HARLEQUIN

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HARLEQUIN

Leisure Magazine of the Atomic Energy Research Establishment

TON HAMPDEN K. P. GINGELL

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	Effective Output Resistance (max.)	0.2 ohms	0.02 ohms	0.5 ohms	0.02 ohms
	Output Ripple (rms. max.)	2mV	1mV	3mV	1mV
—VE Supply Stabilizer	Outputs	—	—	250V 25mA 0-250V 1mA	250V 25mA 0-250V 1mA
	Voltage Stabilization	—	—	±0.05%	±0.002%
	Output Resistance (max.)	—	—	1 ohm	0.01 ohms
	Output Ripple (rms. max.)	—	—	2mV	1mV
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	Number of Ranges	2	2	4	4
	Voltage Stabilization	±0.02%	±0.002%	±0.1%	±0.002%
	Effective Output Resistance (max.)	0.2 ohms	0.02 ohms	0.5 ohms	0.02 ohms
	Output Ripple (rms. max.)	2mV	1mV	3mV	1mV
—VE Supply Stabilizer	Outputs	—	—	250V 25mA 0-250V 1mA	250V 25mA 0-250V 1mA
	Voltage Stabilization	—	—	±0.05%	±0.002%
	Output Resistance (max.)	—	—	1 ohm	0.01 ohms
	Output Ripple (rms. max.)	—	—	2mV	1mV
Unstabilized +EV H.T. Supply 350mA max.		470V 630V	470V 630V	320V 470V 630V	320V 470V 630V
Unstabilized A.C. Supply		6.3V 10A	6.3V 10A	6.3V 10A	6.3V 10A
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er Scene *K. P. Gingell*

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FOREWORD

Dr. B. F. J. Schonland, *C.B.E., F.R.S., has taken up his duties as deputy director, A.E.R.E., after a distinguished scientific career in South Africa, closely linked with Harwell on account of uranium supplies. As he says, also*

Harwell has another link with South Africa, through its Director, who visited it some years ago, before the first British atomic bomb was exploded. He was at dinner in Cape Town with friends, who had the usual irrepressible small son, carefully warned by his Mother to keep silent at the meal.

Towards the end of dinner, the ten year old, who had so far been exemplary, electrified the company :

" Sir John, may I ask you a question ? "

" Yes, yes, certainly you may."

" Well, it's about the atomic bomb. I do not want to ask how it is made. We know that, and we know what it's got in it, uranium. But I want to ask how big it is and what it's put into."

" Well," replied Sir John, " I haven't seen one and I really don't know how big it is."

" Anyway, it must be small enough to be carried in an aeroplane."

" Yes, " said Sir John, " I think it is quite small really."

" But what we would like to know is what it is packed in."

" Well, I really don't know but I shouldn't think that that would be very important."

" The metal wouldn't make much difference ? "

" No ; I don't think it would."

" Oh," with great relief. " Then do you think something like a jam tin would do ? "

" Yes," said Sir John. " I think that would do very well."

" Thank you very much, Sir John. That is exactly what we wanted to know. You see, we're making one."

Dr. Schonland was Professor of Physics at the University of Capetown till 1936. *During the war he was first Brigadier, South African Corps of Signals, and later Superintendent, Army Operational Research Group, becoming Scientific Adviser to General Montgomery. After the war, his main interests lay in geophysics ; he held this chair in the University of Witwatersrand.*

A considerable fraction of the world's present supply of uranium comes from the mines and minedumps of the Witwatersrand, the " ridge of clear waters " which divides the muddy rivers flowing into the Atlantic (the Vaal and the Orange) from the clearer streams which become the Crocodile and the Limpopo and flow into the Indian Ocean.

About 1200 million years ago, this same region was one edge of a great saucer-shaped basin, forming an inland lake, whose muddy bottom has since been converted by pressure and heat into a hard quartzite rock some 20,000 feet thick. This lake was fed by streams from long-vanished mountains to the North of it and the waterworn quartz pebbles at the mouths of these ancient streams now lie in the " conglomerate " seams of the gold mines. In the sandy quartzite around them are found the particles of gold and uranium which are mined today. The majority of geologists think that these metals came into the sand from eroded granite of much greater age and were brought down to the lake by the streams from the North. A minority, however, argue that the gold and the uranium were deposited from later gushes of hot steam-laden gases coming up from below the bottom of the lake.

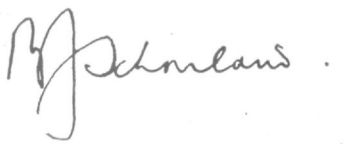
At the moment this majority group is recovering from a series of shrewd blows dealt them in a scientific paper by Dr. Davidson of the Geological Survey of the United Kingdom. They are about to return to the fight with the news that the age of the uranium in the Rand mines, recently determined at the South African National Physical Laboratory, is about 1900 million years. This is much greater than the age of the lake and hence they argue that the uranium must have been stream-borne from more ancient mountains elswhere. The argument will probably go on for some time.

Educated at Rhodes College, Grahamstown, and later at Gonville & Caius College Cambridge, he was afterwards a research student in the Cavendish Laboratory. During the intervening years he gained many important scientific awards ; now like other distinugished ' Cavendish men ' he has come to Harwell, and gives us his first impressions.

Any newcomer to Harwell must be struck by the amazing range and complexity of its activities. That it all works smoothly and effectively is probably due to some secret discovery in scientific and human relations. No doubt the kindly goodwill of the British people and that now declassified invention of theirs, the Committee System, play some part in the mechanism, but these alone would not fully explain it.

The system of numbering the many buildings on the site is a perpetual source of surprise. To work in a building which bears entirely different numbers at its two ends is fascinating. One trusts that it is all documented and explained somewhere for the benefit of future historians.

It is interesting, too, to find how closely its atmosphere approaches that of a University, rather than that of an Applied Research Establishment. It has been said that if one sits long enough at a table outside the Cafe de la Paix in Paris, one will see the whole world go by. Certainly if one stays at Harwell for a while one should see as visitors most of the physicists, mathematical and experimental, chemists and engineers of note in the world outside and have the opportunity of hearing many of them lecture.



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Editorial

In this issue, we welcome our new Deputy Director, Dr. B. F. J. Schonland, C.B.E., F.R.S., who is introduced in our Foreword. We have several other new contributors this time : A. B. Jones writes on the work of the gardeners, R. West on a subject painful to many of us ; Ted Holland rides one of his (steam) hobby horses, and Joan Allan an older type. Among the old stalwarts, C. H. Robinson touches on wage rates in 1670—recalling a story of H. O. Norwood about a labourer he hired when workshop manager in 1946. This man had been an agricultural worker and, living in a tied cottage and having other remuneration ' in kind ' actually had been drawing only some few shillings a week in cash. Consequently, when starting at Harwell, he needed a ' sub,' and was entitled to 32/-. Taking his chit to the cash office he there received a florin and two notes. He at once complained to the gaffer that he had only received 2/- and ' two more papers.' It was some time before the astonished staff would let themselves realise that he had never before seen a Treasury note !

It's too bad Mr. Norwood didn't enter this one for the anecdote competition ! If he had, it would certainly have won the prize, for there were no entries at all, incredible though it may seem ! Wherever I go, I hear conversation on the lines of ' Do you remember when so-and-so,' but I find that a guaranteed way of producing a gloomy silence is to suggest the possibility of writing it for Harlequin. Extracting ' copy ' from some of our most brilliant talkers is like getting tea money from a P.S.O.-and-above. Still, the situation is improving a bit, and with a bit of luck, we may at long last come out as a ' Quarterly ' in 1955 and onwards.

In our Christmas number of 1953 we published a letter from Dr. Lee Harwell, of Poplar Bluff, Missouri, asking about the origin of his family name and line. He received two replies as a result, and has had an interesting correspondence with Roger Evans of Didcot (whose wife works in Reactor Physics). The other letter was from someone whose name and address he has lost and to whom no reply is therefore possible. Since Dr. Harwell is anxious to thank this correspondent, would he, or she write again to 1407, Main Street ?

In the past, it has been difficult to extract from readers not only contributions, but even so much as an opinion of the magazine. The Opinion Poll competition, which replaces the Lucky Number draw, on page 43 is designed to take care of this. You may be as rude as you like on this, and might even get a guinea for being so !

A Merry Christmas to all our Readers !

No, No !—He's a scientist from Harwell !

The Editor, Harlequin.
Department of Haemopsychosis,
Atomic Hospital for
Incurable Diseases,
Nether Harwell.

Dear Sir,

The time seems ripe to publish a brief account of some of the maladies we have discovered as the result of work in this department.

Collis Protuberosis — A sticking out of the neck.
Scalar Traction — A tendency to pull up the ladder Jack.
Macrocephalosis — Big-headedness, often associated with
Micropsychosis — Small mindedness.

Somewhat rife are the two closely associated maladies.

Fini probuscular vision — Inability to see beyond the end of one's nose and
Contrafacial Nasectomy—Cutting off of one's nose to spite one's face.

While it is rather early yet to discuss individual cases, many of our patients exhibited the above symptoms in varying degrees. However, statistical analysis revealed that far from being a drawback a combination of these maladies is often responsible for rapid promotion.

We are indebted to the Director of our Department for permission to publish this letter, and wish to acknowledge the help of "et al" at Nether Harwell who provided a never ending source of material.

Yours sincerely,

A. BLOGGER, Ph.D.
B. LUFFER, M.D.

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For 5/-, the next six issues of 'Harlequin' will be sent, post-free, to anywhere in the world. Why not arrange now to send a subscription to a friend as a Christmas present ? If you are leaving Harwell, don't forget to take out a subscription for yourself - - - - keep in touch with the old place ; you may find yourself growing quite fond of it !

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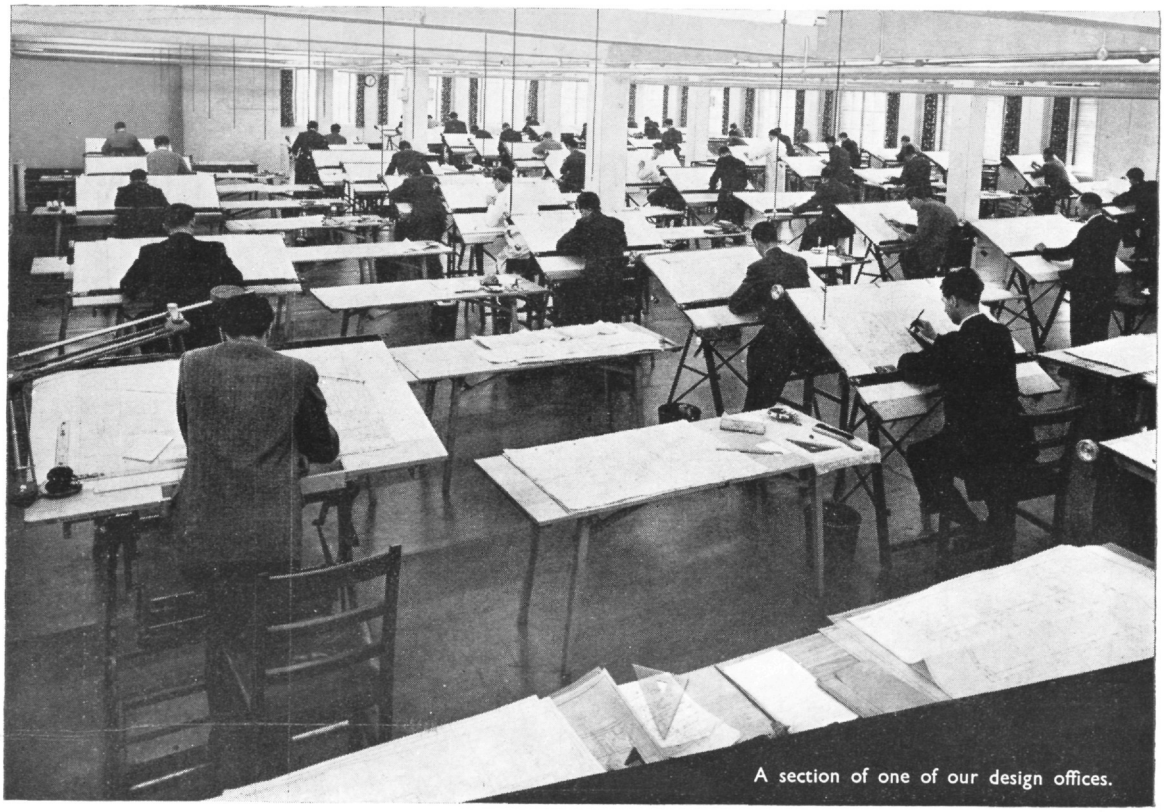

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A Dissertation on the Grounds at Harwell

THE OPEN AIR

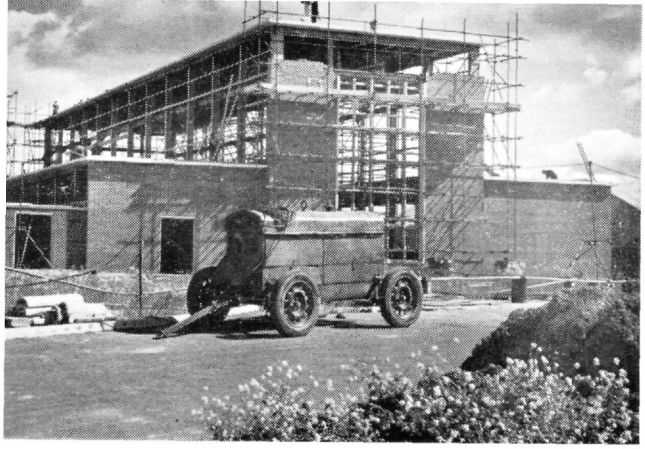
by A. B. JONES

THE past season, perhaps regarded by many as most disappointing because of its lack of sunshine, has seen a display of roses not equalled for many years. The Establishment's modest display has been no exception : the Hybrid Teas in popular varieties in the borders which flank one of the side entrances to Building 329 have bloomed almost continuously since June and the Floribunda selections in the front of Building 77 have given a splash of colour for many months. Even in 1946 the Establishment might well have claimed to have been a " rose garden " for it had been said that the common dandelion—taraxacum officinale—is known locally as the " Rose of Berkshire." In those now distant days the dandelion flourished supreme between barrack blocks, hangars and the other Royal Air Force buildings from which the present Establishment has developed. Maybe it was the widespread activities of Messrs. Chivers at that time in the construction of new buildings which disposed of much of the dandelion vegetation although the efforts of the Grounds staff contributed to the weed's disappearance.

Development and maintenance work associated with the grounds of the Establishment began in 1946 when the Royal Parks Division of the Ministry of Works made a preliminary survey of the problem. The late Mr. W. J. Hepburn—at that time Superintendent of the Hampton Court Gardens—visited Harwell on a number of occasions and suggested a general pattern of development to meet the specification that all areas of ground, not utilised for buildings and other services, should be grassed. Mr. J. H. Clark joined the Establishment from Regents Park in 1947 and he was followed in 1950 by Mr. A. E. Burge from St. James' Park. The latter is still with us and it is to him, his predecessor, and his team that the grounds at Harwell have that ' cared for ' look at all times and, in season, offer to the beholder colour in fruit, leaf and flower. It will come as news to few who are familiar with the place that the appearance of the grounds evokes encouraging comments from many of our overseas visitors, particularly those from America. Twenty years ago the site on which the Establishment now stands was corn land ; cereal crops could be raised satisfactorily on the comparatively shallow depth of top soil which overlays the chalk of the Berkshire Downs. Those now associated with grounds development find the top soil layer rather too shallow for all their present needs and they are, moreover, aware of the limitations of a soil which is not ' lime free ' in determining what will, and will not, thrive. The supply of top soil of suitable quality is, perhaps, more than any other factor, of greatest consequence at the present time. Every yard which can be skimmed off a building site before operations are begun has to be husbanded to meet future needs and, where the top soil layer is found to be woefully thin, it is safe to surmise that some skimming off was practised during the construction of the Royal Air Force Station in the 1930's. Additional to the Establishment's own resources, considerable quantities of top soil have, hitherto, been imported from other sites. Unfortunately, future supplies are unlikely to be so ready to come by and herein lies the cause of one major pre-occupation.

Satisfactory results in horticulture, season by season, call for something more than suitable top soil and observers will have noticed that considerable quantities of humus are dug into the top spit of soil before trees or shrubs are planted. Perhaps more than anything else this preparation of the soil, for what is hoped to be the home for many years of a tree or shrub, is the secret of success. The Grounds staff have set themselves a high standard and results manifest twenty or thirty years hence will demonstrate the extent to which that standard is maintained.

Some readers may be aware that the Establishment inherited some trees—mostly of sapling stature—from the former occupants of the site. In the neighbourhood of the married quarters the trees bequeathed were flowering varieties; elsewhere beech were the main choice. Several of both, having become thoroughly established, have grown into strong shapely trees ; the best examples are probably those in the middle of the dual carriageway from North Gate. Many



Before

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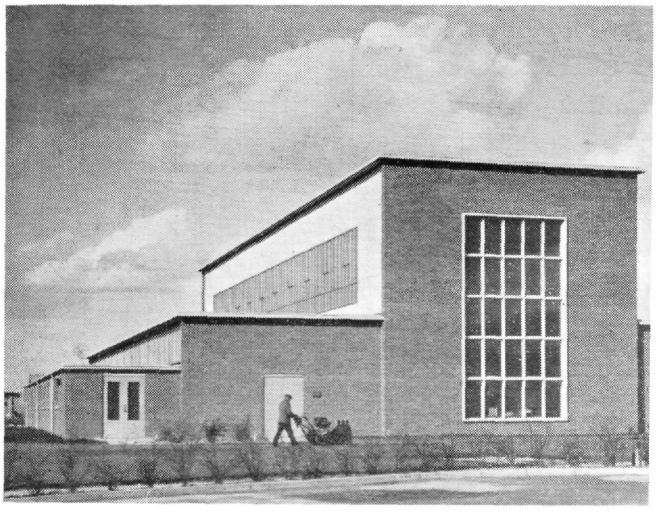
After



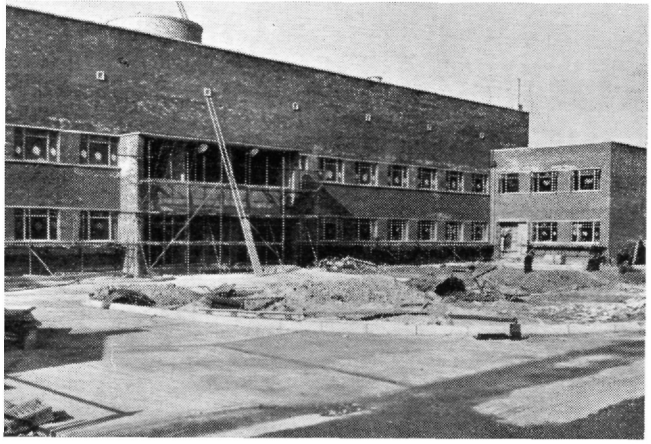
of the inherited beech trees are, judging from their looks, finding conditions difficult ; they lack the protection afforded by group planting and it is likely that they were not given, at the time they were planted, a sufficiency of soil in which a good root formation could develop. It is hoped, as opportunity offers, to lift some of these trees and give them a further chance in more satisfactory conditions : such operations, however, are not without risk and losses may not be avoidable.

Tree planting has had a prominent place in the scheme of things and some 10,000 trees have been planted here during the past 4—5 years. An early start was made with plantings on the bomb dump adjacent to the Chilton Estate perhaps in deference to the views expressed by John Betjeman—which was followed by plantings in the vicinity of the effluent farm. Subsequently several hundred young conifers, planted out when only about a foot high, have found a home near the South Gate and a belt of mixed conifers and deciduous trees now stands on the boundary separating the site from the Eyston estate at Aldfield.

Thoughts turned in 1946-47 to the possibility of some scheme of afforestation whereby large scale tree planting might be undertaken in the shadow of the Downs to afford some protection as a wind break. Consultations with the Forestry Commission Authorities soon revealed that we would not be able to make available a sufficiently large area of land to enable planting on the required scale to be undertaken : this difficulty and other obstacles to the scheme were such that the idea had to be abandoned.

Shrubs do well here and a wide range of varieties have been planted. Most of those now growing have been propagated from cuttings and this particular horticultural activity is the primary reason for the existence of the small nursery which lies between Ridgeway House and South Drive. It is due to their propagating success that the Grounds team is able quickly to plant up newly prepared ground as the development programme proceeds and to make good the losses which occur in the already established plots. Most shrubs, once established, have a spreading habit and quickly fill the space allotted to them ; they are also effective as smotherers of weeds. Their chief attraction, however, is that, apart from occasional pruning they need little attention and this point cannot be ignored where man-power considerations are concerned. For similar reasons flower beds and borders which are expensive to create and maintain have had to be limited in extent both at Harwell and on its housing estates.

Some 4 acres of kitchen garden supply quantities of fresh vegetables to the canteen and hostels although no attempt is made to grow



Before

BUILDING 393.1

After

more than a small portion of the Establishment's needs. A smaller area of ground provides a food supply for the animals belonging to the Radio Biochemical Unit of the Medical Research Council : rabbits and guinea pigs consume vast quantities of cabbage, kale and other vegetables and have created a flourishing demand for greenery in a variety of forms.

For those attracted by statistics the areas of land at the Establishment already developed add up to approximately 300 acres ; about one quarter of this area has been seeded with grass and rather more than 11 tons of seed has been sown in the past eight seasons. Each of the circular beds in the front of Building 77 provide a home for 1,000 bedding plants and when planted for a Spring display they each contain a similar number of bulbs.

No apology is needed in making reference to the responsibilities of the Grounds staff for the upkeep of the grounds of the Establishment's housing estates in Abingdon, Wantage and elsewhere. It is unfortunate that economic considerations have led to a diminution in the scale of maintenance during the past year or so ; unfortunately there is little prospect of any substantial measure of restoration. In addition to the considerable acreage with which a limited labour force has to cope there is the problem of grass cutting. In a season such as that just passed cutting has been a continuous process for nearly 8 months.

This article would not be complete without an acknowledgement to the Bailiff of Royal Parks for the help he has given in the development of the grounds of the Research Establishment and its associated estates. The fact that Major I. K. Hobkirk's connection with us is to cease at the end of March 1955 is a consequence of the recent organisational changes ; it provides, however, an opportunity for Harwell to express its warmest thanks for assistance so readily afforded.



The writer is indebted to Dr. C. E. Bacon (Secretary, Grounds Committee) and Mr. A. E. Burge (Grounds Superintendent) for their help in this article.

The Truth about Harwell

by H. J. M. BOWEN

So little information about Harwell is given to the outside world that I consider myself fortunate in being able to release the following condensed summary to the general public. The information appended below was obtained by decoding an important document with restricted circulation camouflaged under the heading of a telephone directory, but the heading would scarcely deceive any man of intelligence once he had glanced at the contents. While much of the information revealed in this moving and human document has been omitted in what follows, it is felt that the edited version below, corresponding to a free translation of a latin elegaic, gives a remarkably accurate picture of the main activities of the Atomic Energy Research Establishment.

A.E.R.E. is sited on two *fields*, sometimes called the *oldfield* and the *littlefield*, a *goodway* from the nearest town. It stands at the intersection of three *lanes* and two *rhodes* and is overlooked by no less than six *hills*. The neighbourhood is celebrated for its *woods* (at least five are recorded, as well as a *spinney*) in which grow *hazell*, *may*, *roses* and many different *flowers*. Nearby are two *marshes*, and good *drinkwater* is obtainable at any of the five *wells*, one of which feeds a sizeable *poole* from which *pyke* have been caught with a *maggott*. Birds frequently in the vicinity include *crowes*, *jays* and *robins*. The soil is chiefly *clay* with *flints*, typical of the *downs*. The climate is continental with hot *summers*, but *snow* and *gales* are normal in *winter*.

Little is known of the history of the district, but the names of a *king* and six *knights* are preserved in the document to which I have already referred, together with some of their attendants, including a *duke*, a *chamberlain*, a *marshall*, a *page*, *squires*, two *fowlers* and a *rainger*. From an earlier period, coins of *Caesar* and *Constantine* have been found during building operations.

For reasons of security it is possible to name but a few of the items of equipment in use inside the establishment. The largest single item must be the *pyle*, with which is associated a biological *shield* to prevent the escape of dangerous *rays*, some of which reach the energy of a *watt*. An ingenious system consisting of a *pulley* and two *bells* is used to warn the scientists against a possible *spilling* inside the *pyle*. Almost anything, from a *gunn* to a *greenhouse*, or from a *boot* to a *bradshaw*, may be drawn from the two large *stocks* in the establishment.

The members of the scientific staff must also remain secret, but some of the auxiliary workers can be mentioned to give an idea of the multitude involved. Three *butchers*, three *bakers*, two *chandlers* and fifteen *taylors* serve the needs of the hard working scientists, while a *cashman* is employed full time at the *Lloyds bank*. Building is constantly going on with the help of two *masons* and two *potters*, under the supervision of an expert *foreman*. The grounds are kept up by the three *gardners* and a *hedger*, and two *carters* are kept busy removing the *gubbins* they dig up. A *constable* is always on duty at each of the *gates*.

Canteen lunches are provided, and five *cooks* and two *carvers* are kept gainfully employed preparing the food. There are three *prices* at the canteen. The best quality includes such delicacies as *salmon*, *tongue*, roast *lamb* and two kinds of *curry*, while in the lower regions *bacon* and *onion pye*, or *codd* and *pickles* can generally be obtained together with *rice* or *jelley* for sweet. Working hours are fairly *short*, and the end of the working day is indicated by the *bray* of a *horn*. Subsequently there is an exodus of *carrs* and buses at great *speed*. A few even of the scientists have been able to afford cars, including four *Morrises*, three *Fords* and an *Austin*.

The social life of the establishment after hours is by no means dull as there are two *batchelors* to every *husband*. *Raffles* and *sayles* are very popular. Cricket is universally played in the summer, but the only commercial equipment appears to be a single *batt* and two *balls*. *Bailey*, *Evans*, *Sheppard* and *May* have all played for the establishment, which also has representatives in the *Hampshire*, *Derbyshire* and *Cornish* teams. Rugby football is less popular, as only one *try* was scored last season. Religion is catered for by a *parson*, a resident *dean* and a *beadle*, while there are local societies of *monks* and *nuns*. Crime is relatively infrequent, despite the statement of the local *constable* that there are two *crooks* to every *goodman*. Perhaps the last word should rest with the Hollywood star who described her scientist husband as a real *darling*, but a *juggins* in bed.

Book Review

LITTLE CYCLONE *by Airey Neave :* Hodder and Stoughton, 12/6

In this short book (*very* short, considering its price) Airey Neave gives a sparse, even an arid, account of one of the organisations for aiding the escape of Allied airmen shot down over occupied Europe. The somewhat inappropriate title is the nick-name of the young woman who founded this particular ' line,' but the book is not principally about her ; a lot of other characters appear but none of them ever really comes to life for us. They drift on the scene, devoted, selfless, saintly (or else occasionally melodramatically treacherous)—— and play their dangerous parts and disappear, to England or, usually, to a Gestapo prison. Only twice do we catch a glimpse of real people caught up in drama. One is of a young airman whose petulant behaviour draws unwelcome German attention in a restaurant ; the other of a forthright girl who urgently communicates with an arrested colleague by the unbelievably simple device of shouting to her from the street.

If the short sentences paint no portraits for us, they do however, succeed in bringing home a sense of tragedy and doom, of how pitifully vulnerable to treachery and the simplest ' plants ' were these brave people, and yet of how successful, at a high price, were their splendid, amateurish efforts.

Airey Neave, who has done quite a bit of escaping himself, (" They have their Exits ", published about a year ago) is now ' our ' Member of Parliament—that is for Abingdon and North Berks. He was elected in the fair, free and secret ballot that we nowadays take for granted. Things were very different in the Abingdon of 1679 ; *they were, in fact, such as to give rise to :—*

THE MAYOR'S DILEMMA

One of the first elections fought on well defined party lines was that which returned the first exclusionist Parliament in 1679, eighteen years after the restoration of Charles II.

Popular feeling against Roman Catholicism had been brought to boiling point a year previously, in the first hearing of the " Popish Plot," devised and presented by Titus Oates, with the aid of the Green Room Club. The popular target for this anti-popery was the Duke of York, Charles' brother and the heir apparent, who had recently openly embraced the Roman Catholic religion. The election manifesto to the Popular Party, later to become known as the Whigs, was the exclusion of James Stuart from succession, because he was a Catholic, and also the exclusion of certain catholic peers from the council of Charles II.

In those days the borough of Abingdon returned one member to the Commons, the enfranchised of Abingdon being " those burgesses paying Scot and Lot and not in receipt of any aid or charity." There were some 500 of these, and they had, on this occasion, two candidates on the hustings.

Sir John Stonehouse, who was a loyalist, favoured the succession of James, despite his being a Roman Catholic. One of his most ardent supporters was the Mayor of Abingdon, who also officiated as returning officer. In opposition was Mr. Dunch, who lived in Pusey; he supported the exclusionists, and seemed to have a large measure of popular support.

Fearing that his candidate might not be successful, the Mayor caused the poll to be postponed for three weeks, using this breathing space to threaten opposition supporters with increased rates, incarceration for debt and the like, as did also some other members of the council. There was no secret ballot : all votes were cast on the open hustings.

Despite these tactics, or perhaps because of them, Mr. Dunch eventually received 297 votes, 126 more than his opponent. Elated by the result, he demanded that the Mayor declare him the victor, and return him as the burgess for Abingdon. This the Mayor refused to do, and retreating into his council chamber declared that " Having examined the poll, and finding the number 171 to be greater than 297, I declare Sir John Stonehouse to be elected as Burgess for Abingdon."

Jeered to his home by the crowd, the Mayor fled the town for two days, while a mob of 100 horsemen and 200 on foot paraded the town in protest. Finding that this could not in any way reverse the returning officer's decision, the mob broke up, leaving Dunch and his party to contest the election on the floor of the House at Westminster.

Robert Loder: Farmer

by

C. H. ROBINSON

Most of us remember English history from our school days as stories of Robber Barons and the battles they fought, or Kings fighting Parliament for more money. With the under-current of tension and trouble, the past always appears a most unattractive time, even in its most romantic periods. But really, of course, these great happenings, the strife and the struggle, bypassed the man in the street, whose usual concern was no further than the next meal, or at best, the next harvest.

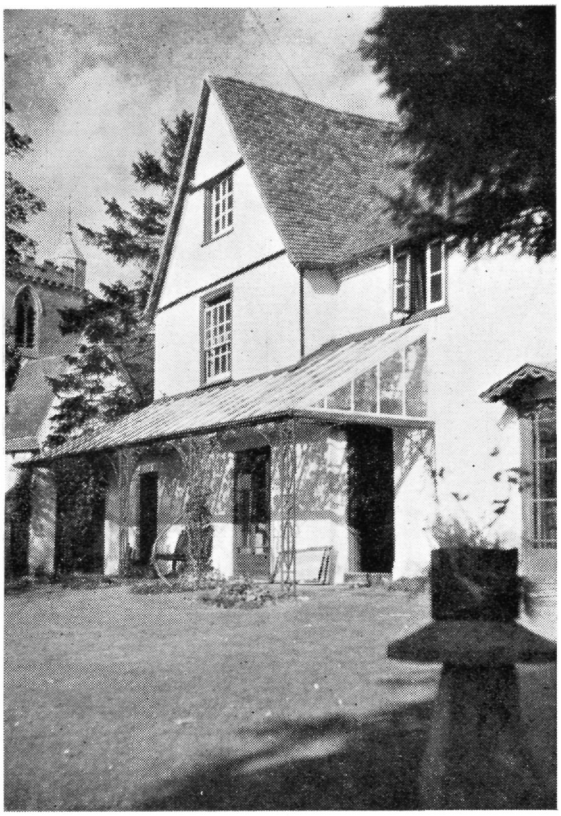
Such a man was Robert Loder. He was born about 18 months after the defeat of the Spanish Armada, and died in 1640, when the nation was already taking sides in the titanic struggle that was to terminate with the death on the scaffold of Charles I, and the exile of Charles II. Yet, other than once spending 4/6d. to have a suit of armour repaired, he seems to have given no thought to warlike activities.

He was a contemporary of William Shakespeare, when many other poets were emulating the master, and beautifying the whole of the English literary scene. Yet, so far as is known, he wrote not a line of blank verse in his life. When Robert Loder put pen to paper, it was to record the facts and figures of his farm, the Prince's Manor Farm in Harwell. From his coming-of-age, in 1610, when he took over the management of the farm, until 1620, he kept a very complete diary of his farming life, and these account books, transcribed in 1936 by Mr. C. E. Fussel, and published by the Royal Historical Society, form the foundation for this brief description of his life and times.

The Loder family had obtained possession of the Prince's Manor farm by purchase. It had belonged to the Chapel of St. Nicholas at Wallingford, but this foundation, and all similar religious houses, had been dissolved by order of Henry VIII, and Robert Loder's grandfather had bought it, through an agent, from the King. Once the land had belonged to the Black Prince, hence its name, and it was he who had given it to the chapel in the grounds of Wallingford Castle.

The farm that Loder inherited was no convenient holding set in a ring fence that we call a farm today, but was a scattered holding of strips of land, some less than an acre in extent, throughout the parish. For the land was still farmed in the manner of the original Saxon tribes when they first settled the land after the departure of the Roman Legions. Harwell, in fact, was a more archaic survival than most, for while most of the English villages had three large open fields, at Harwell there were only two, as was the case in the Fatherland of the Germanic tribes. These two fields, separated by the village street, were known as the East and West fields, and each was a tangled maze of grass roads and pathways, giving access to the individual strips. Actually the large field was sub-divided into smaller fields, and these smaller areas were named in order to help position an individual holding. Geographic location named some of them, Rowstock Furlong could be in one place only, and the Millwaie was obviously on the brook, near to the mill, as was the Millbrooke land. Others, such as Cattsbraine, Whiteland, and Beare Banke have, unfortunately, not survived the passing years.

The Prince's Manor had an entitlement of about 120 acres of this arable land, of which about half was supposed to lie fallow each year. Each year, after harvest-time, the strips in the field just harvested would be apportioned to the farmers by lot, each to the extent of his holding, and these strips were held for two years. The first year the land would lie fallow, and be made as fertile as possible by grazing the animals over it, and spreading what little farmyard dung that there was. On occasion, Loder took catch crops of beans and other pulses from the fallow field, but this was rather unusual. Then,



Princes's Manor, today—much as it was in Loder's time

'iotograph by A. Coggon by permission of the present occupier Mr. R. H. Lay)

wards the Autumn, the land was ploughed, d in the second year the main crop of wheat barley was sown. The seeding required was rhaps three times as great as a modern farmer ɔuld think necessary, in order that the weeds, ıich abounded in the roads and pathways, d took a firm hold when the land was fallow, ɔuld be smothered.

Originally the village elders had decided which ɔp should be grown, but by the end of the th century, in Harwell at least, it was left the free choice of the farmer. Loder, who ıs a great believer in the profit motive, decided ıt wheat was a better paying crop than was rley, and so increased his planting of wheat ɔh year. Some of this wheat was milled ɔally, to be made into bread, the rest was d, sometimes in the markets at Wantage Abingdon, but more often to middle men ıo toured the country. The barley was ılted, and some was used as stock feed. ɔme-brewed ale was another important consumer of the malt, and what was left was nearly always sent to London by water.

The farm horses were the only animals to benefit from an allowance of malt in their winter diet. Winter feed was a very great problem to English husbandry until the introduction of rootcrops, which was not until more than 100 years after Robert Loder's day. So the amount of livestock that the farm carried was not as great as would be the case today, and this, of course, limited the amount of manure available to fertilise the arable and meadow land, and thus reduced the value of those crops. The feed of the few animals that were kept through the winter was usually straw, mixed with a little hay. In the summer, the livestock ran on the common, roughly the land between the Ham Road and the 'Pack Horse' or grazed on the fallow field. The hay for the winter feed came mostly from the village meadow, or from the orchards. The meadow was in the north of the parish, where the railway runs today, and Milton Depot serves the needs of the R.A.F. Here the system of strip holding had died out, by arrangement between the holders of rights in the meadow, and Loder found it well worth his while to spread some of his precious farm yard manure to increase the yield of his meadow land.

The sheep were allowed to graze on the brow of the Downs, on a communal sheep run between the Hollow Way and the Winnow Way, which we more often call the Burma Road, a quarter-mile to the west. It was while guarding the flocks on this sheep run that the village shepherd, called Bag, stuck his stick into the ground, where it took root, and, as Bag's Tree, formed a well known landmark until it was over-shadowed by the Bepo stack. Prince's Manor also had another, enclosed, sheep run, of about 300 acres, in the far South West corner of the parish; this was called Awfield, or sometimes Avill. It is not so very far from the large enclosure that the U.K.A.E.A. has at the present day.

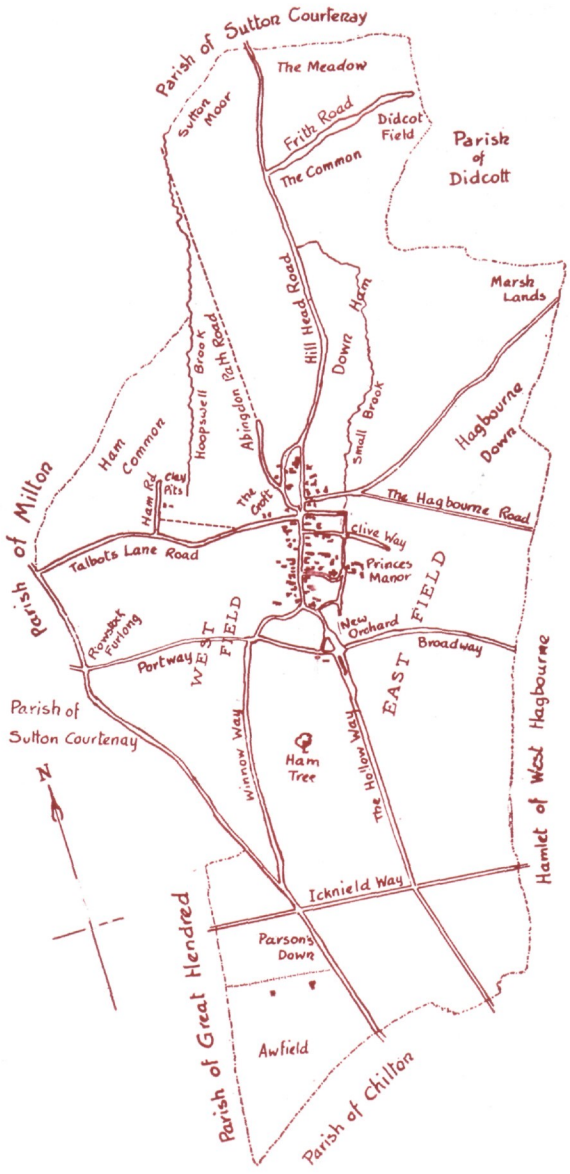
The orchards were about the only other land belonging to the Loders; once again, these were enclosures, and there were four of them. One of them, called 'Fardynges' had been given to Loder while he was still in his teens, and he had caused it to be re-planted with cherry trees. Cherries were in those days a very remunerative crop, for they were often recorded in the farm accounts as fetching 9d. a lb, and a shilling of the early 17th century was worth perhaps £1 of today's money. In his later years he must certainly have praised his own foresight, for, in 1617, when he was 28, Loder sold 2500 lbs. of cherries, and 2400 lbs. of the mcame from Fardynges. It may not

be too great a hazard to place Robert Loder as the man who made Harwell a centre for cherry growing. These orchards were surrounded each year by a fence of Shridding, the branches of trees lopped and set in the ground as a close palisade to keep out the cattle and the small boys. Then, when the fruit was picked, and the grass between the trees gathered for hay, the fence was removed, and sold for kindling. One John Moss shridded at Harwell, and, when he worked for Loder, he was paid 1/- a day ; even this small sum was enough to give Loder food for thought, and he gradually surrounded his enclosures with more permanent hedges of quick-thorn.

The shilling a day paid to John Moss was not, for its time, a niggardly sum. The rate paid for casual labour varied with the season. At harvest time it reached a peak of about 15d. a day ; in the middle of winter, when there was less to be done, and the days were shorter, the wage was usually about sixpence a day. The more regular farm staff were hired by the year. Loder paid his head carter £3 : 6 : 8d. per annum, and his shepherd got by on £2. These sums seem miserable indeed, but it must be remembered that we have suffered considerable inflation since those days, and that very rarely was this the only source of income, for most of the villagers had a few acres in the arable fields, a cow on the common, and perhaps a few sheep as well.

The sons of the family would be working in the fields at a very tender age ; their mother and sisters would help with the harvest, and, by participating in some cottage industry, earn a little pin money. In Harwell, most probably they would spin the local wool, which would later be woven at Newbury.

Robert Loder was himself married to Mary Andrews of Sutton Courtenay, most likely in 1612, when he records an item of £9 : 3 : 11 spent on Feastings. He had a daughter in the next year and presumably another child in 1614, when he 'payed a Midwyfe, . . . 20/-.' In the accounts for 1612, Loder records his household expenses very minutely, but in the following years they become more scrappy as perhaps he found, like many of us do to this day, that no married man can possibly know how on earth his wife can spend so much money. In 1612 Loder reckoned the household to be eleven persons, which would include the servants, and some farmhands 'living in.' The largest single item was the butcher's bill, which totalled £35, and a further £23 was spent on wheat, mostly milled into bread flour. Cheese cost about 7½d. a pound, and 450 lb. were eaten in the year : £4 was spent on fish, a shilling a week bought three pounds of butter



Sketch Map of Harwell Parish

(based on the Enclosure Map of 1802)

to spread on the bread, and another fourpence settled the milkmaid. (There were none of the beverages that we drink with milk, of course, no tea, coffee or cocoa; home brewed ale and cyder were the usual thirst quenchers, with water in case of dire necessity). Many of these commodities were home produce, but were costed to the household at about the market price, and this amount credited to the farm. The most noteworthy omission is potatoes, which were only just being discovered as an edible crop in South America. The house was lit by candle, and 2 lbs. of candles, costing 8d. were used each week, and ' next to Godliness ' was ensured by spending £1 on soap. Loder's reading matter cost him about 2/8d. in the year, no morning paper in those days. Personal adornment cost even less, and the 4d. a year that he spent on hairdressing would be of little use to Harold Prior. A clothing allowance of £8 served to clothe his wife and daughter for the year, but his own tailor's bills are not disclosed. Certainly there is no record of his buying " Yellow stockings . . . a slight taffety cloak, and pumps and pantoffles," as did Sir Thomas Overbury's Country Gentleman to visit London.

Visit London, though, he certainly did, in 1617, when he noted that " Sope, salte and fruit," could be bought more cheaply than at Harwell. Then, as now, living in the Metropolis was probably cheaper than elsewhere, although the added humiliation of Provincial Differentiation had not been invented.

The fruit which was cheaper in London was " reasons, currantes and prunes," Perhaps he wanted them for the sheep shearing feast, as Shakespeare describes in ' The Winter's Tale.'

". . . . Let me see, what am I to buy for our sheep shearing feast ? ' Three pound of sugar, five pound of currants, rice,' what will this sister of mine do with rice ? . . . I must have saffron, to colour the Warden pies ; mace, dates, -none, thats out of my note ; nutmegs seven ; a race or two of ginger,—but that I may beg,—four pounds of prunes, and as many of raisins o' the sun." Or perhaps they were to go into the mince pies described elsewhere.

The only reason for all this accounting was to determine each year the profit that the farm had made. In the best year, he found himself £290 to the good, for which boon he gave thanks to God, and £1 to the church as a tithe ! He did, however spend other large sums on the church, to repair the fabric, and to install new pews. His father had also been a benefactor, and had given seven acres of arable land to the parish, the revenue to help repair the church and highways. The bequest is still in being, but the original 7 acres in Grove lands are now 14 near to Bag's tree.

In his worst year, his profit was £180.

On these sums he paid some small taxes. For the King's Tax, he sent a bushel of wheat each year to Donnington Castle, and another bushel, slyly presented to the Sheriff's Officer after the harvest, kept him free from jury service ! ! The Poor Law overseers relieved him of a further 1/2d. a week. Incidentally, though the collection of a poor rate had been authorised in 1563, and later written into the Poor Law in 1597, no Poor Rate was levied in Harwell until 1612. Perhaps Harwell was not worried by the rufflers and the uprightmen, or had a cheaper way of dealing with them ! The taxes seem trifling when compared with those of today, but then there was no Atomic Energy Authority demanding its annual toll of millions. On occasion, though, the chill wind of the tax gatherer was felt. Robert Loder does not seem to have suffered, but, in 1643, John Loder, his son, had to pay a ' gift ' to the king, £200 in all.

The accounts as they stand give no indication of the leisure activities of the Loder family. Robert himself would almost certainly hunt the fox, the badger and the hare, mostly on his own, or with a few companions, for the day of the large meet was not yet come. Cock-fighting, and bull or bear baiting were still very prevalent, perhaps Loder was a devotee of these. On May-day, very likely he would see the Lord of Misrule leading the parade of dancers to the churchyards where the Mapyole would be erected, and there was always a great deal of feasting when the Harvest was safely gathered, and again at Christmas.

The Loder family sold the Manor very soon after Robert Loder's death, and left Harwell, although some of the same name were still living in the village in the early 19th century. Prince's Manor farm is still in being, and the house looks very much as it did 300 years ago. It is, perhaps, one of the few things in Harwell which has not altered.

The farm itself has changed immeasurably ; no longer a scattered holding of strips throughout the parish, it is now a compact holding specialising in fruit-growing, with Fardynges one of the orchards.

Loder would understand as little of our way of life as we do of his, but do not belittle him for that. George Washington is remembered for cutting down a Cherry tree : How much better to have planted an orchard of them, as Loder did ! !

The Typewriter

By J. B. SYKES

LAST Christmas a combination of parental generosity and filial persuasiveness resulted in my becoming the owner of a typewriter, and if a like fate should befall any reader of 'Harlequin,' I hope the following remarks will be of interest. The model concerned is, according to the proud boast of its manufacturers, "no higher than a matchbox," but they do not explain what use this is. It is true that the machine could be concealed behind a row of 8 matchboxes, which would not, I suppose, attract much attention.

From the outside, the instrument is distinguished by little except two metal buttons, which eye the would-be user malevolently. When these are pressed, the lid can be removed, though with a grating sound perhaps not intended by the makers. This being done, the typewriter itself may be viewed. It is a remarkable fact that the letters on all typewriters are arranged in precisely the same way. I do not know who was responsible for this arrangement, but I suspect he was also the person who invented the invariable system of numbers on a dartboard.

The general principle employed by this anonymous hero is to have common letters in the middle and uncommon ones at the end, though he seems to have thought that J is a more frequently used letter than A, and this, as we shall see, has serious consequences. I should explain that there are three rows of letters. The top row, QWERTYUIOP, has been said to represent the sound of a cork being withdrawn from a bottle, but in my opinion it is designed to enable the operator to type "Quiet, O typewriter" with ease. The second row is remarkable for containing such an alphabetical sequence AS DFGHJKL, while the bottom row, ZXCVBNM, is clearly a refuse dump for letters not used elsewhere. The best typists, I believe, use all ten fingers (my limit is six), and in order to improve their dexterity they repeatedly type such remarks as "The quick brown fox jumps over the lazy dog" or (across the Channel) "Ma grande fille Zoe veut que je boive ce whisky dont je ne veux pas." They also practise the no doubt praiseworthy sentiment "Now is the time for all good men to come to the aid of the party," but I have never met a typist who could tell me why this particular collection of words has any educational value.

In order to obtain capital letters, it is necessary to depress one of two things called "shift keys." To be really well equipped as a typist, one needs three pairs of eyes, one to look at the keys, one to look at the result, and one to look at the matter to be typed (this pair may be closed if one is typing from memory). As I am not endowed with this feature, I frequently strike keys without looking at them. Since the letter A adjoins a shift key, the result is that I flick the latter as well when aiming at A, and so I produce something which I can't possibly ask the printer to do, but which consists of the bottom half of a capital A and the top half of a small a. I should be obliged if any reader can tell me of a use for this symbol.

In order to type, it is necessary to put paper in the machine. To do this, the paper is placed upside down and wrong way round behind a roller thing, which typewriter manufacturers for some reason call a "platen," and in front of a flat piece which they call the "paper table." Assuming that the Paper Release Lever has not been Raised and the Platen Release Mechanism has not been Disengaged, the paper can now be brought into view by turning the roller, and is then held in place by a rod which the t.m's call the "paper bail." It *should* be right way up and right way round, but it is advisable to check this, because there is nothing more infuriating than to type carbon copies with the carbon back to front—a mirror has then to be attached to each copy.

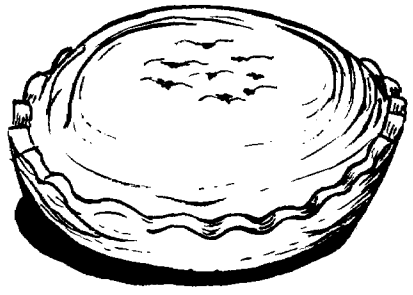
Fortunately, two of the best typists in the Establishment work in my Division, and they are usually willing to help me, though sometimes, when I point out a particularly glorious howler in their output, they become a little *boutonné*. I hope they are in a good mood today, since I want them to type this for me in their lunch hour. My own typewriter is—er—out of order.

£ £ £ H A R d d ¤ ¤ # # L E $ $ ¤ S S S ¤ ¤ Ø ¤ ¤ Q U I N

An Elizabethan Mince-Pie

Take a leg of mutton, and cut the best of the best flesh from the bone, and parboil it well : then put to it three pound of the best mutton suet, and shred it very small : then spread it abroad, and season it with pepper and salt, cloves and mace : then put in good store of currants, great raisins and prunes, clean washed and picked, a few dates sliced, and some orange-pills sliced : then being all well mixed together, put it into a coffin, or into divers coffins, and so bake them : and when they are served up, open the lids, and strew store of sugar on the top of the meat, and upon the lid. And in this sort you may also bake beef or veal ; only the beef would not be parboiled, and the veal will ask a double quantity of suet.

GERVASE MARKHAM, *The English Hus-wife*, 1623 (*2nd. Ed.*)



Season's Greetings

Christmas Greetings to Theoretical Physicists in their new ' Harlequin ' facade building :

May your Bessel functions function there :
If they don't, well—c'est Laguerre.

Joy to Ministry of Works staff. Soon we shall miss you, though :

We must admit (with lamentations)
That we design the wrong foundations :
Whereas ours they always hide
The other kind are always eyed.

If Chivers uncovered
A skeleton in the cupboard
Would M.O.W. get inside
To measure up—" how long he died " ?*

Happy New Year to all at Harwell ; may you avoid the fate of both

A cleaner at Harwell named Mabel
touched a thing with 'Don't touch' on the label:
Her immediate feeling
On hitting the ceiling
Was said to be disagree-able
&
Doctor Fish, one of Harwell's bright sparks
Chose November the Fifth for some larks ;
But o'erweening ambition
and nuclear fission
Spread Fish on the County of Berks.

* *They did, and you did, and he had* (*—in* 1948 *when excavation for the effluent pipeline revealed an ancient grave*)

Christmas Card Competition

On the centre pages are shown six of the rejected entries from the recent Christmas card competition. These are not necessarily the runners up—they are chosen and published as examples of the better entries.

1. Cartoon by D. Knight.

2. Scraper Board Design by F. W. K. Firk.

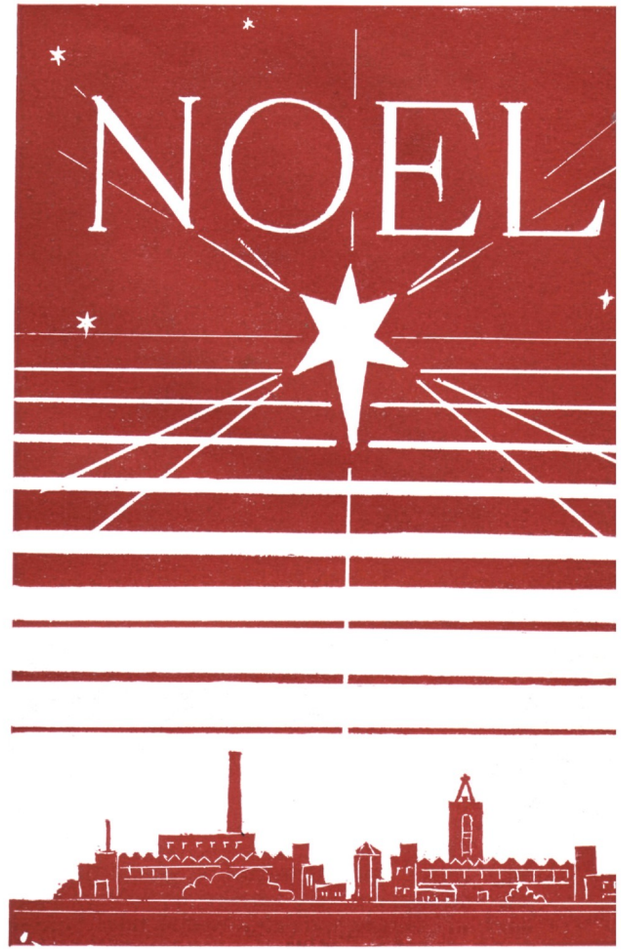
3. Abingdon Pen-and-Ink by G. C. Ashworth.

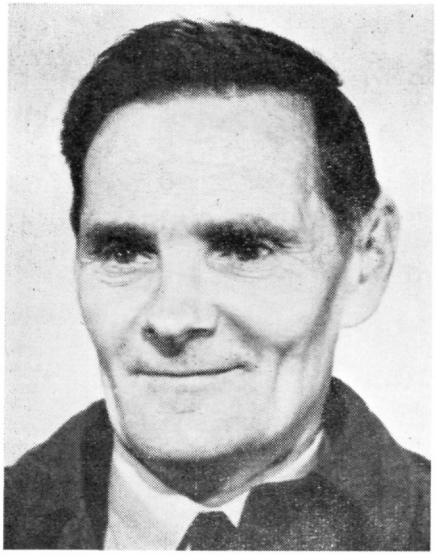
4. Winter on a North Berks Farm photo by D. J. Belcher.

5. Scraper Board Design by A. H. Humphreys.

6. Harwell Church photo by M. L. Blakeston.

BUT I HAVEN'T GOT A - - - - PROPERTY PASS !





REG RAISBECK

by the Editor

MANY years ago, novels ran out of simple, straightforward titles, so that they now have to have elaborate ones, usually based on some minor and completely irrelevant quotation. Since Reg. Raisbeck's job for some twenty years before the war was spent bookkeeping in Boot's Booklovers' Library, the transition (via No. 3 M.U., R.A.F. Stores) to Senior Storeman of " Lab. equipment and Photo " is not, perhaps, as abrupt as it may seem ; for the names of many pieces of the ' equipment ' are mighty obscure to begin with, and translation and inversion into ' Storese ' takes care of the rest. So, where lesser folk hum the traditional tune " Quartermasters' Stores " and sing about rats, twice as big as cats, Reg. shuffles, cuts and deals his vouchers to the refrain " Oxometers ; Oxometers ; calibrate with Haemoglometers."

This first instrument I had long believed to be nothing but a product of vulgar scient'sts' imagination, but in 1946 I was proved wrong, for Reg had one, which for a few short weeks at any rate was known to be in one piece. It arrived along with a stream (Reg called it a shower) of thousands of other weird objects which, at that time, were pouring into new-born A.E.R.E. from all the former " Tube Alloys " out-stations. If you look at the aerial view in our next issue, you will see that there were very few buildings compared with now ; many of these were being torn apart by M.O.W., so there wasn't any spare room. (There isn't, of course, any spare room now, six years later, in accordance with H.S.Arms's hypothesis that a research establishment has only two stable states :—' short of room ' and ' dead '.) The first resting place of the Junk was Hangar 10. When other people had d fferent ideas about the use of this space, Junk began the first of its many moves, and Reg began the first of his many attempts to classify a tangled mass, with already a personality of its own, and the like which neither Heath Robinson nor Rowland Emmet have ever come near. About this time, A. C. Davis began to lose sleep over an object he had signed for, but not actually *seen* ; the Oxometer. It must be found at once ! and Reg found it, buried deep in the jungle and crowned with what was undoubtedly a tin hat welded on neatly. Unfortunately, this rare specimen did not survive the exposure it suffered when Junk's last resting place (a marquee where 354 now stands) blew down in a gale, and I still do not know what it *was* supposed to measure.

The demon Junk was eventually exorcised and reduced to less embarrassing size by the inspired exhibition of notices strictly forbidding entry in search of loot ; this, together with the ample provision of ways in, did the trick. Meanwhile Reg. had charge of more manageable stuff, but much was still war-surplus and obscure both in purpose and description. This was particularly true of some of the captured German equipment which began to find its way here ; German is difficult enough, but Teutonic Storese is ten times worse. For various reasons, there were many disappointed customers, but Reg dealt with them kindly, for he is indeed a

kind hearted man. This is well illustrated by a little incident concerning one of our P.S.O.s, whom he always addressed as Dr.———. One day, he said after both had registered failure to identify some Gothic artefact, " Let me see, you *are* Dr.———, are you not ? " On receiving the answer, " No. I'm *Mr.* ——— " Reg was a little put out, but swiftly rallied with " Never mind, we can't all have brains, Mr. ——— " and quickly continued with " Now then, what d'ye suppose *this* Doofah's for ? —beats me ! "

For six years of stores' life, this equipment, like most other, was dispensed from a hideous corrugated iron hemi-cylinder, which roasted or froze those inside (there was no intermediate state). Now, however, two vast new departmental stores have risen, and " lab equipment and photo " has been swallowed up into the luxury of 404.1. Here also are merged many of the old individual stores into one gigantic whole (and for some curious reason, the serving counter is barely big enough for two customers standing sideways ; still I suppose it *is* largely a mail-order business nowadays). The contrast is for Reg like that of village postmaster and ironmonger with a shopwalker in Gamages.

At home, that is Windsor Cottage, Grove Park, his family still find life in the backwoods a strong contrast with their comfortable London flat which was bombed. With his wife and three sons, he came to Wantage, fourteen years ago for a rest ; they are still ' resting,' and a granddaughter has appeared on the scene. I think it looks as if they may decide to stay, although Windsor Cottage, picturesque as its appearance may be, has no gas, no drains, no electricity and no approach by road. This last lack is why you may see Reg., in this changeable climate of ours, clumping about in gum boots on a warm and dusty day at work ; but it will have rained a day or two back, and at Grove Park it will still be very sticky. By the way, those gum boots are not Stores Issue ; a Storeman may have ten thousand dogs on his shelves, but he must neverthele s do his own barking. However, the wettest of Sundays does not stop Reg from attending Church, where he is a regular and devout worshipper.

He is a keen amateur sportsman, and follows the fortunes of the village football team ; he does not now play himself, but he carries the first-aid bag. He is much more active where running and sprinting are concerned—" McDonald Bailey ? Gosh, I was thinking of retiring from running before he was born ! " One thing that stopped him was that, though running for several clubs, he was many times 100 yards and 880 yards champion, he never in twenty years won either a cup or a barometer. Then, in what turned out to be his last race before becoming a Veteran (i.e. aged 40) a barometer was offered as second prize. Reg wanted it ; he also wanted to win his last race, in the Men's class and was so confident he would that, I regret to report, a ' fiddle ' was arranged, and his nearest rival agreed to swap prizes. As it turned out, Reg was soundly beaten, got his barometer, and learned that fiddling doesn't pay (All in one race !) The years rolled on—there were meetings with Lord Burghley and other Olympic runners, but no cup came his way, though by now he must have won nearly everything else in the stores catalogue ! If he won a race, there was no cup : If there was a cup, then he just couldn't seem to win that race ! After more than thirty years of it he was just about to resign himself to being " A Tram, not a 'Bus " when, at Grove Sports in 1951, a local Ice Cream King presented a cup for a race, *after* Reg had formally entered for it. Thus, in the end, he got his cup, by what would have been called in some of the early novels that started all this off, ' Cheating Fate.' It was a bit of a fiddle after all.

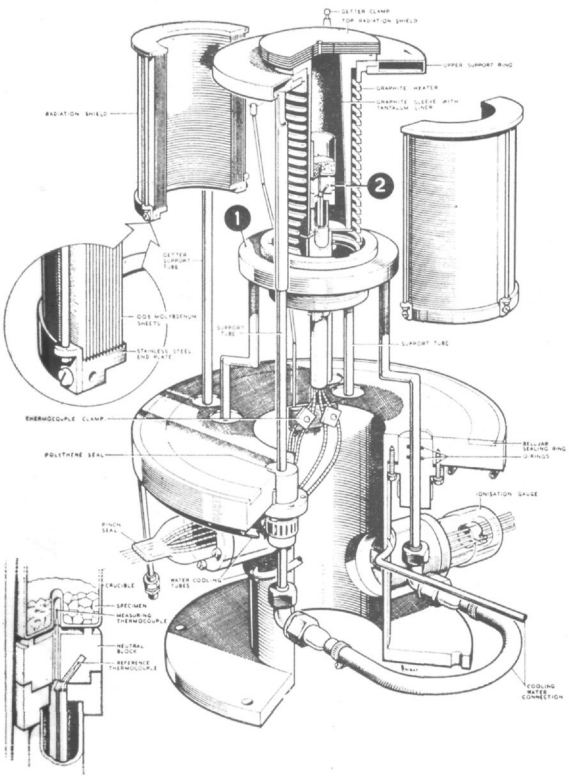
He has done a little country dancing around the Maypole at Grove, but does not, on the whole consider it a complete success where he is concerned. Not only does he prefer to go round in large ovals rather than small circles, but he prefers to be able to pass, even lap, the other participants without actually strangling them. So he sticks to running, and (cup safely won) his ambition is now to win from his old rival, Len Reeve, the Veterans' Race at A.E.R.E. Sports Day. Good Luck, next July, Reg. and don't forget to take off your gum boots first !

RUE PIERRE, BLOIS– *from an etching by G. C. Ashworth*

ILLUSTRATION SECTION

by

D. A. TYLER



FOR its art requirements "Harlequin" is able to turn to an increasing number of Harwell staff who have developed talent with pen and brush. In the main they are those who turn to art as a creative leisure project contrasting with their day's work. Among this group of Harwell artists is to be found considerable talent, but this is not necessarily their exclusive possession. Tucked away in the labyrinth that is Building 329 is a comparatively little-known group of persons whose artistic talent has hitherto been untapped by this magazine: here, indeed, is a group of professional, commercial artists.

In the main they are technical illustrators, but typography, book and poster lay-out, retouching, colour, half-tone work and figure drawing are all within their scope. Yet before enlarging upon their versatility it will be as well to refer to the function of the technical illustrator in general.

Many people find it difficult to visualize the finished product from the usual orthographic drawing. Although no mention of technical illustration work can be found in the A.E.R.E. Library—even within the pages of the Encyclopedia Britannica—technical illustrators appear to have been used on an appreciable scale since the First World War. In particular, they were used by the Air Ministry and since then motor manufacturers in both Britain and America have been quick to realize the value of draughtsmen who could turn orthographic drawings into true perspective views. Today, apart from the manufacturer, the buyer too finds value in seeing a perspective drawing of the product prior to manufacture.

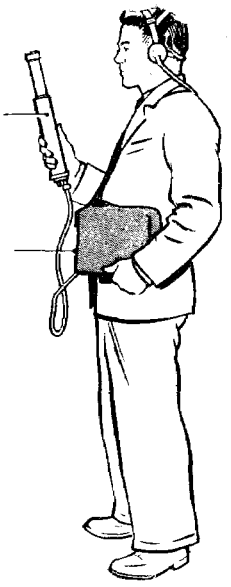
Here at Harwell the section produces illustrations for outside publications, reports and Instruction Manuals. Most informative are the 'cut-away' and 'exploded' views and these are usually drawn as for art illustrations, two or three times the size of reproduction.

Information for these drawings was obtained from the orthographic manufacturing drawings supplied, but in some cases it may be obtained alternatively, or in addition, from photographs taken where the product is already in existence. In other cases, where the product is readily portable the task becomes one of still life drawing.

Re-touching of photographs will also be called for, so that any definition lost in printing will not be too apparent and, apart from the technical illustration work already mentioned, typography, colour, and half-tone work will all be required.

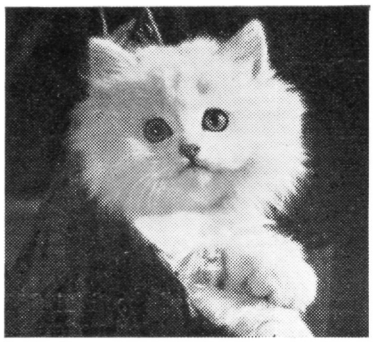
And now a less impersonal reference to the members of the section. Naturally, they all inhabit the more Bohemian, Wantage night clubs, but neither the male nor female members of the section sport beards : in short if you use the services of the Illustration Section, you may be surprised that, although artists, they are quite normal.

Versatility is their hall-mark : apart from technical knowledge and artistic talent the need for which has already been emphasized, it is also required of the illustrator that he should



have a knowledge of anatomy, for to illustr the use of equipment in Instruction Manu drawings are required of figures in an ass ment of postures.

It may be said in conclusion that vacan for illustrators occur at the time of writi Should, however, the reader have visions o less exhausting career than actual illustrat work, it must be stated that no need fo model has yet been recognised.



Keep on taking

FACES & PLACES

this winter

ILFORD HP3 FILM

Don't put your camera away for the winter — you can go on taking exciting photographs on Ilford HP3, as these examples show.

With this famous high-speed film, which fits all popular cameras, your winter FACES AND PLACES, indoors and out, will be just as successful as your summer snaps — and just as easy to take.

ILFORD FILMS FOR FACES AND PLACES ALL THE YEAR ROUND

UNICORN THEATRE

By Joan B. Allan

In the part of the ancient Abingdon Abbey buildings known as the Checker Hall, there is now a flourishing little theatre built in Elizabethan style, with an apron stage, an upper stage or minstrel's gallery, the traditional entrance each side of the central inner stage and even a trapdoor.

This delightful theatre owes its existence to the inspiration of Alan Kitching, formerly Drama Organiser for Oxfordshire who, when visiting the Abbey buildings, was struck by the possibility of turning the bare bones of the hall—a long, and very high room with a decaying gallery at each end—into an open stage theatre of the type Shakespeare used. He discussed the idea with the ' Friends of Abingdon ' who own all the Abbey buildings, and they agreed that if there was sufficient support, (and enough money!) they would allow the hall to be used as a theatre.

In September 1952 a meeting was held in the Checker Hall to initiate the project, and the eminent producer Michael MacOwan spoke to a large and enthusiastic audience seated on beer crates and piles of stone! As a result of this demonstration of interest, the ' Friends of Abingdon ' gave the scheme their blessing and the Unicorn Theatre Club was born. Although at first it was called the Checker Hall Theatre Club, this was later discarded in favour of the less clumsy name. Owing to the difficulty of licensing the building for public performances, it had to be run as a theatre club open only to members and their friends.

Christopher Ellis of Radley College was asked to design the stage, incorporating the existing gallery and two beams below the lovely old collar beam roof. I think all who have visited the theatre agree that the result is a delight to the eye. Unfortunately a black and white photograph can give little idea of the effect, for the greatest beauty lies in the bright, yet subtle, colours which glow so richly in the dim hall.

In January Alan Kitching and some enthusiastic club members began work in the hall. All the existing fourteenth century bricks were carefully lifted from the floor and piled out of the way to be used for part of the final floor. The soil below was then excavated to quite a depth to form the pit immediately below the apron stage which was to contain the cheap seats as in Elizabethan theatres. The excavated soil was then piled up at the end of the hall to form the stage. This was no easy job, as there were many huge stones to be dug up and we even found part of a stone Capital in Early English style buried there.

When this preliminary clearing was finished, some professional help was called in to lay the floor, to be made partly of the lovely old bricks, and partly of concrete. Christopher Ellis and his team of boys from Radley College started on the carpentry, and gradually the stage took shape. They had made the six tapering pillars, the balustrading, and prepared all the wood at the College. It was now assembled and the designs drawn onto panels and pillars. This also proved to be harder than it looked, because the gallery beam slopes down considerably at one end and all horizontal lines had at least to look parallel, without upsetting the rest of the design! The band of helpers was now increased by several members of the A.E.R.E. Dramatic Society who came down from Harwell in the weekends, and wielded brushes. Electricity had been laid on, a borrowed switchboard and lighting was now installed, curtains hung in the archways, the inner stage, and the gallery ; 50 chairs borrowed from the Town Council for the raised seats at the end of the hall, and the beer crates (with cushions) arranged in the pit for the cheap seats.

The theatre was opened during the local Coronation Celebrations on June 8th, by the Mayor of Abingdon and the first production, an Elizabethan play by Henry Porter called " The Two Angry Women of Abingdon," proved a great success. This ribald Tudor comedy was excellently acted by the Abingdon Drama Club and produced by Alan Kitching, who demonstrated how swiftly moving action could be achieved on this type of stage.

A very varied season of entertainment followed, including concerts by the English Consort of Viols and the Kirby Quartet. These

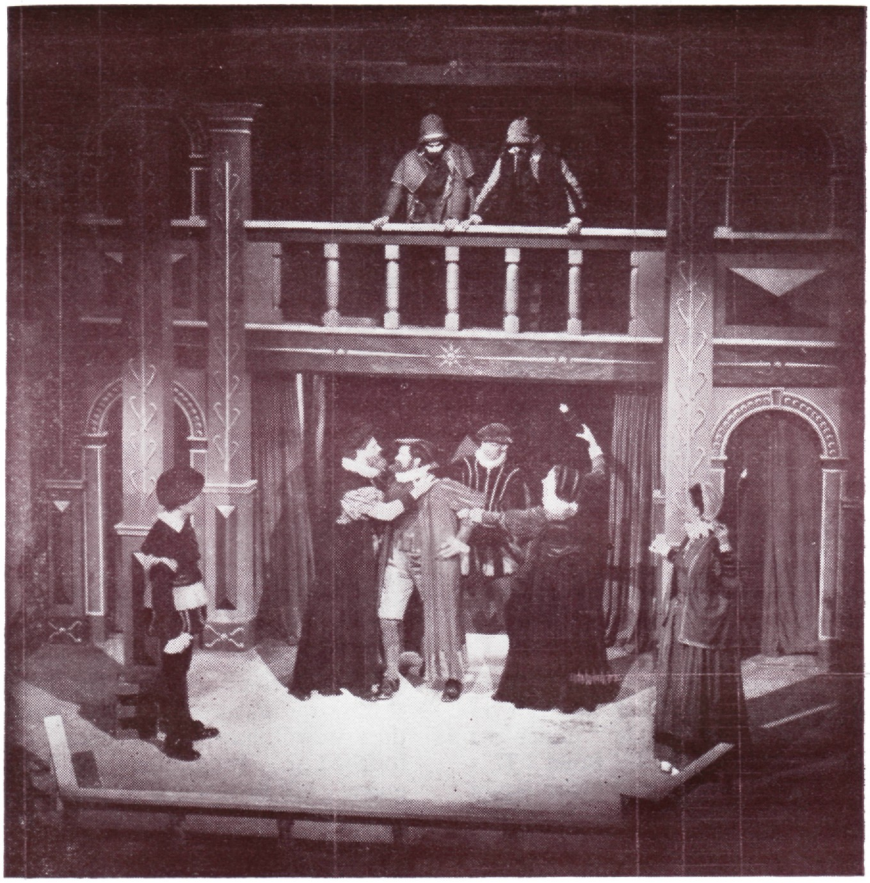


Photo Bill Jones

A Scene from "The Two Angry Women of Abingdon"

concerts proved that the acoustic properties of the hall are perfect for chamber music, probably because of the timbered roof. The Caroline Society of Jesus College presented "Much Ado About Nothing," and the Oxford University Experimental Theatre Club staged a reading of "Dragon's Mouth" by J. B. Priestley and Jacquetta Hawkes. There were also some very interesting talks by Geoffrey Trease the playwright, Richard Southern the Theatre historian and others.

This first season was not without its alarums. I remember one evening after a terrible rainstorm, arriving early to do steward's duty and finding the pit completely flooded ! The first club members to arrive nobly turned to with buckets and mops borrowed from the custodian, and order was restored just in time for the evening's entertainment.

A further short season was planned for September, and the A.E.R.E. Dramatic Society agreed to provide a cast for Alan Kitching to produce in Jean Anouilh's version of the Greek Tragedy "Antigone." By a very skilful use of spot lighting effects, and a chilling flute obligato and crashing gong, the atmosphere of doom was achieved with no scenery, and the setting did not seem at all incongruous. In fact the emotional impact on the audience in such an intimate theatre is enormous, and the feeling of mounting tension is much greater without the interruption of lowered curtains and scene changes. According to the local press "Harwell A.E.R.E. players excel" and Mary Fawson achieved a great personal triumph.

The Unicorn Club had been doing pretty well financially, so between August and the September season fifty chairs were purchased, and the beer crates were removed ! Before the 1954 Summer Season another fifty chairs arrived and the borrowed chairs were returned to the Council. The makeshift stage curtains were taken down and replaced by new ones of the soft grey originally planned by Christopher

Ellis, and four spotlights were purchased. The Unicorn Club now owns a considerable amount of equipment, but there are still a lot more lights needed, and also that costly item, a switchboard.

The 1954 Season opened most successfully with a performance of T. S. Eliot's "The Family Reunion" by the Alchemist players from Oxford. During the interval cups of coffee were sold for a few pence, and this innovation proved so successful that it has been continued all through the season, and when possible has taken place in the charming garden between the Abbey buildings and the river.

The 'Club Nights,' which are free to full members, and very friendly informal occasions, included a most amusing talk on costume in the Theatre by James Laver who must be known to many as a writer and broadcaster, an enthralling hour or so of mimeing by the Oxford Theatre School and a talk by Oliver Wilkinson on what he called "Documentary Plays." This turned out to be much less dull than the title suggested, and might perhaps be better described as 'plays with a message.'

The A.E.R.E. Dramatic Society collaborated with the Abingdon Drama Club to put on Shakespeare's "The Winter's Tale" under the Abingdon Club's producer, A. K. Boyd. This venture was a great success, and once again the uninterrupted flow of action, the use of two levels of stage and the lines spoken straight at the audience from the fore-stage, made one feel that the stage as Shakespeare knew it is really the best place to act his plays.

Another considerable dramatic achievement was Alan Kitching's production of the comedy by Christopher Fry "A Phoenix too frequent" which was brilliantly acted and most effectively staged.

Two concerts were included in the season, one by the internationally known Robert Masters Quartet, and the other by the Kirby Quintet who had delighted us in 1953. The September programme was appropriately finished off by an evening of very varied entertainment called "Abingdon at Play," which included local Morris Dancers and handbell ringers, the Fitzharry's Singers, readings from old local poems, an amusing little reconstruction of Pepy's evening in Abingdon based on a reference in his "Diary," and was brought up to date by an excerpt from Noel Coward's "Private Lives" by members of the Abingdon Drama Club. This was so popular that a repeat has been requested for next year

Now the theatre is stripped of curtains and lighting for the winter, for it would be impossible to heat the building without spending an enormous amount of money. However, many club members, with a little time to spare, will be making Elizabethan costumes from such things as bedspreads, curtains and old evening dresses to form the foundation of a theatrical wardrobe. Odd jobs about the theatre will have to be done, and paintwork touched up. Programme and Production Committees will be meeting to plan the 1955 Season, and enrolment forms will be sent out. The Unicorn is very much a 'going concern' and has provided good entertainment value for its 97 full members, 155 theatre members and 10 group members. It has also become famous enough to be given nearly half a column in the *London Times* recently !

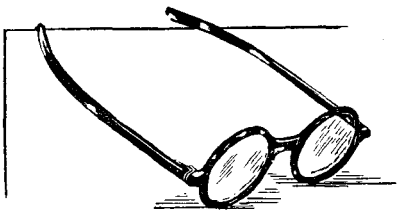
For the information of anyone wishing to join for the 1955 Season, membership is of three kinds—

(a) Full Member £1 1 0
(Subscription includes free club evenings and six shilling vouchers).

(b) Theatre Member 2 6

(c) Secretary of Society for Group Membership 5 0

Inquiries or subscriptions should be addressed to ALAN KITCHING,
Hon. Secretary, Unicorn Theatre Club,
17, East Saint Helen Street,
Abingdon, Berks.



Proof Readers' Competition

Beesleys (Front Cover) " Made to your measures " for " Made to Measure " or " Made to your Measurements."
All-Power Transformers (p. 2) " Stabliizer " for " Stabilizer."
Coxeters (p. 3) " Upholstererers " for " Upholsterers "
Station Garage (p. 39) " Overalls " for " Overhauls "
Baileys (p. 43) " Rewedging " for " Re-wedging"
D. B. Eames (p. 43) " Accesories " for " Accessories "
Read and Partners (Back Cover) London " S.E.I." for " S.E.1."
West Anglia School of Motoring (back cover) Question mark missing after end of second question.
Sales (back cover). Inconsistent punctuation in list.

" This time I *will* get it right," wrote Dr. J. B. SYKES, who, although he won the previous competition, was frustrated at not having completed the list. This time he will be further frustrated to learn of his drop to second place with the previous occupant of that position in the first. Other readers on the other hand may be gratified to know that this battle of the giants is finished, for MICHAEL CREW, the winner, has submitted a complete entry of the deliberate mistakes concealed in last issue's advertisements. With the award of one guinea has followed co-option to the Board as " *specialist in typography*." In the future he will be concerned with this competition from the other side of the fence and the present writer who has been concerned with it since 1951, hopes now that his own eyesight will be no longer impaired.

As mentioned, the second prize of half a guinea was awarded to J. B. Sykes whose entry on this occasion contained a number of red herrings.

Although a search was made for a unique entry, none was found, and it was decided to give book tokens to the following four competitors whose entries were of special merit : Miss M. S. Bretscher, C. J. Marchbanks (both of South Drive), H. J. Yallop of Fort Halstead and P. M. C. Lacey of Chemical Engineering.

Several cases of wrong fount were to be found in this competition, the " w " of " who " in the advert of the West Anglia School of Motoring being a good example. Errors of fount that escaped the notice of the average competitor included the ' S ' in ' Stock ' (Sales of Wokingham, back cover) and the ' g ' in ' telegrams ' in the Geo. H. Gascoigne advertisement.

One reputed case of wrong fount starts our list of red herrings, which led so many readers on the wrong scent ; this is the " *R* " in " *Cambridge* " (*W. G. Pye & Co.*—inside cover). When it was seen that this was in different fount from the " *R* " in the top line, it was easy to overlook the fact that for purposes of contrast, the *whole of both lines* are in different fount.

H. J. Yallop who received a copy at Fort Halstead listed the above and the accidental leaving out of the printer's name by the Alfred Press on the back cover. He quotes the *Newspapers, Printers & Reading Rooms Repeal Act* 1869 : " for publishing without printer's imprint a penalty of **£5** per copy issued." After a quick calculation, which confronted the Board with a fine of over **£10,000**—there was relief on ascertaining that the law is at present concerned only with election and lottery material. But this time, compositor, please play safe !

Among other red herrings " *hire car service* " for " *car hire service* " may be grouped with " *cyder* " for " *cider* ": both we would claim are alternate versions. " Soling " is not as many competitors claim spelt with an " e " and *Major Smith* of the " *Grays Inn* " *Tent Shop* assures us that " *guy line* " is correct without the " s ", for it is in fact sold by the yard.

For one false entry *Mrs. Gaff* of Sir Donald Perrott's office, W.C.2, is to be excused. In *Coxeters'* advertisement she claims "*undertakers*" should read " *undertaken* " : without local knowledge she was not to know that undertaking is in fact undertaken by Coxeters !

Before the reader embarks on a search for the deliberate mistakes that have been conceaied in this issue, let it be emphasized that no local knowledge is called for—only powers of observation. Thanks must also be accorded to the business houses concerned for their co-operation in the competition.

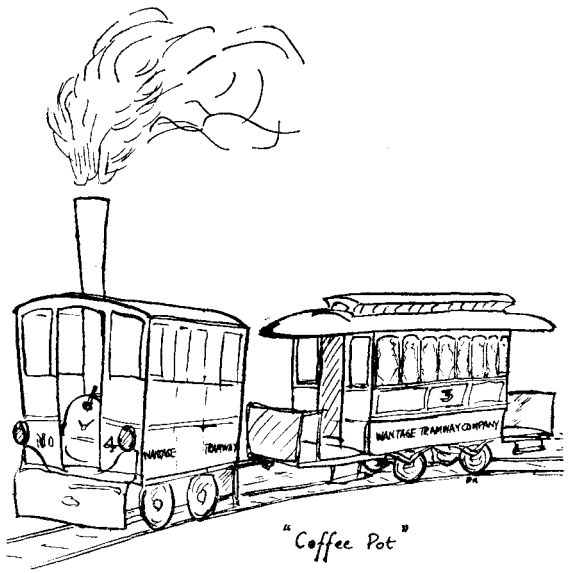
Apart from the guinea for the best entry and a half guinea for runner-up, there will be book tokens for all unique entries listing an error not discovered by any other reader. The closing date for this contest is *Monday, January* 17th. Entries, which must be accompanied by the Opinion Poll from page 34, should be addressed to " Harlequin Competitions, C/o Central Registry."

'. . . all Steam and Smoke'

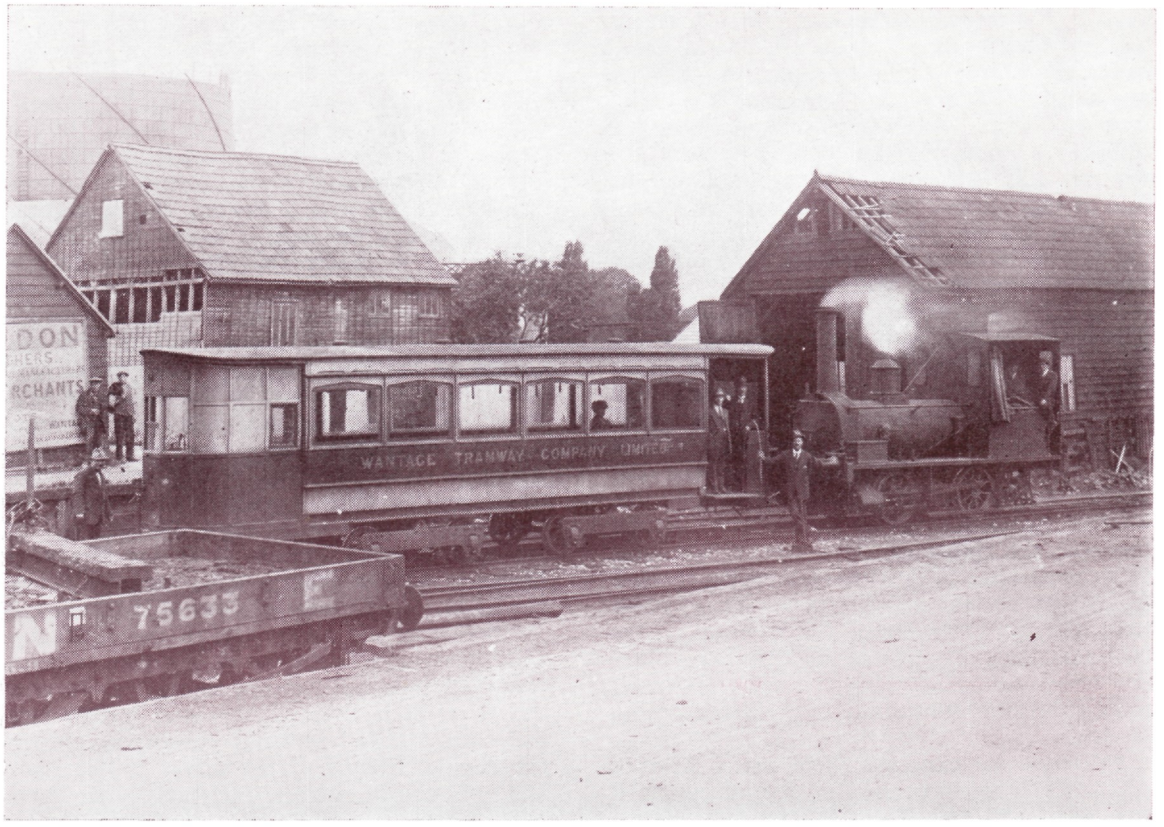
Written and Illustrated by E. Holland

IN the hurly-burly of troubled times there occurred on the 21st December 1945 an event of little consequence to most, except to those who were lovers of the quaint, or those whose nostalgic minds could return to easy-going days of a few decades ago. This sad day saw the closure of the Wantage Tramway and with it, the end of a story of local enterprise. Seventy years previously, this enterprise had sought to give Wantage a good connection to the outside world via the Great Western Railway, whose main line approached the old town no nearer than 2½ miles out along the Oxford Road. Some thirty years before that, the latter company had been pleased to provide a wayside station to serve the needs of the town but until the Tramway came into existence, the usual method of reaching the town, at least for the poorer people, was by 'Shanks' pony.'

The line, which was of standard gauge (4ft. 8½in. between the rails), was opened in 1875 and was laid in the grass verge along the left hand side of the road leading into the town, but at the first glimpse of the gradient leading into Grove Street the track shot diagonally across the road, traversed a field or two and arrived at a terminus situated at the rear of Mill Street. Here were the offices of the Company, (the building still proudly bears the Company's monogram) and also a collection of barnlike structures which did service as workshops, engine, and goods sheds. A respectable service was maintained throughout its passenger history; connections were made with almost all trains scheduled to stop at the main line station. This convenient schedule had however its repercussions, for even the Wantage Tramway cost money to run. In spite of its monopoly the passenger traffic was never heavy and the fares charged, even by today's standards, were exorbitant. Doubtless the old and hoary joke, "that he wished to know the fare to Wantage and not the purchase price of the carriage," was often heard when the conductor demanded ninepence from the unsuspecting traveller. Following the first Great War the rapid development of motor transport quickly robbed the Tramway of its long held monopoly and the passenger traffic declined to such minute proportions that the service was withdrawn at the end of July 1925. To erase at one fell swoop an institution of such character was well nigh impossible however. A steady freight service had been built up and this was to continue for another twenty years in spite of the advent of a second war. It can be well imagined that during this period traffic decreased rather than increased, but the final blow came as a result of the dreadful wartime deterioration of the track, the relaying of which could not possibly have been economically justified.



To those who were concerned rather with its unique charm than its utility, the little railway was a source of sheer delight for the wonderful collection of rolling stock gathered throughout its life. Logically we must start at front of the train and record that from the start, motive power had been provided by horse, steam engine and for one wonderful experiment in 1880, by compressed air engine. The steam engine was of course predominant but here we must distinguish between the two particular types employed. Firstly there was "Jane"! A full story of "Jane" would occupy many pages; suffice it to say that her official name



Photograph *Tom Reveley, Wantage*

JANE AND THE BOGIE AT WANTAGE

was " Shannon " and technically one would describe her as a four wheeled well tank engine. Built in 1857 she arrived in Wantage at the age of 21 years, having seen service on a private railway in Bedfordshire, the L.N.W.R. works at Crewe and at the Cromford and High Peak Railway in Derbyshire ! Of all the Company's family there is no doubt that " Jane " was the best known member and her typically Victorian profile remained unchanged throughout the years. Innumerable photographs of her have appeared in the illustrated railway journals. She was narrowly rescued from the scrapyard, when in 1946 through the good offices of a senior official of the Great Western Railway Co., she was bought by that Company and transported as part of a local goods train to the great works at Swindon. Here she was renovated and beautifully painted, whereafter she was returned to Wantage Road station, to be preserved on the down platform under a concrete awning as permanent memento of the historic line. The other " orthodox " engine No. 7 which survived to the end, unfortunately had no name but again she was four wheeled, although unlike " Jane," she carried her water in a saddle tank over the boiler. Although constructed as long ago as 1888 she was the most modern of the Wantage engines and had at one time been owned by the Manchester Ship Canal Co. Appropriately enough she was the last engine ever to use the line, for in the summer of 1946 the writer was able to see her hauling flat wagons on to which was being loaded the dismantled track. What could have been more humiliating for the old engine than to have to haul away the track which had been filched almost from under her very wheels!

The second type of steam motive power provided was a steam tramcar locomotive of the type which used to grace our city streets before the advent of electrification. A veritable box on wheels with a stove-pipe chimney protruding through the roof, No. 4 was locally known as " The Coffee Pot " although what physical resemblance she bore to such an article is mystifying. Brought to Wantage in 1877 she was well nigh exhausted when retired in the

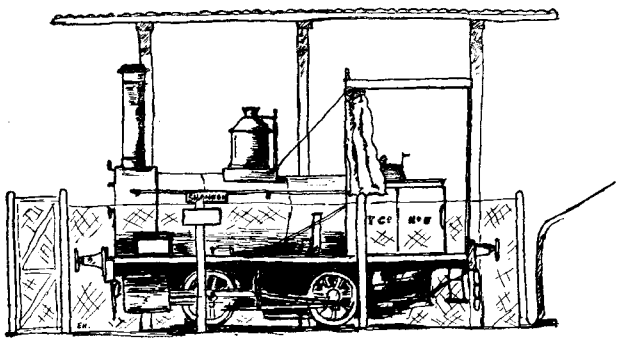
1920's. The original steam locomotion however was provided less than 1 year after the opening of the line when a combined engine and tramcar was obtained after a not altogether successful trial in London. With some modification and possibly a liking for the purer Berkshire air, she ran quite well on the Wantage line. The fate of this ancient railcar seems to be lost in obscurity but she earned for the Wantage line the honour of being the first regularly operated steam tramway in the country.

The passenger carriages must have been quite superlative in the early days judging by the stories of buttoned seats of red or sea green velvet, floor carpets and multi-coloured glass in window surrounds and clerestory roofs. Mostly they were four wheelers with typical early tramcar open ends but there was one double bogie car with better provision for weather protection at its extremities. By all accounts the riding of these cars in the later years must have been somewhat trying in view of the poor state of the track. Derailments were not infrequent and it was quite usual for the company's servants to have to work into the small hours to re-rail a locomotive in order to be ready for the next day's early morning service.

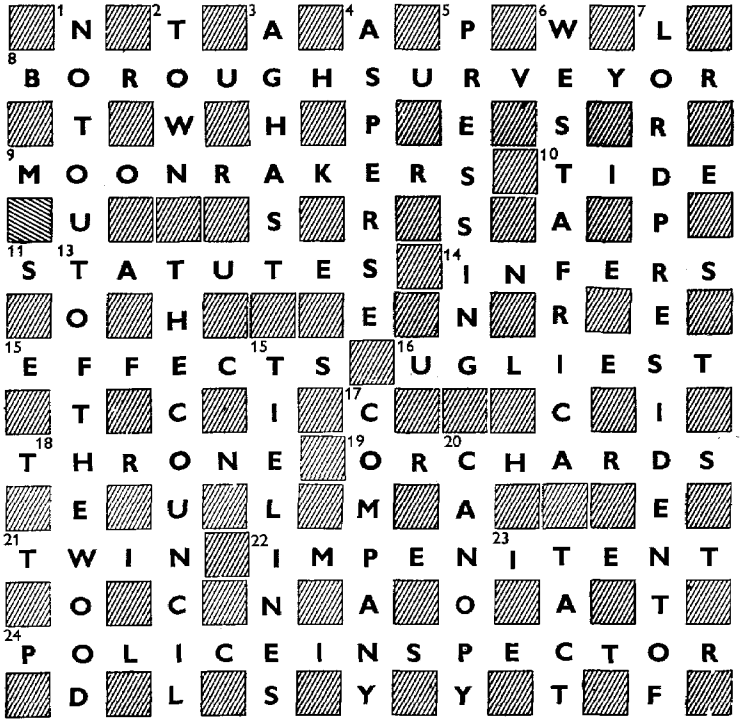
As might be expected there are a host of anecdotes concerning the line and of course it had its characters. Probably the best known story concerns the famous race between the tram and the donkey and cart of a local chimney sweep well known for his wooden leg. Somebody was inspired to verse and even to this day post cards can be obtained commemorating the remarkable event. The rhyme goes—

A curious race has come to pass
Between an engine and an ass.
The Wantage tram all steam and smoke
Was beat by Arthur Hitchcock's moke.

In his delightful book " The Beauty of old Trains " Hamilton Ellis records that in the last days of passenger service one of the casualties on the line was a donkey and comments that of course an engine cannot bear malice but - - - - ! After the opening of Didcot Depot about 40 years ago, those of its workers who lived in Wantage used the Tramway as the first part of their journey to Didcot. For the benefit of the late risers or stragglers it was usual for a man to stand in the middle of Mill Street and ring an enormous hand bell announcing the impending departure of the train. There is also the story of the driver, who, when approaching a particularly rough or awkwardly curved bit of track, speeded up ' to get over it more quickly' ; of the charming Manager who in quiet periods sent his young conductors to do odd jobs about the house at the behest of his wife ; and of the conductor who after collecting fares in the rear carriage could de-train and run fast enough to be able to board the leading carriage and resume fare collection ! The unofficial passengers aboard the engine, friends of the driver or his mate and of course non-fare-paying ! ; all have contributed to the unique character of this railway backwater, the like of which these days can only be found on the numerous " Vicinaux " of Belgium and France. Alas, there is now nothing left, except for a few rusty rails near the town terminus, a few old photographs and of course " Jane " !



"Jane"
R.I.P.



The Autumn Issue Crosssword
(No. 13)

Too easy, or too hard? By the number of entries it might be thought that the crossword was too hard for Harwellians, but those who entered proved their ability. We had twenty-two entries all told, being one crossword puzzle enthusiast for rather fewer than each hundred copies of 'Harlequin' issued. The first correct entry opened was that of Mr. D. B. McCulloch, Building 154, which we print in this issue. He was swiftly trailed by fifteen other entirely correct entries and we regretted disqualifying two others who had misspelled 22 across. Two entrants decided that the clue "Castor, for example" (21 across) meant a swan, but Castor and Pollux are famous mythological twins. The remaining two submissions were characterised by several examples of ingenuity and it may be that we have among our competitors some who would be capable of setting a useful crossword for a future issue of 'Harlequin.'

This issue's Crossword is on page 44 *; enter by filling up the squares, and also the opinion poll form on page* 43. *Detach the whole page and send it to us by Jan.* 17*th.*

BOARDS

By R. WEST

BROADLY speaking, there are two types of board, those that you attend in order to discover if you are as good as you think you are, and those that you sit on to be convinced that you are not.

The word board probably came from the Greek (or Latin) BOARDUM, meaning barrier, obstacle or board, which could be appropriate.

Present-day boards, as we know them, are believed to have developed from the pagan ritual of Panel-Beating. This is a form of mass entertainment known to have sometimes taken place at the Ancient Temple, or Palace, of Alexandra, the ruins of which may still be observed nightly.

The ancient form of assembly has been preserved in many respects, and boards still consist of what are known as a Chairman, and Group of Members or Team, against whom Candidates, or Celebrity Victims, are to pit their wits and vice-versa.

The present-day form of board in which we are apt to participate, or take part, has now however discarded the symbolical bell or buzzer, in favour of the Bland Countenance, or Poker-Face, though occasionally a symbolical clanger is heard. Now-a-days, certificates and applause are rarely given at the conclusion, or end.

Time-honoured procedure remains substantially unaltered, the Board or Panel asking numerous questions of the competitor in order to try and discover or understand Something. On the other hand, the Victim skilfully attempts to satisfy the Panel without actually giving away any Knowledge.

In order to maintain a strictly unbiassed indifference it is preferable that the members of the Board, or Panel, should not be known to one another, and also be as cross a section of the community as possible.

Comparison between the ancient and modern dialogues indicates some of the changes brought about by time. For example, the traditional Opening Gambit used to be either, " Are you a live animal ? " (according to Cuthbertson-Brown), or " Have you a vegetable end-product?' (V. Banglestein, Mrs.*). Now, however, the abstract is much more popular, such as " What do you do with your evenings ? ", or, " What will you do when you are fifty ? " One school of thought suggests that this type of question reflects a genuine desire for sympathy from the Candidate, whilst another is inclined to the view that a direct answer is subtly invited. Whatever answer is given, a favoured Counter, or Ploy, is an enigmatic " Oh " (attributed to A. Toddy**), or rather less frequently, a plain " I see " (origin unknown).

Further research into the fascinating tradition and technique of boards would be of great sociological significance, or use. It is to be hoped that the Yeovil College will come to our aid, or rescue, by creating a Chair appropriate to this end.

* *From " The Anatomy of Reason " published by the Boccaccio Book Club* 1953 ; *banned by the Swindean Magistrates* 1954.

** *Believed originally discovered by A. Toddy in Roget's Thesaurus in unenigmatical form.*

Should HARLEQUIN be promoted.....?

or Sacked?

You don't need SKILL to enter this Competition, but you must have OPINIONS. There is no Lucky Number Competition this time and we hope to hear more from our readers than ever before in the history of Harlequin. Let the grumbles come, and the brickbats fly . . . . the Board wants to know what YOU really think of our magazine.

Readers are asked to mark their opinions by a cross in the appropriate squares below—one cross only in each horizontal line. Sign your name and your address (enter for the Crossword Competition too while you have your pencil in hand !) and then tear out this page and send it to " Harlequin Competitions " c/o Central Registry, A.E.R.E. Harwell Berks, by January 17th.

The winner of the One Guinea Prize will be the person who submits the entry nearest to the majority opinion of Harlequin Readers. In case of identical entries, the decision of the judges must be accepted as final.

Harlequin Magazine	Very Much	Fairly	Fairly	Very Much	
Exceptionally Bright					Rather Dull
Makes a good impression on strangers					My friends think it's rubbish
Produces many new and good ideas					Seldom Original
Articles are Clear and Concise					Incoherent and merely Amateurish
Presents too much History					Too much Science
Far too serious					Far too flippant
Advertisements—Thrilling					Boring
Sales—Assertive					Diffident
Illustrations—Cheerful					Gloomy
Competitions—Interesting					Unimaginative

Don't Forget your Name and Address—(Overleaf).

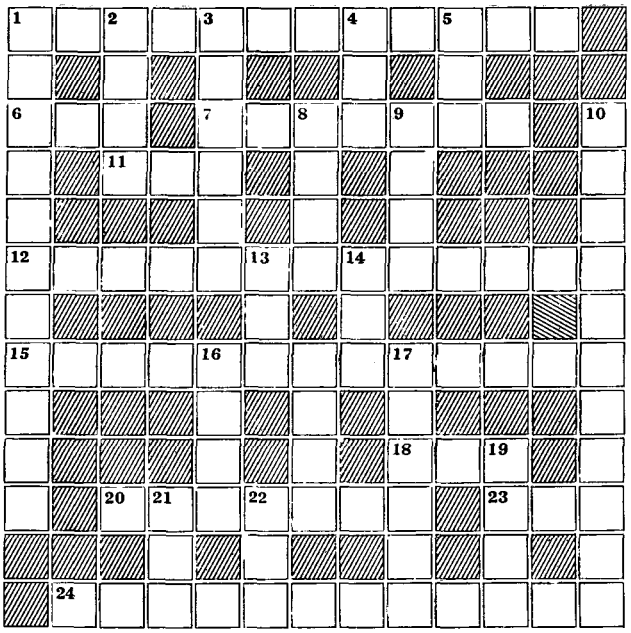
The Children's Competition

Pencil and Paper . . . . and get ready to solve a code ! When Bill's father took him shopping to buy Christmas presents, they went first to a sport's shop and spent AE shillings on a big 0—1—7—7 for Bill's sister Nancy. While Bill's back was turned, his father bought him an 0—1—6 which cost A pounds, L shillings, and E pence. Then in a furniture shop down the road, a salesman showed them a very nice small 6—1—0—7—4 which they both agreed was just the sort of thing that mother wanted in her room at home. The 6—1—0—7—4 cost E pounds and T pence, which was quite a lot more than the other presents.

When they got home, Nancy was shown what they had bought and how much they had spent. If she could work out the code before Christmas she would know what the parcels contained ! The account looked like this :

0—1—7—7	£— : AE : —
0—1—6	£ A : L : E
6—1—0—7—4	£ E : — : T
	£ T : A : AB

Can you work out what each purchase was, and how much it cost ? There are five numbers and five letters in the code and they have been substituted for each other in the code account. All entries must be signed by your mother or father as being your own unaided work, and sent to the Editor, Harlequin Magazine, c/o The Registry, A.E.R.E. before January 17th. They must be accompanied by this page, cut out, with the opinion poll form filled in by one of your parents. The first correct entry opened by the judges will win a prize.



Harlequin

Crossword Puzzle

Contributed by R. S. BOOKER.
No. 14

Half a guinea will be awarded for the first correct solution opened by the Editor. Entries must be on this page, cut out and sent to arrive by Jan. 17th . . . fill in the simple opinion poll form overleaf and thus have a chance of the guinea also.

First fold back here

ACROSS

1 Owned before, apparently (12)
6 Look out of the grey evening ? (3)
7 Agitate (7)
11 Plant having grain (3)
12 Does it bring opium from Hollywood (13)
15 Day and night could be described thus (6, 3, 4)
18 I'll be left out of the Lebanese seaport (3)
20 A disturbing high wind in the returning air—ornamental no doubt (7)
23 It's caught in the lasso (3)
24 In this it would not be enough :—but it is (12)

Last fold up here

DOWN

1 Result of ironing the joint ? (7, 4)
2 Notify if every result ? (4)
3 Sometimes issued standing (6)
4 Roseate, maybe : but it lifted from the outside (3)
5 Extract the river of desire (3)
8 This line is a cord with weights (4)
9 European mountain range (4)
10 Peter Ivlitch ? (11)
13 The dealer doesn't do this to his cards (3)
14 Now, more or less, to possess (3)
16 Suspend (4)
17 How Sambo defined speed ? (6)
19 Acid (4)
21 Sprite (3)
22 He's invalid

Second fold down here

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The Fiery Dragon

A Christmas Story for the Young Reader

by UNCLE LUKE

ONCE there was an ancient city the people of which were greatly troubled. In the first place it was bitterly cold—ten times colder, in fact than the summers of England—and, as nearly all the trees had been cut down, they were short of fuel. In the second place, as if that was not enough, the city was molested by a dragon, a tremendous, fiery creature that would come bellowing down from the mountain in which he lived.

The citizens would one moment be out in the snow searching for wood and in the next they would have to be running for refuge behind their barred doors and shutters. In the deserted streets the dragon would stump about making a very great noise. With each bellow would shoot forth a column of flame that would reduce to a cinder anything that lay in his path. In their places of refuge the citizens would stay in fear, some burning their furniture because they were so cold, till the dragon, sensing that he was not wanted, would, with one last earth-shaking roar, return to the mountain.

On one occasion a certain boy and girl had climbed the icy branches of a tree to get wood and from there they watched the dragon closely after he had suddenly appeared. Like their father, who was an alchemist, they wondered about the reason for things. "I shouldn't be surprised," said the girl, "if that poor creature is just lonely. He has nobody to talk to and be his friend."

"Maybe you're right," said the brother. "We will find out."

The very next day, leaving a note for their father, they slipped out of the city and made their way through the snow to the mountain. As they climbed up and up, they began to hear a curious noise—a noise as loud as thunder and as though a thousand dogs were howling. The kind-hearted girl took out her pocket handkerchief—it was small, but she thought the dragon might not have one. Together they entered a large cavern :

"Please, Sir, we've come !"

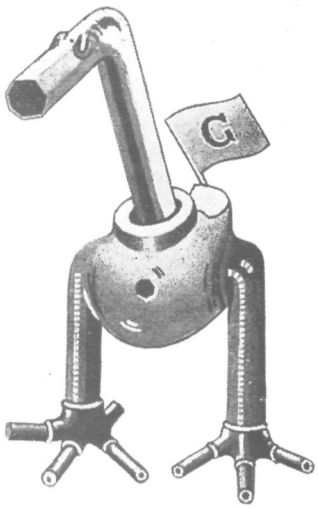
The dragon could scarcely believe his eyes—that two people, and such nice people, should be friendly towards him. As best he could, for he was not prepared for such visitors, he entertained his young friends. Then, as they felt that perhaps their father, the alchemist, might be getting worried, they asked the dragon to see them home.

The people of the city, when they saw the dragon re-appearing over the city wall, began to run.

Then they noticed round the dragon's head the necklace of holly berries that the girl had made for him and they gaped in astonishment. And there, high in the air, was the little girl with her brother, riding quite safely on their new friend. The surprise of the citizens was only equalled by their joy on learning that the

continued on page 48

KEEKLAMPS



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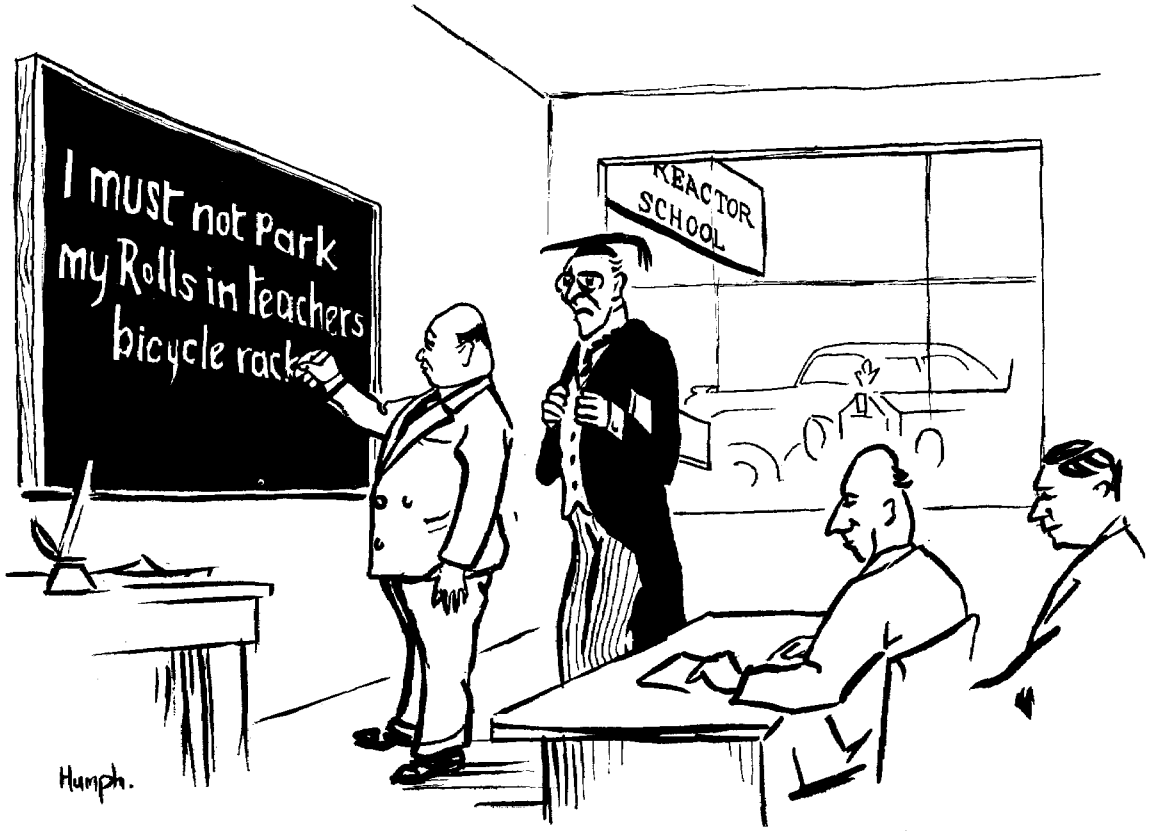
dragon would no longer molest them, but wished only to be friends. In the future the city would have only the bitter cold with which to contend.

This was a problem, of course, that the children's father, (the alchemist), had been trying to solve. There was a wide stream flowing through the city and the alchemist had tried hard to change water into paraffin, for if he could succeed, there could be warmth for everybody. In this he had failed, but now, seeing his children's triumphant return with the great dragon, another idea occurred to him.

His idea was to build a large boiler on which the friendly dragon could direct blasts of his hot, fire-like breath. Hot water pipes, he explained, could run from the boiler and be muffled to keep the heat in. As the fire in the dragon's breath was so very, very hot, there would be more than enough heat to warm all the homes of the city. They need now no longer worry about the shortage of fuel.

The dragon, in particular, was delighted with the idea and, guided by his young friends he soon learnt to help in carrying the pipes for the citizens. It was hard work, but everyone knew it would be well worthwhile just as soon as the idea could be developed.

Thus it was that the fiery dragon who had been the unhappiest of creatures, looked upon in horror by all who had even heard of him, was soon happy and proud that in his new life he could be of use to others. Together with the alchemist, and his special friends, the children, he earned the greatest respect in the city. From far and wide people came to see the friendly dragon, who could destroy and kill, but who wished only to do good.



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