Learning and Earning

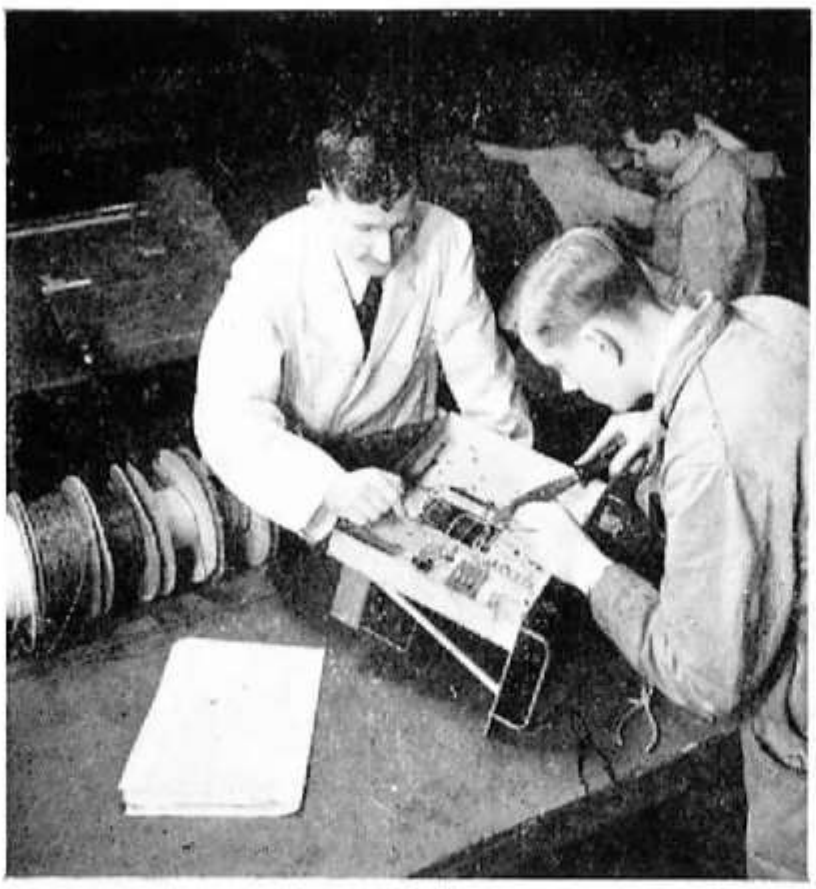
BY E. R. L. LEWIS

ANYWHERE IN THE Works, as you pass down the busy aisles amid the burr and clatter of machines, you will probably notice a youngster working among older men, perhaps a boy at a high-speed drill, his hand on the long lever and his eyes intent on the drill sinking into metal, or maybe a young man bending over the spinning chuck of a complicated lathe, watching the tool fashion a part in a stream of soapy lubricant. You may even see a Medium Power Transmitter in Assembly growing in the hands of a young team.

These young men are just a few of over four hundred apprentices gaining experience in the many sections of the Company's organisation. Apprentice training is one of the responsibilities of the Works Education Officer, E. R. L. Lewis, and his assistant, R. L. Hitchens, who enjoy the willing co-operation of the people throughout the Works who have a hand in apprentice training.

First there are the instructors at the Apprentice Training Centre at Waterhouse Lane. All have had experience in our own shops, and J. Hillman, the chief, keeps his eye on his ship's company from the captain's cabin, with C. E. Sweetman, his first mate, responsible for the instrument benches. Of the twelve Sections in the Training Centre through which the apprentices pass in turn, W. Watts is in charge of drills and mills, J. Cooper the capstans, R. W. Thrift centre lathes, J. Whitaker sheet metal and E. K. Cordery the assembly bench.

The Machine Section of the Apprentice Training Centre at Waterhouse Lane. D. Watson in the foreground is working a capstan lathe



C. C. Chorley, a senior apprentice, who is now in the Forces, instructing student apprentice Peter Noice at the Training Centre. Graduate apprentice Cliff Jackson is in the background

The craft apprentices spend nine months there. The student and graduate apprentices with no previous workshop experience stay six. It is important that as much production work is carried out in the Training Centre as is compatible with wide training and the abilities of the young men. After leaving the Training Centre all apprentices go into the production shops to apply the skills they have just acquired. There they reap the benefit of the experience of supervisors, charge hands and skilled men alike, and there have always been many of these men who have shown an outstanding interest in the welfare of apprentices under their control. We are particularly fortunate in having in the Company the kind of man who is not only good at his job, but eager to develop the skill of the youngsters coming along, and help them to carry on the Company's tradition of reliability and good workmanship which he himself has maintained. These are the men who really train our apprentices and testimony to their services is manifold. Chief among them are H. Luxon, Section 17, H. Kingdon, Section 15, C. Stock, Section 16, C. Atkins, Tool Room, and C. Britton, Development Workshop. One of their main difficulties is the interference caused to production by the movements of apprentices between sections, which a wide training demands, and which sometimes become due during a lengthy job. In practice a telephone call and a friendly discussion solves these tricky problems.

We receive many letters from ex-apprentices now doing their military service who can best speak for themselves. "All this work must be within .001 tolerance, which thanks to the knowledge gained in my work in the Instrument Shop and Waterhouse Lane came quite easily. . . . I certainly am grateful to all at Marconi's who have given me the various tips and aids, that have enabled me to keep up a good standard of workmanship." And another, "I passed my trade test in July entitling me to be an Engine Room Artificer fourth class and consequently a Petty Officer. I must say that I am very thankful for the training I received as it stood me in good stead and enabled me to pass my trade test with eighty-one per cent." And one more—"My experience of the Works methods, especially at Baddow and under Bob Myall at New Street, not to mention Ted Cordery and many others, has stood me in excellent stead where manual dexterity and the procedure of using your 'loaf' is concerned."

Incidentally we are sending copies of the magazine to all our people in the Forces, and many have said what a cheerful link it provides with old times and old friends.

For the last four years we have entered the National Physical Society's Annual Competition for Apprentices. There are two grades, senior and junior, and the groups include Draughtsmanship, Tools and Gauges, and Scientific

In the Metallurgical Laboratory, student apprentice R. G. Graygoose (right) is making chemical tests

Instruments. We have not yet competed without winning a prize and our success in the Draughtsmanship class has been outstanding, thanks to the great interest taken by R. H. Mead, Supervisor of Drawing Offices, and the careful guidance given to the competitors by E. B. Lloyd at the Drawing Office School. Three times we have won first prize in the Senior Class, and this year it was won by David Cork. Roger Pallemaerts won second prize in the Tool and Gauge Class. Altogether this year we gained three prizes and four Honourable Mentions. The wins in the Junior Craftsman Class bring particular credit to the Apprentice Training Centre, for entries are submitted by boys still under training.

Craft apprentices either join us at the age of fifteen on leaving school or later if they take their school certificate. Their formal training starts at sixteen and while they are at the Training Centre the trade to which they are most suited is selected—one of the many found within the Works. The programme for the remainder of their five years' training is devised to give them as wide and varied an experience in practising that trade as we can offer. While at Broomfield one apprentice went to the storekeeper who was also an apprentice and asked for a ring gauge. "What?" said the storekeeper. "A ring gauge, please", said the apprentice. "Sorry, we don't stock greengages here", replied the storekeeper. However, they are released one day a week with pay to attend an appropriate Technical College, first to preliminary classes and then to a National Certificate or City and Guilds Course.

We have apprentices at seven different technical colleges from Northampton Polytechnic in London to North-East Essex at Colchester. A college is chosen either because it is the nearest to the boy's home or because it has the particular course he needs. Attendance at Technical College is strongly encouraged and as long as an apprentice is successful, the time release continues; though if he fails an exam. he must repeat that year of the course in evening classes. We have a good measure of success. Last summer's results included twelve Higher National Certificates,

A group of student apprentices who have just arrived at the Training Centre spending their first week on drills. (L. to r.) G. S. Hunt, C. Davidson, P. B. Proudfoot, B. D. Guest

C. E. Sweetman supervising the finishing touches to the Physical Society competition entries. (L. to r.) R. Pallemaerts, D. King, C. E. Sweetman, J. D. Brewer, D. G. Bowtle

twelve Ordinary National Certificates, two City and Guilds Inters, three City and Guilds Finals and three Graduate Memberships of the Institution of Production Engineers. For those who pass the year's course the Company pays any fees they have incurred, buys their essential text-books for them and gives them a bonus for the next year. To the boy who makes good progress in the Works and at his Technical College many opportunities are offered. He can be transferred between the ages of eighteen and nineteen to a student apprenticeship for training as an engineer. Some wish to become draughtsmen and those showing promise are sent to the Drawing Office School either soon after coming out of the Training Centre (from whence they would normally return to the shops) or towards the end of their apprenticeship. Others receive training with a view to their ultimately going into such sections as Production Planning. At the end of their training we unfortunately have to lose them for two years' military service and we hope that while they are learning to use arms they will not forget how to use their hands.

Student apprentices usually join us at seventeen or eighteen, either from a Technical College where they have taken an Ordinary National Diploma, or a Grammar or Boarding School where they have studied for a University Higher Schools Certificate. Their apprenticeship is for four years to train them as engineers or technicians. Progress at Technical College is an essential part of their training and they follow a variety of courses. Some are taking a Higher National Certificate with a view to getting their A.M.I.E.E.; a few are reading for degrees in Electrical Engineering or Physics, which is an exacting path to tread, demanding great perseverance and a lot of hard study. One boy is about to start on a degree course in Metallurgy. At the same time, however, sound practical experience is essential and after moving on from the

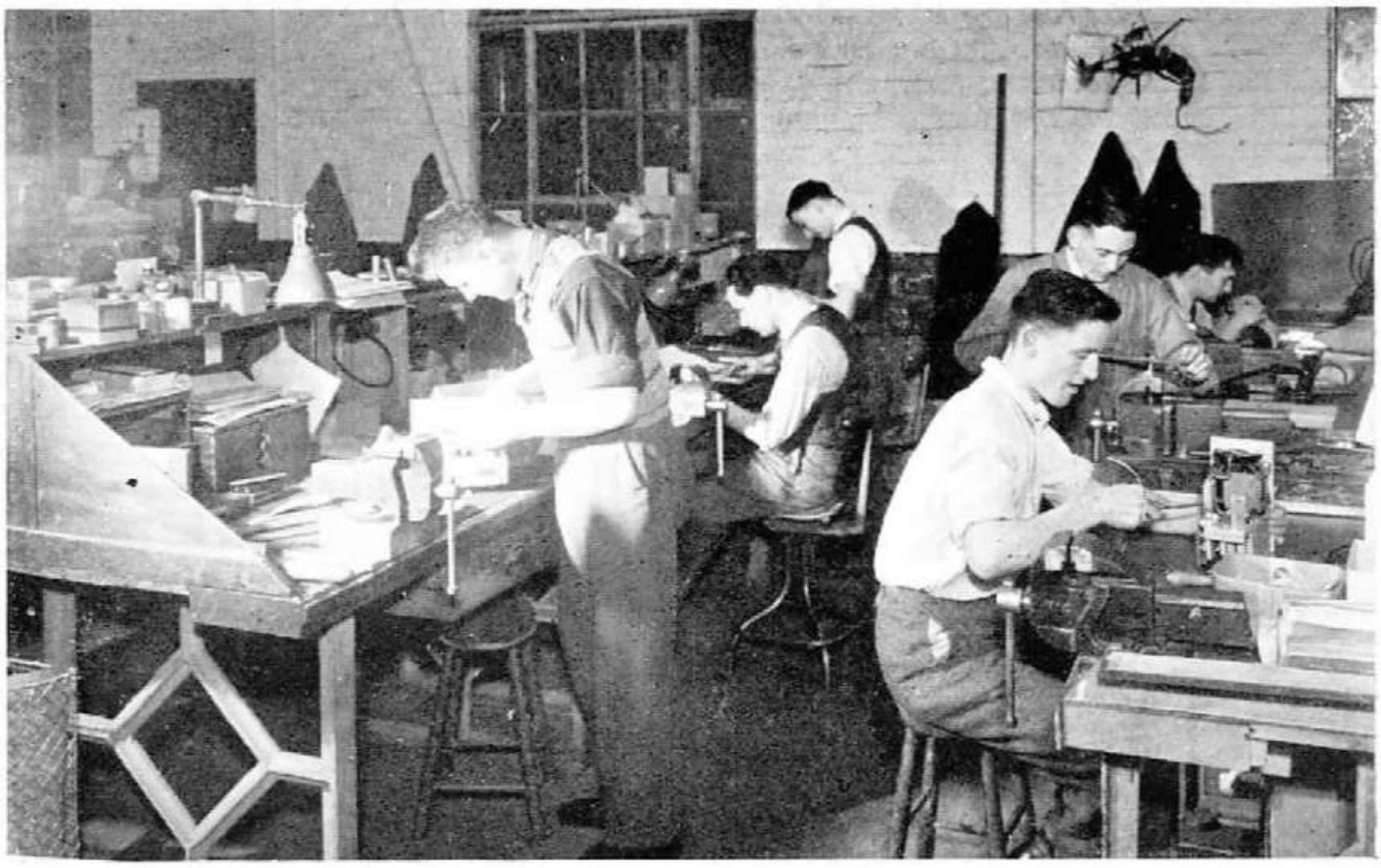
Training Centre, the next eighteen months are spent in the shops. Their training is then continued in the various research or development laboratories and later they go to Marconi College for the six months' Radio Communication course. From there, they are fed into the sections where, it is hoped, they will ultimately settle.

Graduate apprentices join us in their early twenties, with a degree or a diploma, after having completed a full-time course at a University or Technical College. They wish to add to their long period of scientific or technical study, two years of practical industrial training. They do six months at the Apprentice Training Centre, six months in various Works sections, six months at Marconi College on the Radio or Radar Course, and a final six months' training in the Department where they will ultimately work.

They come from all corners of the Commonwealth. Some are tall and thin, some are short and bearded, some have wives and children and some have taxis; some have been in the Forces and some have that treat in store. They all mix very well and soon settle as familiar figures in our varied community.

Out of Works hours apprentices have their sport, and several play in the M.A.S.C. teams. Their hobbies are many and varied and once occupied R. L. Hitchens in a startling and intricate piece of market research. He found, among others, two fishermen, two puppet-makers, six musicians and two bell-ringers. Here mention must be made of the varied and widespread activities of the Apprentice Association. It is run for the general social welfare of the apprentices by themselves. Membership is now one and sixpence a year and the activities of the club are becoming well known. It selects and arranges trips to see over other companies' Works. It organises sport, theatre visits, dances and, of course, parties when even the

Working in the Design and Development Workshop under C. Britton are apprentices (l. to r.) E. E. Langridge, J. Polley, C. W. Boyton, G. C. Fenner, K. H. C. Clements, P. Webb



Craft apprentice B. Munday, son of the Chief Electrician, making brackets for T.V. equipment in the Prototype Shop

education staff are subject to organisation. In fact, the association will organise anything that the apprentices want.

It can be well imagined that to control the training of a large number of apprentices needs careful organisation, and the smooth running of the Department is largely due to the efforts of the Education Officer's secretary, Coral Halter, and Mary Hobrow.

To ease the task of the shop foreman, advance notice is given of all apprentice moves; frequent reports are obtained to watch the progress of each apprentice. Occasional reports are sent to parents to sustain their interest in our training. There are many other activities that go on—the recruitment of new apprentices by interview and contact with the schools, arranging appropriate technical college courses, arranging lectures on the various Company Departments, training programmes for apprentices, students and trainees, and even sorting out apprentices' individual problems.

Our training provides greater opportunities today than ever before. For every apprentice who will avail himself of them there is a first-class career, and it is our belief that, given the chance to make the most of his abilities, he will bring the greatest credit to himself and to the Company.

In the Tool Room, C. Strutton, chargehand of the Apprentices Section, helps D. R. Martin. In the front row are B. Pashley and A. J. Cuff, and behind, J. Cant and J. P. Atkin, son of the toolroom foreman

D. J. Kemp soldering connections to range units for "Radiolocator IV" Marine equipment