which is based the 'Unit Plan Central Heating' Campaign is getting off to a good start for the coming season. In July, 323 enquiries for details were received in the Area, and on follow-up these resulted in the sale of 230 kilowatts of off-peak load. The full-scale publicity campaign to be conducted by the industry is to commence in the Autumn, and we may look to a substantial response from people interested in having central heating in their homes. The recent announcement that Purchase Tax has been removed from this type of heater should give a boost to our sales drive and enable the Board easily to reach its target for thermal storage heaters sales this winter.

Sales of large appliances during July were only two per cent better than in July last year, but there was a welcome increase in the sales of electric cookers, which rose by nine per cent. The value of sales for the four months April to July is already £90,000 in excess of those for the same period last year and, with a successful storage heater campaign, the total for the present financial year should reach the £3½ million level compared with £3.1 million in 1962/63.

During the month the Board purchased 623 million units for distribution to their consumers, an increase of over 60 million (14.8 per cent) compared with July last year, and the first time the purchases in a midsummer month have reached an average of over 20 million a day. The increased purchases were once again to meet the additional requirements of industrial consumers, sales to this class rising by more than 59 millions. Major increases arose from the chemical industries (one

consumer took over 27 million more units), the iron and steel and the motor-car industries.

The number of new consumers connected to the Board's system—2,193—was only slightly lower than in July last year, and included 91 farms.

ENGINEERING

At its September meeting the Board approved many schemes for extending and reinforcing the supply network, and the total expenditure authorised was approximately £1,660,000. Among the major schemes that were approved there is provision for supplying eleven multi-storey blocks of flats and one Council estate, which will be equipped with under-floor heating. The Board's high voltage network is to be reinforced by providing eleven substations fed from the 33-kV network, and a further 7.5 MVA 33/11-kV substation is to be established to supply the new Electron laboratory at Daresbury.

In July a 7.5 MVA 33/6-kV transformer was commissioned at Union Street, Liverpool, and a 4 MVA 33/11-kV transformer at Middlewich was replaced by a 7.5 MVA unit.

During August 45 MVA 132/33-kV grid substations were commissioned at Elworth in the Crewe District, and at Marchwiel in the Wrexham District. These new substations will relieve the loading on several 33-kV feeders during the coming winter, and improve the security of the supply in these districts.

A recent failure of supply to approximately 600 consumers in the Aberystwyth District was caused by an aircraft which struck the conductors of an 11-kV overhead line while crop-spraying. The line was extensively damaged but the aircraft flew on, apparently none the worse.



I would like to express my heartfelt gratitude to the engineers and all concerned in "putting out" the fires at Clarence Dock.

Being in display work one thinks possibly more about the job when away from it—per-

haps the thoughts are on a "Clean Air Exhibition", or window display while travelling on a bus.

One particularly beautiful, very cold morning this last winter, the sky was lovely, clear duck-egg blue and gold with small petal-pink clouds. Round the corner went the bus and "there she blew"! !—the plume of black smoke from "The Dock" ruining a beautiful picture and very much depressing me.

Keeping watch most carefully each morning you can

imagine my joy—when on one bright morning—no smoke! A few mornings later a small puff of black from the landmost chimney and I thought "Oh dear they've still got a bucket of coal left!" Next day—no smoke!

We use slogans such as "Go Electric", which really is nonsense and not even English. Would it not be much better to say "Use Electricity—it is so clean"—and to say it truthfully?

J. A. BEVAN (Mrs.)
Display Department, Area 1.

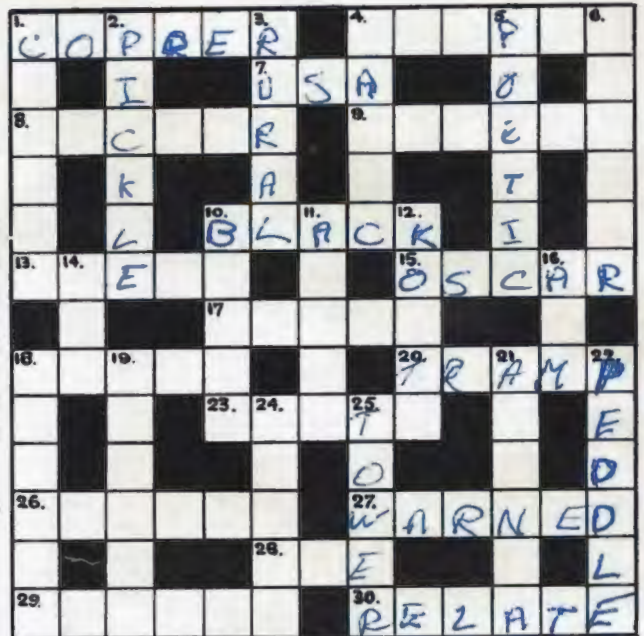
THIS MONTH'S COMPETITION

PRIZE CROSSWORD

Once again, Mr. C. G. Barnes, meter reader/collector at Shotton has provided us with a crossword puzzle for our readers to solve.

Three prizes of half-a-guinea each will be awarded to the senders of the first three all-correct solutions opened on October 21st. Send your entries, on plain paper if you wish, to The Editor, Contact, MANWEB, Head Office, Love Lane, Pall Mall, Liverpool, 3, to arrive not later than October 19th. Don't forget to add your own name and address (office or home).

The competition is restricted to MANWEB employees, pensioners and their families.



Clues Across

- | | | |
|---|---|---|
| <p>1. A Bobby on his metal. (6)</p> <p>4. Oscar Peterson has one inside. (6)</p> <p>7. Initially America. (3)</p> <p>8. Recork this old chair. (6)</p> <p>9. Something fishy in it perhaps for the master? (6)</p> <p>10. Velvet luxury. (5)</p> <p>13. Sounds as though she is very pleasing. (5)</p> <p>15. An extra large vehicle wins this award. (5)</p> <p>17. Endeavours to score a few points. (5)</p> <p>18. After common in the normal course of events. (5)</p> <p>20. Untidy fellow finished off by a measure of electricity. (5)</p> | <p>23. Goes quite mad when I leave the twisted trains. (5)</p> <p>26. The little sister prepares the essay. (6)</p> <p>27. Cautioned by the warden? (6)</p> <p>28. She appears in several guises. (3)</p> <p>29. I don't like it when Ted returns a broken set. (6)</p> <p>30. Again overdue; to give a detailed account? (6)</p> | <p>5. Justice an erring playwright might expect. (6)</p> <p>6. Lost in anger. (6)</p> <p>10. He loses a letter in temper. (5)</p> <p>11. Join in UNO. (5)</p> <p>12. Receivers? (5)</p> <p>14. Sick, in a village hospital. (3)</p> <p>16. Allegedly long when the owner is 1 across (3).</p> <p>18. When separated Ted takes the rap. (6)</p> <p>19. Friends often toasted. (6)</p> <p>21. Ada has inside information at the meeting. (6)</p> <p>22. Sounds like a bicycle part to sell. (6)</p> <p>24. It will be a boon when Tessa returns. (5)</p> <p>25. Capital place for the crown jewels perhaps. (5)</p> |
|---|---|---|

Clues Down

1. Cob, ran this copy. (6)
2. Choose the French onion perhaps. (6)
3. Countrywise. (5)
4. A turbulent sea is packed into them. (5)

Get your Tickets NOW !!!

FOR THE ANNUAL SUPPER DANCE

AT THE EXCHANGE HOTEL ON
Friday, 15th November, 1963

DANCING 8 p.m. to 1 a.m.

TICKETS 20/- each obtainable from Mr. Helliwell (Area 1); Mr. Henderson (Area 2); Mr. Kellett (Area 3); Mr. Pegg (Area 4) and Mr. Parker (Head Office). Table reservations from Mr. Dutton (Establishments, Head Office).