*Winter 1962*

# HARLEQUIN

*Price 1/-*

*Christmas Greetings*

NUMBER 39 WINTER 1962

Leisure Magazine of the United Kingdom Atomic Energy Research Group

# HARLEQUIN

*Harwell - Bracknell - Amersham - Wantage - Oxford - Culham*

*R. E. Wilkinson* (M.R.C.)

Too often a group photograph is both static and lifeless. This study in concentrated attention is an exception. It shows young Harwellians of A.E.R.E. Estate, Harcourt Green, Wantage.

Too many people when they grow up look back on the magic of their early years — if they remember them at all — with a cynical smile. Too much is taken for granted.

In science, as in any other creative activity, this sense of wonder is kept alive.

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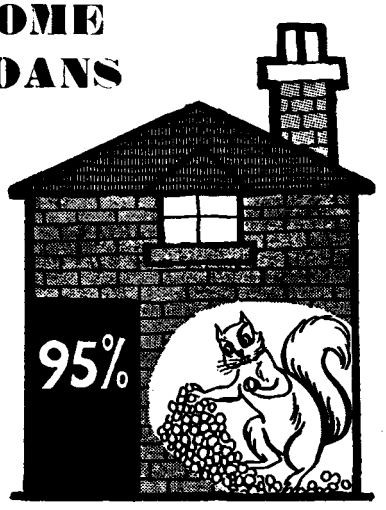


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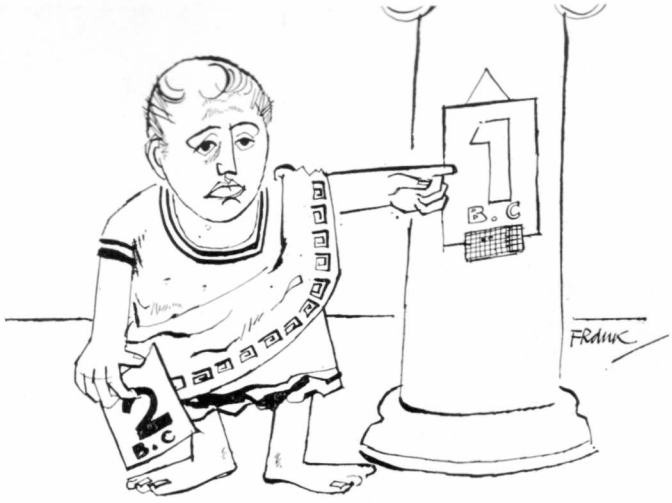


*"Something must be happening soon."*


**CHRISTMAS CHEERS**

# *in this issue*

CHRISTMAS 1962

NUMBER 39

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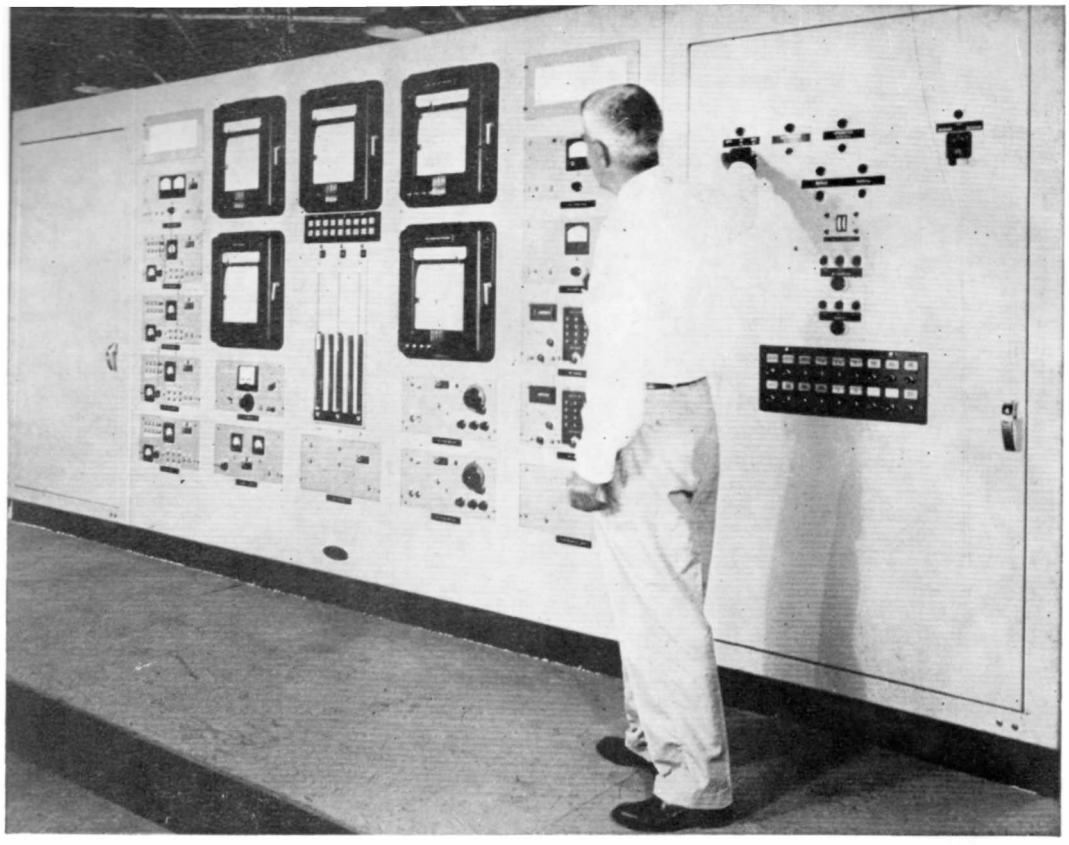

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# . . . *from the Director*

I WRITE this message shortly after the death of Niels Bohr, one of the founders of nuclear physics whose work almost exactly fifty years ago paved the way for the formation of A.E.R.E. We remember particularly his visits to Harwell, the last in June 1961 when he was in good form and obviously enjoyed his discussions of scientific problems and progress. If we can retain our enthusiasm for scientific exploration as long as Bohr kept his, the future of the Research Group is assured.

The three establishments of the Research Group, A.E.R.E., R.C.C. Amersham and the Culham Laboratory, have very full programmes stretching ahead as far as we can see. We must carry on with them in spite of international and national uncertainties. We may not have a Rutherford or a Bohr among us (this remains to be seen!), but collectively we may have just as big an impact on the future as they had fifty years ago. So to all my colleagues I send good wishes for Christmas and for success and happiness in 1963.

F. A. VICK.

26th November, 1962.

# EDITORIAL

THE ARTICLE IN THIS ISSUE on the Harwell postal service reminds us of a service too easily taken for granted. For *Harlequin* the post can bring help towards filling some of the two or three hundred pages which each year are to be produced. Sometimes, too, when no contribution arrives, there comes a letter referring to some past feature which makes the effort of the present seem worthwhile.

Through the post come first proofs of the text book *Creative Writing in English* in which are reproduced, by permission of the authors, articles "contributed to Harwell's house journal". The paragraphs are numbered and subjected to detailed examination. We are pleased to discover that the work is used as an example, not of what to avoid at all costs, but of what is "clear, accurate and comprehensive".

Received from Broadcasting House last week: "*I believe that you already know that the B.B.C. Television Service is proposing to televise three ex-members of the staff at Harwell in our religious 'Meeting Point' programme from the Midland Region on Sunday, 24th February,* 1963. *I am the television producer responsible for the programme and I have before me the Winter* 1961 *edition of 'Harlequin' and have read with interest the article 'What They are doing now . . .*"

From one of Dr. Barnardo's Homes comes a letter to remind us of a visit made eighteen months ago on a cheerless night to what seemed at first sight an equally cheerless place. Writes the superintendent of Caldecott House, Abingdon: "*Today I have received in the post a P.O. for* £1 *from an old age pensioner who read your article in the 'Harlequin', and now lives in the Brighton and Hove area. Would you please acknowledge this in your next 'Harlequin' as the address was not given and I would like him/her to know how much this generosity meant to us . . .*"

Yes, it can be pleasant to receive one's post — even if it conveys just a few words; such as those we now send to him/her, and to you: —

A Happy Christmas and Best Wishes for the New Year.

# WINDSCALE STORY

CONCLUSION

GETHIN DAVEY

*First general manager of the U.K.A.E.A. plant in Cumberland.*

*"His excellent relations with local people and the trust and respect he inspired were never better demonstrated than at the time of the accident to the Windscale Pile in* 1957. *There was no local reaction of panic or distrust; the people of West Cumberland, by long experience, believed in the integrity and the competence of Gethin Davey.*

*"Through his humanity, honesty and sincerity and sense of justice," said Sir Leonard Owen in a memorial tribute, "he won the respect and trust of his colleagues, his work people and staff and of the people of West Cumberland. He firmly believed in the normal responsibility of industry to the locality in which it was placed. He never wanted his Works or his people to be set apart. His was an outstanding achievement in knitting work and local interests together . . ."*

*A more detailed account of the local education problem will be found in "Atom" (August* 1962).

*We publish here his appreciation of the public relations problems of the atomic energy industry and the answers which he found to those problems.*

**The Windscale incident**

The first major incident at Windscale took place 10th October, 1957 when Pile No. 1 overheated. Within a few days this incident had been built up into a national scare, but in West Cumberland the good relations which had been established over the years stood Windscale in good stead. Quite naturally local people and local organisations demanded explanations and assurances, but in the various meetings that were held there was no deep-laid antagonism or resentment. The local press and people had some understanding of the work at Windscale and had sympathy with and faith in the management. The story might have been very different !

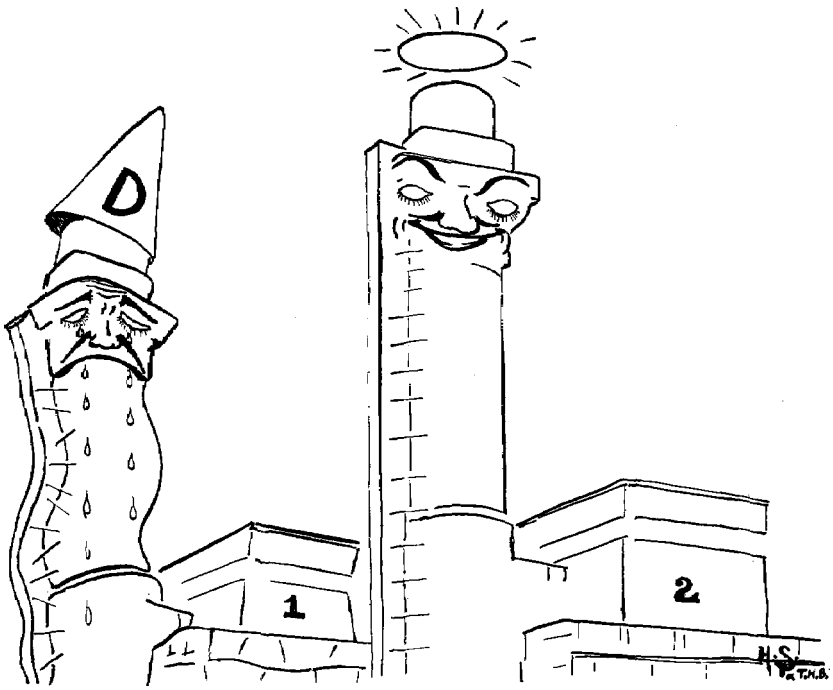
Again, comment is taken from the local press :

" The pride and faith of many West and South Cumbrians in the Windscale Atomic Factory in the Factory have been badly shaken by the accident in No. 1 Pile. It is evident that the atom is even mightier than it was considered to be ; that it is not going to submit tamely to being split and pulverised and harnessed for man's usage. It would be futile to try to gloss over the incident but the position was never quite as bad as the screaming press would suggest.

" Let us forget the hysteria of the people from outside and review the position from the point of view of those most affected, those who live in the vicinity of Windscale and Calder Hall. We have accepted the hazard, well knowing that the use of atomic energy was still in its infancy when Windscale was built. We were perhaps somewhat apprehensive when the Piles first became 'live', but as time went by and nothing really serious happened we became complacent and confident. Then last Thursday the ' tiger got out of the cage '.

" There are some people, especially in the Barrow area, who want Windscale Works scrapped. Windscale has given work to thousands of West Cumbrians for the past ten years. It was largely due to Windscale's need of scientists and technicians that the Whitehaven College of Further Education was built. The coming of Windscale opened up a new future for hundreds of young people in West Cumberland. To man Windscale and train our own youth hundreds of highly skilled, highly educated people have been drafted into the area, hundreds of houses have been built at Seascale, Egremont and Whitehaven to house them and a new school was built at Seascale for their children. The life of the district has been enriched in every way through the developments at Windscale and an even more prosperous future is assured by further developments now in progress. We are proud of Windscale and Calder Hall and we in West Cumberland have little fears of the future.

" For ten years we have basked in the light of world publicity of a sort we welcomed. To a fanfare which resounded throughout the world,




Her Majesty the Queen opened Calder Hall, the world's first full-scale notable use of atomic energy for peaceful purposes. Atomic energy has not only given us the leading place in a new industry but it has contributed in no small measure to full employment and a prosperity hitherto undreamt of. Recently we have had to pay for our place in this new industry just as in the past we have had to pay the price of being a coal and iron ore mining area. Let us not forget that the latter industries have cost hundreds of lives and the new one has focused the eyes of the world on this little corner of Britain. Thus will we keep the events of the past few weeks in their right perspective ".

**Social integration**

Experience at Windscale showed that when a large project is to be built in a relatively isolated area, an early lesson to learn is that the thinking and planning must not be confined to the project. A large number of scientists, technicians and specialists have to be brought into the area and they have to be housed and their children educated. Some thought must also be given to transport, shopping facilities and social amenities, the effect of the newcomers in the locality and the best ways and means of integrating them with the local population.

An initial estimate showed that Windscale Works would require a total staff of about 2,700 (in fact this number was increased substantially as a result of later developments) and of these about 1,000 would be scientists, technicians and craftsmen. West Cumberland's major industries had been coal and iron ore mining in which there was no tradition of fine skill and precision engineering and, therefore, it was not possible for the more specialised type of craftsman to be found locally. Also, the Works would use to an exceptional extent instruments of all sorts, and men qualified as instrument mechanics would be necessary. Consequently, it would be necessary to bring about 1,000 people into the district. In order to accommodate some of them the Whitehaven Corporation were asked to build 360 houses and the Ministry of Supply placed a contract for the construction of 300 houses at Seascale.

In early discussions there was complete agreement that, as far as possible, the building of " atomic colonies " should be avoided, although, by the very nature of the project, it would be necessary for certain members of the staff to live near to the Works so that they could be available quickly should the need arise.

At that time, the Whitehaven Corporation had an ambitious programme of slum clearance and estate building and they wished to develop a valley running in a south westerly direction from Whitehaven to St. Bees. This became

known as the Mirehouse Estate ; it was agreed that the Corporation would receive certain assistance from the Ministry of Supply in building it and, in exchange, would allocate houses to Works personnel on a one-for-one basis. The underlying idea was that a Works employee would have as neighbours on this estate local men and women who were engaged in different industries and practising different crafts and professions, and, in this way, there would be mixing of types and of established West Cumbrians and newcomers. This was admirable theoretical planning, but in practice numerous difficulties arose and some of them were insuperable. An irate Windscale employee said : " As far as I am concerned your scheme is trying to run counter to an old and proved proverb about oil and water ". Certainly, the scheme was not an unqualified success, but the majority of people settled down reasonably well.

Before the 1939-45 war Seascale was a small seaside resort with a population of about 690. It catered chiefly for middle-class families since it met their requirements admirably. Nanny took the children on the sands and father played golf while mother read a novel or, alternatively, the parents took the day off and explored the mountains and lakes. The commercial and social life at Seascale centred around catering for such people and two well-known boarding schools. Consequently, the village consisted essentially of a few shops, boarding houses, a hotel, a church and a Methodist chapel, a small number of private houses and a Church of England School. After the war it seemed that with the change in economic circumstances Seascale could not expect its former type of visitor, and that as a holiday resort its decline was inevitable.

Some of the older residents looked askance at the construction taking place on the Seascale site and also at the proposal to build 300 houses at Seascale, but there is no doubt that most of them fully appreciated the changed circumstances and, on balance, welcomed the new developments. The fact remains that a sociological problem could have arisen and a good deal of thought and attention were given to the implications of more than doubling the size of Seascale. Amongst the newcomers there were people who had something to offer in general social activities, but it was stressed that their approach would have to be tactful and, as far as possible, their contribution unobtrusive. In a very short time some Works personnel were playing a part in the religious life of the community, notably as lay preachers, bell ringers and choir conductors. The Seascale Horticultural Society was resurrected largely through the enthusiasm and initiative of newcomers, but much credit was due to its president who was a well-known and much respected old Seascalian. The Women's Institute played a valuable part in breaking down barriers and providing a common meeting point for all women in the community ; as an institute it fosters friendship and gives every opportunity to women to utilise their talents and to expand their effort for the common good.

A social club was built at Seascale which is not by any means elaborate but it does permit people to meet, to spend a convivial evening and and to attend small dances, whist and bridge drives and cinema shows. It was emphasised that this would not be a club whose membership would be confined to factory personnel ; by making the maximum use of associate membership, it was possible, for all practical purposes, to make the club available to the whole of Seascale. It has been a great success and anyone visiting the club on, for example, whist night would be left in no doubt that the mixing of old and new residents is complete.

**Education**

From the latter half of the nineteenth century until 1939, West Cumberland's chief industries were agriculture and coal and iron ore mining, and, after an initial period of prosperity, the story is one of social and economic decline. At no time in this period were there many opportunities locally for professional people, and children from Grammar Schools showing the ability and the desire to obtain professional qualifications knew full well that it would be necessary for them to leave home to practise their professions elsewhere in the country. This in itself probably curbed ambition amongst local children. By the early 1930's, West Cumberland was experiencing the full blast of the economic depression, coal and iron ore output was declining, unemployment was increasing and the total population of the district fell as people moved elsewhere to obtain work.

The new school at Seascale and the Technical College at Whitehaven were the first requirements, but they do not finish the story. As children have grown older the demand has increased for higher education. Already the Millom School has been extended and improved and is now functioning as a comprehensive school and plans are in hand for a county secondary school at Egremont and a new grammar school at Whitehaven.

Bearing in mind that these developments

have been additional to the original post-war educational programme prepared for West Cumberland, the County Education Authority deserves most of the credit for the co-operation which was given and the speed with which the extra facilities were provided, but it should be emphasised that this resulted from the attitude and approach adopted by the Windscale staff. They took the initiative and went to the limit in revealing confidential information and plans about Sellafield. The people they had to deal with were pleased by the confidence placed in them and the information given and this determined their response. Undoubtedly, the result would have been different had similar demands been made and all background information withheld on the grounds of security or secrecy.

All aspects of public relations at Windscale have not been covered in this chapter but what has been said illustrates the fundamental principle which was adopted. Some general conclusions emerge from this experience. First there are certain conclusions about security. Security is necessary on projects and subjects which touch on national interests and safety, but the implementation of security policy needs careful attention. The policy and principles of security may remain substantially unchanged but the applied security on any project must be dynamic rather than static. To the people employed on the Windscale site in 1948 and 1949 it seemed fatuous and pointless to pretend that Windscale did not exist when one pile chimney was already dominating the skyline.

A realistic attitude is called for and, in particular, a recognition of the fact that much information cannot be kept secret. Sometimes people engaged on the job give out information innocently because they are pleased with, or proud of, an event in which they took part. A workman on a shift bus was sufficiently excited to announce that Pile II had gone on to power and within a few hours the whole of West Cumberland knew; but, for several weeks afterwards, the senior staff at Windscale found themselves in the position of having quoted against them that exceptionally stupid phrase " would neither confirm nor deny that Pile II was working ".

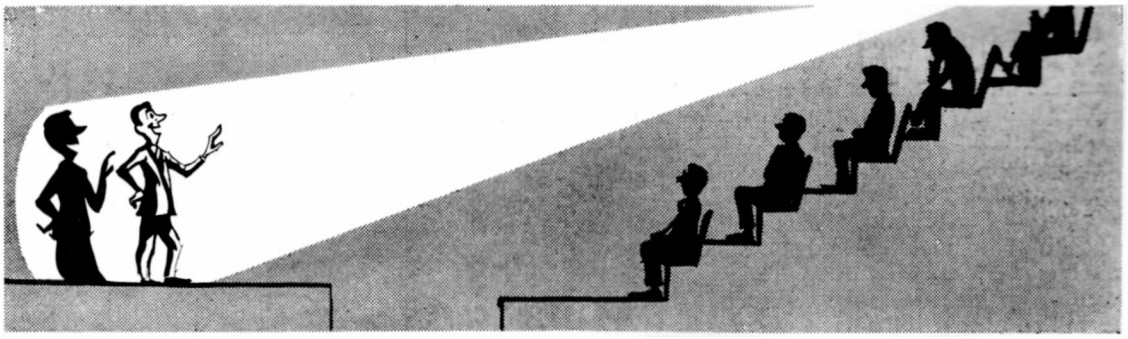
It should be remembered moreover that many public officials engaged in County and Local offices are trusted with confidential information in the course of their own employment and that they are fully capable of treating with the utmost respect any confidential information given to them about a new project.

A second conclusion is that there are excellent reasons why, at all times, the maximum as distinct from the minimum of information should be given to the local press and through them to the local people. A new project is always a centre of interest and experience proves that if facts concerning it are not provided there are always enough enterprising people to supply rumours. Any locality will tend to be sensitive in certain matters connected with the background story, and in West Cumberland the word " redundancy " was abhorrent. A headline such as " Redundancy at Sellafield " in a local newspaper would have caused a great deal of concern.

In 1949 and 1950 talks were given to groups of people and to representatives of the local press in which the situation on a construction site was described. It was pointed out that thousands of men had been brought into the area by the main contractors and as construction passed through its various phases inevitably groups of these men would be paid off and leave the district. In the latter stages hundreds of craftsmen such as joiners, electricians and welders would arrive to do specific construction tasks and when those were complete they too would depart. It was emphasised that over the next few years it would be necessary to distinguish between redundancy on the construction side and amongst permanent factory employees and, in fact, a guarantee was given that redundancy would not arise on the factory side. Several instances arose where the wisdom of making an effort to give this type of advance information was demonstrated in a most convincing manner.

Thirdly, factory staff in their dealings with local people should not pretend to be clever or superior. The risk of exposure is great and the consequences are incalculable. It is well to bear in mind that many of the local people are as intelligent, equally well-educated and some of them a good deal more astute. All they lack is specialised technical knowledge and general information about the new project. It should be remembered too that the great majority of local people will wish to be helpful and friendly and they can play an important part in helping the newcomer to settle into the community.

Lastly, no new project can be treated in isolation. In the early days thought must be given to its implications and the demands it will make socially, educationally and economically. Without delay discussions need to be initiated with County and local officials with a view to giving all relevant information and assessing the magnitude of the various problems and difficulties which will arise. ★



# *The talkies....* are here to stay

*Some observations on scientific colloquia*

Homolka

AT CERTAIN PERIODS in his (or her) career the scientist is ordered, asked or allowed to give what is whimsically known as a talk. This may range from an informal chat in the divisional tea room to presenting a paper at an International Congress in America or Russia, but basically it always boils down to the same thing. For a specified time the colloquist is allowed to state his case without interruption and in comparative safety ; then he is thrown to the wolves.

We must admit that many scientists deserve to be thrown to the wolves. In fact, some are so smug and brilliant that one's sympathy is with the wolves. But These are in the minority. In general, the lot of the speaker is fairly grim, and if it is his first talk it can be paralysing. His listeners start off with a powerful moral superiority : they can spend the whole time quietly thinking up devastating questions, or they can sleep ; but most important—and this is the great psychological factor—*they are not obliged to utter a single word.* You, the speaker, on the other hand, *must.* You must talk and show your wares and try to make the whole thing as interesting as possible. It is, if you like, a challenge ; or, if you do not like, it is an out-and-out battle. There are only one or two books on the subject of giving a talk, and they miss the whole point of the thing. " Throw your voice to the back of the hall " and " Look your questioner in the eye " smack rather of " How to Make Friends and Influence People." The audience do not care a damn where you throw your voice, and you can stare at the ceiling if you like. The essence of the matter is that once you have stepped onto the platform a state of war exists.

The following notes, based on many years' experience of relaxation at scientific talks, are intended primarily for the novice, although the seasoned " colloquateur " might also find some useful points.

A talk may be broadly divided into two parts —the *Attack* where you do all the talking, mustering your facts, slides and diagrams in an attempt to overwhelm the listeners, and the *Defence* where you protect yourself under the cross-fire of their questions. During the Attack initiative is yours, and the important thing is to hold on to it. Slides getting mixed up ; chalk breaking on the blackboard ; pointer knocking down a lamp or nearly poking someone's eye out ; notes scattering on the floor : these are all standard hazards ; how you cope with them is what matters. The casual approach is essential. Actually, some veteran speakers welcome (or engineer) these hazards in order to make dry humorous comments ; but more of this anon.

A little nervousness is not a bad thing. The audience like it. It makes them feel safe and superior. Of course, if it is carried to the point of weeping or becoming speechless (quite possible in a first talk) then the *audience* will become nervous and the whole business will be wrecked. But the odd stutter, the shy little smile, the nervous cough, all these go down well. For most novices, the problem usually is to keep the hand steady enough to hold the chalk. It often helps to assume a heavy cold : it is surprising just how much voice-shake and panic can be covered by violent nose-blowing, sneezing and sniffing.

The choice of material is, of course, dictated by the work you (or more likely, your assistant)

have reputedly covered ; but its presentation offers a certain amount of scope, and a little imagination will pay dividends, at least to the extent of keeping the audience awake. You must bear in mind that probably 80 per cent of the mob have not the faintest idea what you are talking about, and do not particularly care. They are there (a) to skip a few hours' work and have a quiet " kip " ; (b) to see you make an ass of yourself ; (c) because their fares and expenses have been paid by a beneficent if short-sighted organisation ; (d) to try to sit next to the well-made blonde in the next lab ; (e) for more reprehensible reasons.

*. . . some are so smug and brilliant*

Do *not* just show, for example, a slide of the figures for abnormal corn growth due to " fall-out ". Show a slide of the actual corn field—with perhaps one or two courting couples and a scarecrow that looks like the Division Head. Graphs can be dry as dust, or they can make people sit up and take notice. Try using little skulls for the points on a mortality curve, or adorning the axis with little dancing girls And on the subject of results, a word of warning : human nature being what it is, spectacular failures are much more appreciated by other scientists than phenomenal discoveries. Statements like : " At this stage the reactor blew up ", or " It was later discovered that these significant results were due to a dead mouse in the calculating machine " will endear one to the most jealous-minded audience.

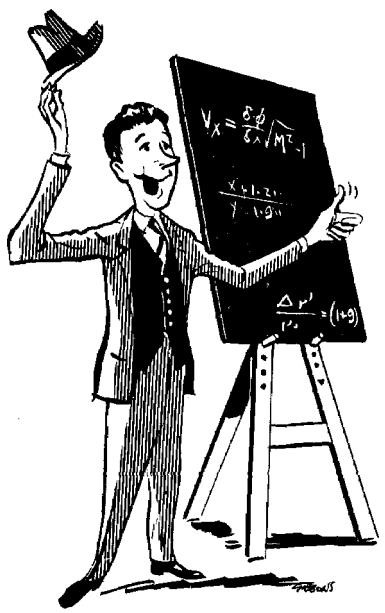
Nowadays humour is a must in any talk. Apart from a few scientific cranks, most people judge a talk on the standard of the jokes, and the competition is quite keen. The humour, of course, must have some bearing on the subject matter : it is not enough to start your talk with " A funny thing happened to me on the way to the Cockcroft Hall today ". It is admittedly difficult to introduce spontaneous humour, especially if you are a novice and your tongue is sticking to the roof of your dehydrated mouth, but often it can be pre-arranged. For example, the slide operator might be bribed to show one of the slides upside down. You then drily remark : " Now if you will all kindly stand on your heads . . . " This sort of thing often goes down well—especially if there are ladies present.

All this may sound a bit unethical to the idealistic young scientist, but even scientists are beginning to face the fact that this is a hard, competitive world. As Toscanini's manager used to say, " Yuh gotta have a gimmick."

The Defence is the really dangerous part of any talk. One would think that, after struggling through the harrowing experience of his presentation, the poor speaker would merit a well earned rest. But no. Once he sits down, the battle really begins.

There are four types of questioner : 1. The genuine scientific nosey-parker who wants to know everything ; 2. The man who is working on the same problem as you, and is out to pick your—for want of a better word—brains ; 3. The smart-Alec who could not care less about your work but wants to impress others ; and 4. The kindly idiot who is sorry for you (usually your boss or the colloquium organiser) and feels compelled to start the ball rolling.

They are all potentially deadly.



*. . . nowadays humour is a must*

Perhaps the most hackneyed, and yet insidious, questions are the ones that begin : " Am I right

in thinking that . . . ? ", and : " Have you tried . . . ? " Consider the implications of : " Am I right in thinking that . . . ? " It is usually said with a slightly quizzical air and, if the questioner's assumption is right, it subtly suggests that you are a liar or an idiot. If his assumption is wrong, it gives the impression that your presentation was obscure. The only reply to this sort of question is a curt " Yes " or " No " ; then pass quickly on to the next question.

" Have you tried . . . ? " is even worse. You know, and the questioner knows you know, that there are dozens of experiments one could try. Research consists of choosing the most suitable one or two in the time available. Yet these morons will persist in asking if you have tried the most outlandish things. This type of question has a twofold purpose. It shows the questioner up as a keen, observant type who apparently knows more about the subject than you do, and it reduces you to silent, impotent fury. The only safe reply is " No " and leave it at that.

There is another, rarer type of questioner to look out for, and this is the dreaded " Genius Lethargicus ". This fellow apparently sleeps harmlessly through your whole talk but, near the end of question time, he opens one eye and asks the most damning question. Usually this concerns some slight, imperceptible slip in your calculations or figures on Slide 1. The outcome is a frenzied searching through slides, off-the-cuff mental and contradictory calculation, explanations, apologies and general chaos—just at a time when everyone is fed up with the whole business anyway. There is no obvious cure for this except perhaps the employment of a Claque.

*Genius Lethargicus*

Claques are not so well known in this country as in more enterprising places like, for example, America. They originated in the heyday of Italian opera, the singers employing them to clap and cheer at appropriate moments. Nowadays, their activities are more comprehensive, and many scientific establishments have their own resident Claques. For a small remuneration* they will ensure that your talk is a success ; or at least that the opposition is a failure. The " modus operandi " varies according to conditions, but usually they commandeer the front rows, ask all the pre-arranged questions, heckle or discourage anyone asking the wrong questions, refer to you as " Sir " or " Professor ", clap and cheer like mad after your talk and—on some occasions—carry you off shoulder high.


*. . . many establishments have their own Claques*

And now, another word of warning. No matter what your own private opinions are as to the ethical or moral aspects of the Claque system, it is always expedient to accept their services if offered. Hell hath no fury like a Claque rejected. Smoking outsize pipes and obliterating the platform, giving agonizing, wheezing coughs, falling off chairs, fainting, making just audible sneers and sniggers at your results, quoting references showing that your work has already been done better by the Russians —these are a few of the antics of a frustrated Claque.

The average, honest, clean-living scientist might well think that all this smacks of gangsterism and protection rackets, but even scientists must face the fact that in most professional spheres publicity and advertising are essential for success. And (more to the point) think how comforting it is to know that at least some of the audience are on your side—albeit at five bob a head.

*Terms can be had from the author.
All transactions strictly confidential. All fields of science and engineering covered.

Tom Farrimond,
*Head of Section.*

# That the wheels may turn

TO MAINTAIN in reliable running order about 350 vehicles and 100 trailers is the responsibility of the Transport Maintenance Section of the Engineering Division. It is noteworthy that relatively few breakdowns occur through mechanical failure. Under a Planned Maintenance System, each vehicle is called in for inspection at regular intervals, determined mainly by mileage. The Section carries out repairs to vehicles, and controls repairs and major overhauls done by outside contract. Technical advice on mechanical handling and the suitability of vehicles for particular tasks is always available. ★

Some of the Harwell Drivers who have been presented with Safe Driving Awards by the Director.

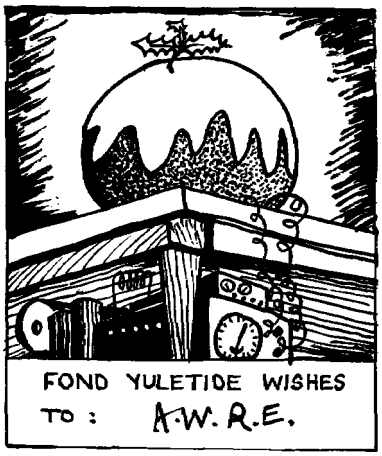
. . . with the more severe winter snowfalls and freeze-ups which we get every few years, the cry goes forth "Gore Hill is blocked — what now?" Then the frantic telephoning to the M.T. Section and the very natural concern as to how we are going to get home in the evening. Then the lengthy diversions to avoid blocked roads, with much going round and about. Sometimes the coaches refuse to take the formidable hills like Kingstanding on the Reading Road, or Sincombe on the Wantage-Lambourne Road, where in conditions of snow or ice the roads become like glass. Many view these hazards with some sense of adventure, others with consternation or even alarm, but get home we do in the long run, thanks to that long-suffering, hard-working unit with its many commitments and problems . . .



# Cards for Christmas


WHEN WE BUY OUR Christmas Cards we seldom realise that in so doing we give not just temporary employment to people during the Christmas rush but permanent employment to many thousands. Yet such is the case, for the annual demand exceeds one hundred million cards, and nowadays some of the best in art, literature and modern printing technique is lavished on their production.

Whilst you and I were basking in the sunshine at Somewhere-on-Sea last summer, a little-known army of craftsmen was sweating and toiling in an atmosphere of driving snow, old-time stage coaches and all the other traditional backgrounds to an English Christmas. Artists and writers labour all the year round preparing verses and drawings for consideration by our leading publishers. Many a






DRAWN BY : MICHAELANGELO & VAN GOGH

INSPIRATIONS BY : MESSRS. WORTHINGTON, BASS, AND YOUNGER.

hitherto humble artist has risen to fame through capturing and portraying the spirit of the Festive Season.

The first Christmas card of which we have any record is generally held to have been designed by J. C. Horsley, R.A. in the year 1843. It depicted, in colours, a happy party of children and grown-ups with glasses of wine raised in greeting, over the words "A Merry Christmas and a Happy New Year to You". Still preserved, it bears the inscription: "To James Peters, wife and family, from John Washbourn and his wife of 22 Theberton Street, Islington". Theberton Street is still to be found in Islington, though we shall never know the address to which the card was sent.

It was not until 1879 that Christmas cards really became popular. This was largely due to the enterprise of the well-known firm of Raphael Tuck in offering prizes totalling 500 guineas for the best and most original designs. Thousands of entries were received from artists both professional and amateur, and an exhibition was held at the Dudley Galleries, Piccadilly, where the public flocked to see them.

From that time the number of cards sold each year increased enormously. It is interesting to note that the snow and "old English" scenes now so popular are a comparatively recent innovation. Most of the earlier cards portrayed bowers, country scenes, seascapes and the like. The early cards were usually single, but later came the folder, then the inset leaflet and finally the popular four-fold card,

So popular is the idea of Christmas cards that they are bought by races whose religions have no connection with Christmas observances. Tastes differ, of course, and the Christmas card manufacturers who export to many parts of the world have to bear in mind that in such places as Australia or Africa Christmas falls when the shade temperature may be in the 90's. Even so exiles from the Mother Country still insist on getting a real 'English' type design with plenty of ice and snow depicted in the design.

Perhaps the only people who do not fully appreciate the spirit of goodwill behind the Christmas card are the heavily laden and overworked postmen! ★

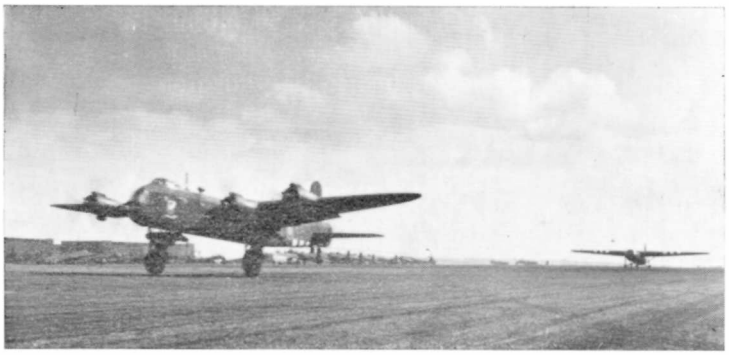
(*Photo*: *Studio Atalanta*)

A scene at the annual Memorial Service by the granite plaque which stands at the east end of the historic runway beside the Oxford/Newbury road at A.E.R.E.

# TRIBUTE TO R.A.F. HARWELL

In 1944 the Royal Air Force Station at Harwell came into its own as one of the most important airfields of No. 38 Group, Royal Air Force. The duties of that Group were co-operation with the Airborne Forces and the dropping of personnel, supplies and arms to Resistance Groups in the occupied countries of Europe.

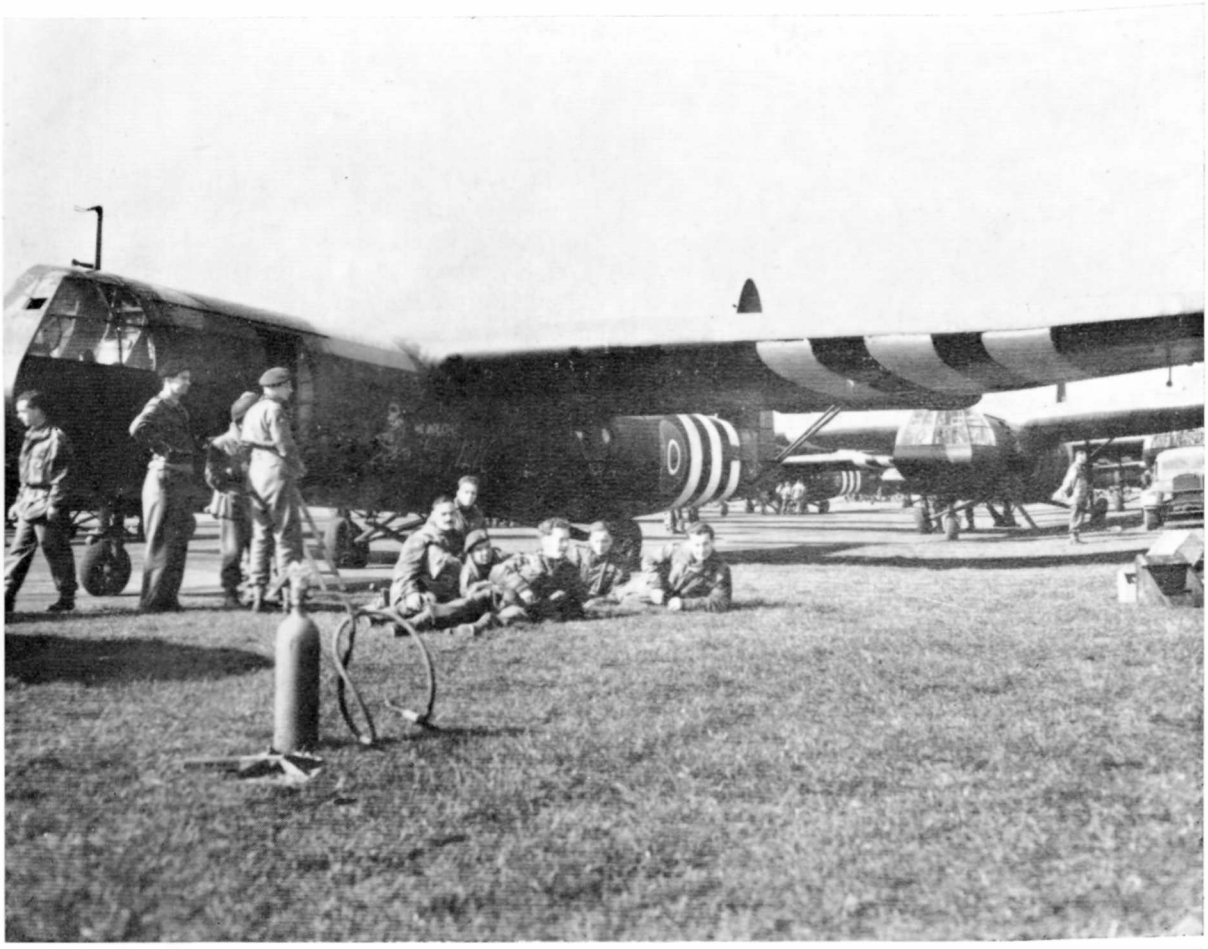
It was about an hour before midnight on Monday, 5th June, 1944: the war, which for four and three-quarter years had been waged against Hitler's Germany, was about to break into its final round; the scene was the Royal Air Force Station at Harwell from which airfield the first aircraft, carrying parachute troops who were



*Photos Left*
A Stirling aircraft tows a British Horsa glider at the take-off from Harwell.

*Right*
A scene on R.A.F. Station, Harwell, just before the start of the airborne invasion of Holland. British troops wait to enplane.

*Below*
R. A. F. Stirlings and Gliders of the 1st Allied Airborne Army lined up at Harwell for the take-off.



*(Photographs by courtesy of Imperial War Museum)*

the spearhead of the invasion for the liberation of Europe, took off at 2303 hours precisely. The operation was one of the most closely guarded secrets of the war. The first aircraft to leave on this historic mission was piloted by Squadron Leader C. Merrick and carried Air Vice Marshal Hollinghurst — now Sir Leslie Hollinghurst — who at that time was Air Officer Commanding No. 38 Group, Royal Air Force. At thirty-second intervals it was followed by five other pathfinder aircraft carrying the 22nd Independent Parachute Company. The remainder of the 6th Airborne Division under the command of Major-General Gale — now General Sir Richard Gale, Commander in Chief of the British Army of the Rhine — took off an hour or so later from the Harwell and other No. 38 Group airfields in a vast air armada of 264 aircraft and 98 Horsa and Hamilcar gliders. It is recorded that "Richard the First" was chalked on the side of the glider which carried the General from Harwell.

But let Squadron Leader Dennis Wheatley, who was then working with the Joint Planning Staff of the War Cabinet and who witnessed the activities at the Royal Air Force Station Harwell during the forty-eight hours which preceded the start of the operation, describe the happenings:

"And then at last D-day was almost upon us. For the second time only since the end of 1941 I was allowed to go to an airfield — in this case the one from which the key operation for the first act in the liberation of Europe was to be directed.

On the sunny morning of June 3rd I left London in an Air Ministry car. We sped along the Great West Road now, owing to the impossibility of obtaining petrol except for war purposes, almost empty of traffic, to Maidenhead. In peacetime the river there would have been gay with picnic parties in punts and launches; now it was still and deserted. More miles of England's green and pleasant land; the country lanes, the little cottages, inviolate for centuries from the brutal hand of an invader and inviolate still thanks to God and the Royal Air Force. Then on to the downlands and, over the horizon, to the widely spaced buildings of the R.A.F. Station which I am to visit,

It is a peace-time aerodrome with well designed buildings and comfortable quarters, but they are crowded now as it is also the Headquarters of the 6th British Airborne Division. I see an adjutant and am taken to the mess. I do not feel in any way a stranger and within half an hour I have made a dozen new friends.

That evening I attend the preliminary briefing. It is a colour film showing part of France. It is just as though we were all seated in a huge aircraft flying over the country of the film. Again and again we run in over the German-held beaches to the fields in which the paratroops are to be dropped and the gliders come down. As we make our series of chairborne flights to the different objectives the commentator points out the principal landmarks of the area by which the pilots can identify their targets.

Back in the mess I meet scores more officers: there are about equal numbers in khaki and air force blue: they are now talking and laughing together. They all look incredibly fit and their morale is terrific. Half a dozen of us talked on till midnight: when soon afterwards we went to bed we were a bit worried about the weather but we knew that there could not possibly be a postponement unless it became exceptionally bad. That Saturday night ships were already moving to their concentration points, and the security of the whole operation might be jeopardised if it was put off even for a single day. But in the morning the weather was worse. At 1130 hours the Station Commander sent for me and told me that the operation would not take place that night. I was utterly appalled. Even an hour earlier, in spite of the poor weather, I would have bet anyone 100 to 1 in pounds that there would be no postponement. Fortunately, however, very few people even knew that a postponement had occurred, far less the possible use the enemy might make of it if his reconnaissance aircraft were active and alert. In consequence, that night the crowded mess was again the scene of gaiety and mirth: at about nine o'clock an impromptu sing song started and for over three hours we made the rafters ring with all the old choruses.

The morning of Monday, June 5th passed quietly. Very few people as yet knew that this was now definitely D – 1. But at lunch time the whispered word ran round among the operational officer: "Final briefings at 3 o'clock." There were three briefings, each taking an hour, for three separate but co-ordinated operations, and I listened to them all with wrapt intent. Major General Crawford, Director of Air Operations, War Office, had arrived from London to join us, and soon after, Air Vice Marshal Hollinghurst came in. Both had played a great part in the preparations of the forthcoming operation and the Air Vice Marshal was responsible for it, since under his command lay all the airfields in the area on which the aircraft and gliders that were to take the 6th Airborne Division to France were assembled.

The Station Commander, Group Captain Surplice, opened the proceedings in each case

by reading orders of the day from the Supreme Commander, General Eisenhower, and the Commander-in-Chief, Air Marshal Sir Trafford Leigh Mallory. Then, having explained the general layout of the sea-borne assault, he asked General Gale to describe the part his Division was to play. The General told us that his task was to protect the left flank of the Allied Armies. To do this three separate landings would be made to the east of the river Orne. It was imperative that the large German battery which enfiladed the assault beaches should be silenced. One of the first groups to land would storm a small chateau and seize a car in its garage. Two paratroopers, both Austrians, would get in the car and drive hell for leather towards the steel gates of the battery shouting in German "Open the Gates! open the Gates! the invasion has started!" The Germans would have heard the aeroplanes overhead so it was hoped that they would open up, then the paratroopers could hurl bombs through which would render it impossible to close the gates again. It was a suicide job. This fortress battery had a twenty foot wide and fifteen foot deep concrete ditch all round it filled with barbed wire and to make certain of the job the General meant to crash three gliders across the ditch.

The other two parties were to seize two adjacent bridges crossing the river Orne and the Caen Canal about five miles from the coast and to blow up other bridges further inland. The General then meant to establish his battle H.Q. between the two seized bridges, to infest with his men all the territory to the east in order to delay a German attack against the British flank and, when the attack came, as come it must, to fight with his back to the double water line. He thought that the 21st German Panzer Division would be at him pretty soon so he would need every anti-tank gun that he could get in. 'We shall need those guns pretty badly' he said, and then, as though it had just occurred to him, he added, 'as a matter of fact we shall want them tomorrow' at which a great roar of laughter went up from the packed benches of the briefing room.

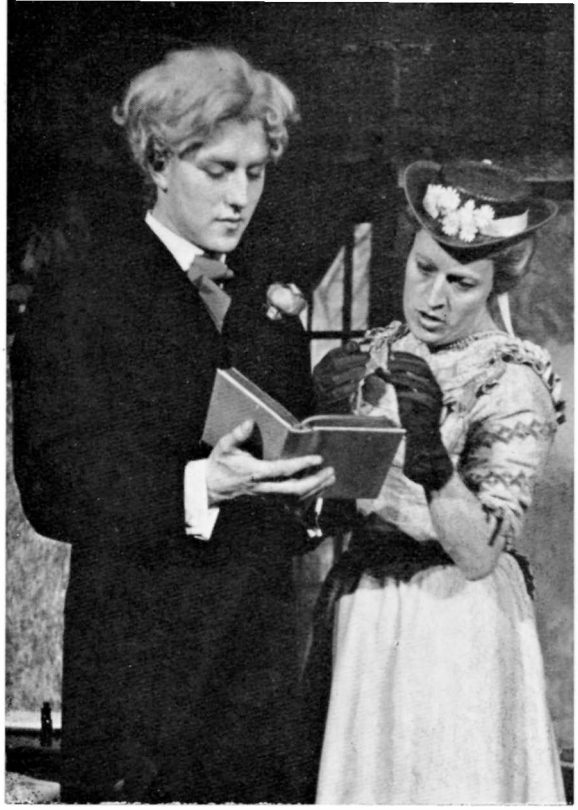
The Station Commander then briefed his pilots, giving detailed instructions to each flight as to their course in and out with the navigational aids arranged to get them safely home. Group Captain Surplice was followed by the Signals Officer, the Meteorological Officer and the Secret Devices Officer. The "Met" man predicted clear skies under 2,000 feet and broken cloud above which would let moonlight through so that the pilots should be able to pick out their dropping zones without difficulty.

The briefing over, we returned to the mess. After dinner a few of us gathered round a rather special bottle of wine which had been produced for the occasion and together we drank to the success of this great venture".

——— *And now for a graphic description of the scene on the airfield shortly before "take off" as related by the late Chester Wilmot in his book "The Struggle for Europe":* ———

" On the evening of June 5th, 1944, as the last glow of twilight was fading from the western sky six R.A.F. Albemarles were drawn up on the runway of Harwell airfield. Gathered around them, drinking tea and smoking cigarettes, were 60 men of the 22nd Independent Parachute Company, pathfinders who were to guide the 6th British Airborne Division to its landfall behind the Atlantic Wall near Caen. Their faces and equipment were smeared with brown, black and green paint, and over their uniforms they wore camouflaged jumping smocks. Every man was a walking arsenal. They had crammed so much ammunition into their pockets and pouches, so many weapons into their webbing, that they had found it difficult to hitch on their parachute harnesses. Grenades were festooned about them; they had fighting knives in their gaiters and clips of cartridges in the linings of their steel helmets. No man was carrying less than eighty-five pounds, some more than a hundred, and in addition each had strapped to his leg a sixty-pound kitbag containing lights and radar-beacons with which to mark the dropping and landing-zones for the rest of the division.

These men were the torchbearers of liberation. Like all paratroops they were volunteers, and they had been specially picked and trained for this responsible task, but otherwise there was little to distinguish them from the rest of Montgomery's force. Beside the leading air-



Scenes from

# "Angels

*"Her whole nature recoiled from the man to whom she owed obedience . . ."*

*Cedric, Lord Fauntleroy*
*(Maurice Barton)*
*Dearest, The Hon. Mrs. Errol*
*(Greta Wheeler)*

*"I . . . I think I've been insulted."*

*Lettice, Lady Fauntleroy*
*(Sue Ferguson)*
*Sir Pomeroy Pomeroy-Jones*
*(John Birmingham)*
*Dearest*
*(Greta Wheeler)*

# *in Love"*

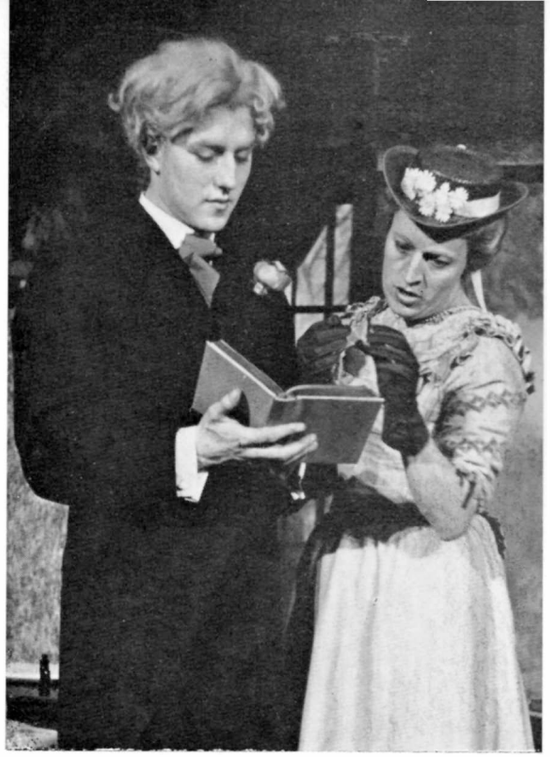
Autumn Production of the
A.E.R.E. Dramatic
Society

*"Don't you think she has Lord Harry's nose?"*

*Violet, Comtessa de Chaumont*
*(Jean Sugarman)*
*Cedric*
*(Maurice Barton)*
*Molyneux, Earl of Dorincourt*
*(Brian Charlton)*

NEXT PRODUCTION:
Noel Coward's Comedy
"Blythe Spirit" Directed
by Bill Howarth,
FEBRUARY 8TH AND 9TH
Social Club

Enquiries from those interested in acting, production or back-stage work will be welcomed by Janet Hoare, N.I.R.N.S., Ext. 7/458.



Scenes from

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Autumn Production of the
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# *Of local interest* — *Grim's Ditch*

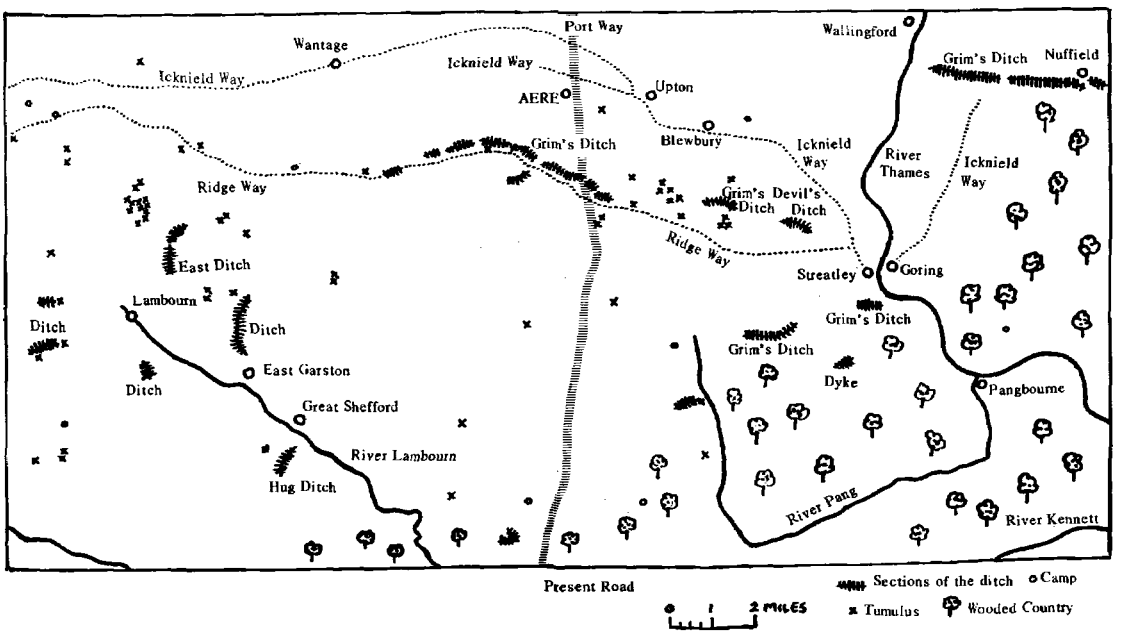
V. J. Wheeler (Chem. Div.)

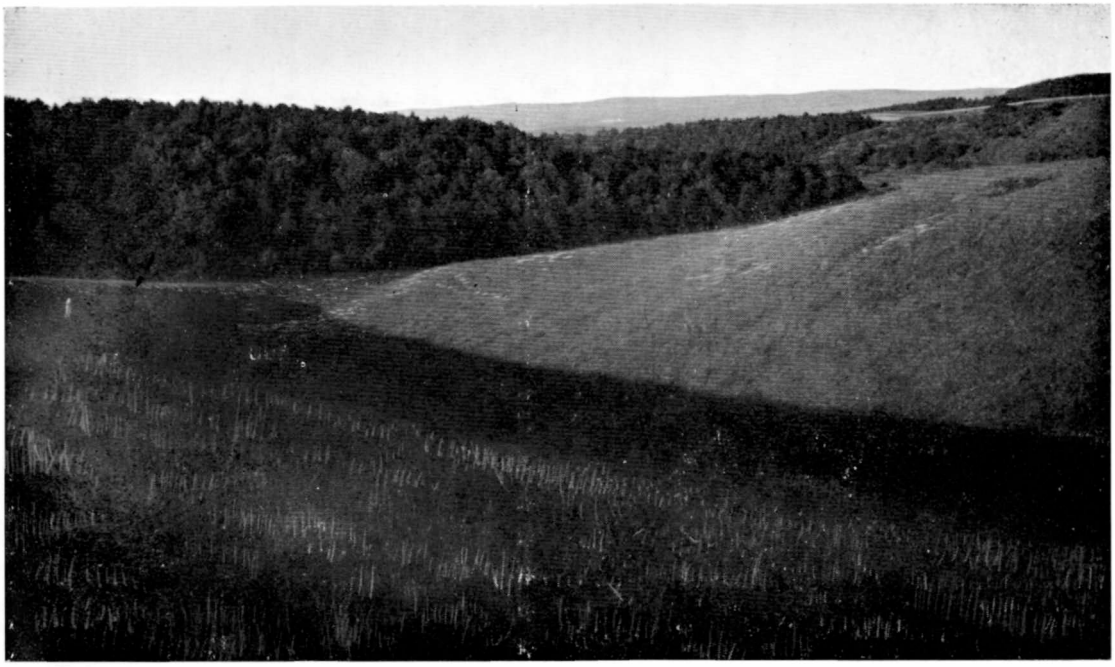
THERE IS STILL considerable speculation on the origin of the extensive earthworks and ditches in the southern part of England. Probably the most dramatic and well-preserved of these is the Wansdyke (Wiltshire), stretching all the way from Newbury to Bath. Other smaller sections of the same type of earthwork found in Berkshire, Cambridgeshire, Hampshire, and Oxfordshire may have belonged to a larger system which has since been destroyed or to an *intended* larger system which was never completed, or may have been designed for more independent, local purposes.

A common name for them is Grim's Ditch (or Dyke), the name "Grim" being an alternative for the Scandinavian god Woden : this is illustrated, for example, in the name Woden's Dyke (Hampshire) which was recorded as Grimesdich in 1272. The character of Woden was somewhat variable, but he was the principal god of war to the warriors at the time of the Saxon invasion. The Anglo-Saxons attributed the earthworks to this god, though later names show that they were also thought to be the work of the devil (e.g. Devil's Dyke, Cambridgeshire) or of giants (e.g. Andyke, Hampshire).

It is commonly believed that the purpose of the Wansdyke was to act as a defence against Saxon invasion from the north, and its construction has been attributed to the Britons occupying the south-west of England during the 5th and 6th centuries A.D. This is supported by the discovery of Roman pottery and marks of Roman footwear during excavations of the dyke. The same construction date has been suggested for other similar earthworks : for example, excavation of Bokerley Dyke on the Dorset-Wiltshire border has led to the discovery of Roman coins suggesting a construction date of 5th century A.D., and Bran Ditch (Cambridgeshire) has yielded pottery thought to be 5th-6th century A.D. However, evidence of Roman *use* is not necessarily evidence of Roman *construction*, and there is a considerable body of opinion favouring initial construction during late Bronze Age-early Iron Age. Nor does the defensive purpose of the earthworks go unquestioned—many alternative proposals have been put forward based on their use as tribal or ranch boundaries, and cattle enclosures.

The particular earthwork considered here is the ditch extending from Goring to Lambourn





A section of the ditch on Aston Upthorpe Downs. (*Photo*: *G. R. Tilt*)

across the Berkshire downs (see map). Its course in relation to the detailed local geography is best seen on Ordnance Survey sheet No. 158 (1959).

If one attempts in this age to reconstruct the route of the ditch, one quickly sees the result of hundreds of years of disuse, and of ploughing and cultivation. The Ordnance Survey map shows only some sections which can still be recognised, but these vary from shallow hollows to enormous cuttings, in some parts completely overgrown with vegetation. It may be conveniently divided into three sections : (1) on the western side of the River Thames at Streatley (2) on the high ground running along the Ridgeway (3) along the Lambourn valley between Lambourn and Great Shefford. This division in itself at once suggests a defensive purpose—to control the river crossings at (1) and (3), and the high ground at (2). Incursions from the west could also be dealt with from the high land of the Ridgeway, and there is evidence of a rudimentary defensive system to cover the south east through the low-lying, wooded country between Newbury and Pangbourne. This system encloses a roughly triangular area of about 80 square miles, the outline of which can be picked out quite clearly. The pattern of camps and tumuli also follows this outline very closely, often filling in present gaps between sections of the ditch.

If one accepts this defensive interpretation, there is left the question of the date of original construction. The most favoured at present is late Bronze Age, which would mean the occupation and consolidation of this area by a community some 3,000 years ago. This is by no means far-fetched when one considers that the track along the Ridgeway was used from Neolithic times, and that the Icknield Way was in constant use throughout the early Iron Age. No doubt, they were modified and improved by later inhabitants—as were the tracks and field systems—but the basic design was established for the centuries to follow.

The projected M4 motorway across the downs, in fact, has its origins thousands of years ago—for this was part of the great route from the Wash to the south coast, and the motorway will be just one more layer on the road that goes back into pre-history. ★

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Lilian O'Shea franks the mail.

# *The Story of the Harwell Mail*

THE POST ROOM, situated in Building 77, is part of the General Services Department. It has a staff of only six, but every Division depends on its services.

The main function is the sorting and dispersal of both incoming and outgoing mail, and there is also a fair proportion of internal site mail. Although this type of work demands no specialised qualifications, intelligence and energy are essential. A short training period is necessary for most of the work involved and, although the view is sometimes expressed that it is uninteresting work and a dead-end job, much benefit can be derived by new entrants learning at first hand the geography of the site and the procedure for dealing with the post.

Much of the inward mail arrives at 7 o'clock in the morning, and some staff are engaged from 7.45 to sort as much of the mail as possible for the first delivery from the Post Room at 8.30. Together with a second delivery of mail from the G.P.O. between 12.30 and 1 p.m., up to fifteen full size G.P.O. bags, mostly filled to capacity, are dealt with daily from Monday to Friday. A greater number arrive on Saturday, however, and following a holiday period there can be as many as forty bags, depending on the duration of the break; pressure on the Post Room staff is then extremely heavy.

Norman Branch sorting on the move in one of the two electric vans.

Outgoing post is despatched at 11.30 a.m., 3.15 p.m., and 5.30 p.m. to the G.P.O. at Didcot. Two machines are in use for franking and dating all official letters; and our postal bill amounts to £12,000 a year. The peak period for outward despatches begins around 4 o'clock, when the entire staff work at full pressure to ensure that all items received from the site are included in the final despatch, one-third of which consists of privately stamped letters. (At Christmas we *seem* to handle most of the country's hundred million cards!) Franking of mail continues until 4.50 p.m. each day, after which *stamped* mail may be posted at a mail box in the Post Room, and another in the bus-park, up to 5.30 p.m. In addition, we have our own daily courier service to London Office, Aldermaston, Oxford Office and Culham and Wantage Laboratories.

Canvas envelopes are in daily use from Harwell to most of the Authority's other Establishments. These are used for bulk despatch of ordinary letter and letter packet mail.

Only too frequently does the Post Room receive heavy and bulky packages in the flimsiest of brown paper. As these parcels must be repacked, they are put on one side until the main post has been sent off. This can mean a delay of twenty-four hours. Among the odd items handled are samples of rainwater and tigerskins for irradiation tests, and such things do deserve special packing!

It is not generally known that all European letter mail now goes by air as a matter of course, and that the G.P.O. sort the Air Mail envelopes initially by their coloured edges and not by the written address. Such envelopes are then sent to a special Air Mail centre which does not deal with European mail. Any European mail which has been included will be delayed through having been sent to a wrong centre.

Another point of interest is that a Customs Declaration Form must be prepared for every parcel and bulky packet sent overseas. To add


Barbara Beaumont surveys the morning mail.

to the difficulties, each overseas country requires a different type of form.

New methods and procedures have been introduced to speed up work and relieve the staff of many irksome tasks. The internal messenger service has recently been re-organised so that it is no longer necessary for site mail to go into the Post Room for sorting and reloading into a van for delivery. Two electric vans have been fitted with suitable racks, and mail is now sorted "on the move". Times of delivery on the circuit vary between two minutes and two hours, depending on the relative positions of buildings on the vehicle schedule. Between them these two vans carry 10,000 packets each day.

Another recent improvement is the introduction of a short-wave radio enabling Mr. Indge, the Head Messenger, to direct a van to collect urgent packets as necessary.

The Post Room staff consider they have had a light mail when less than 2,000 letters and 100 parcels are delivered by the G.P.O. or when much less than this is sent out to Didcot in the evening. These figures do not include the four or five bags which are delivered daily direct to the Main Library and Isotope Production Unit by the Royal Mail van.

Supporting all this effort are the fifty-five messengers and office keepers in numerous buildings throughout the site.

Those who read the "Unclaimed Mail" column of the *A.E.R.E. News* will see what little mail remains undelivered each week. The Post Room have over the years developed a technique for tracking down the owners of inadequately addressed letters.

Even "Mr. Smith,
Harwell — Berks"
does not defeat them — despite the fact that there are, apart from those at Harwell Village, one hundred and thirty-five Smiths in the Establishment!

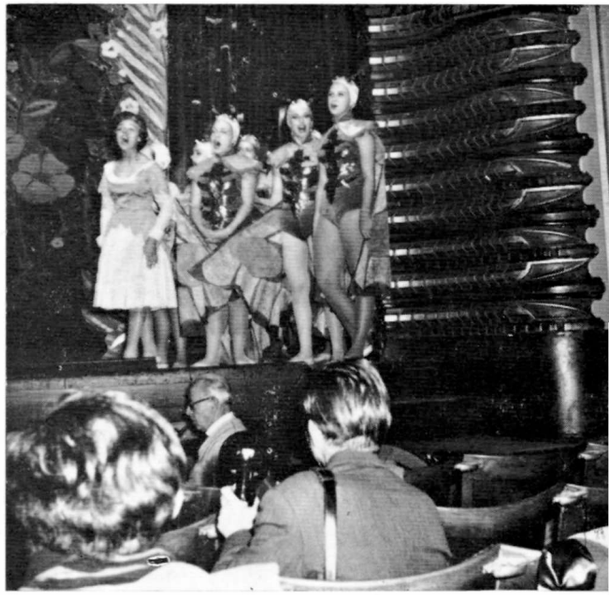
"Mr. Smith, Harwell!"
Arthur Usmar, in charge of the Post Room, tackles a poser.

"*!*! bad writing this!"
Sydney and Sandy pick up the parcels for their morning delivery.

# Time for Pantomime

Harlequin, the legendary character in tight, diamond-checked costume, is not wanted in modern pantomime proper, but "Harlequin", your magazine, found itself very welcome behind the scenes at rehearsal time.

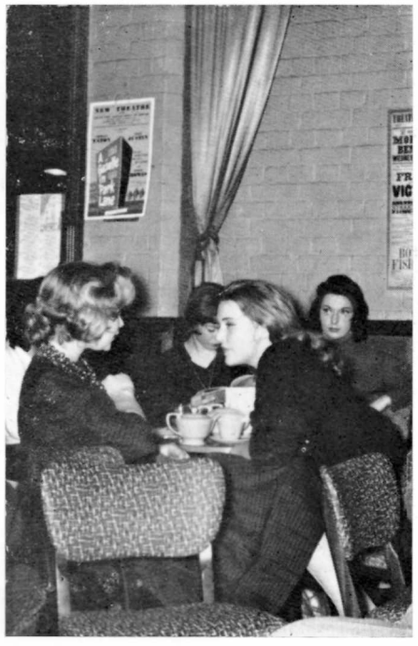


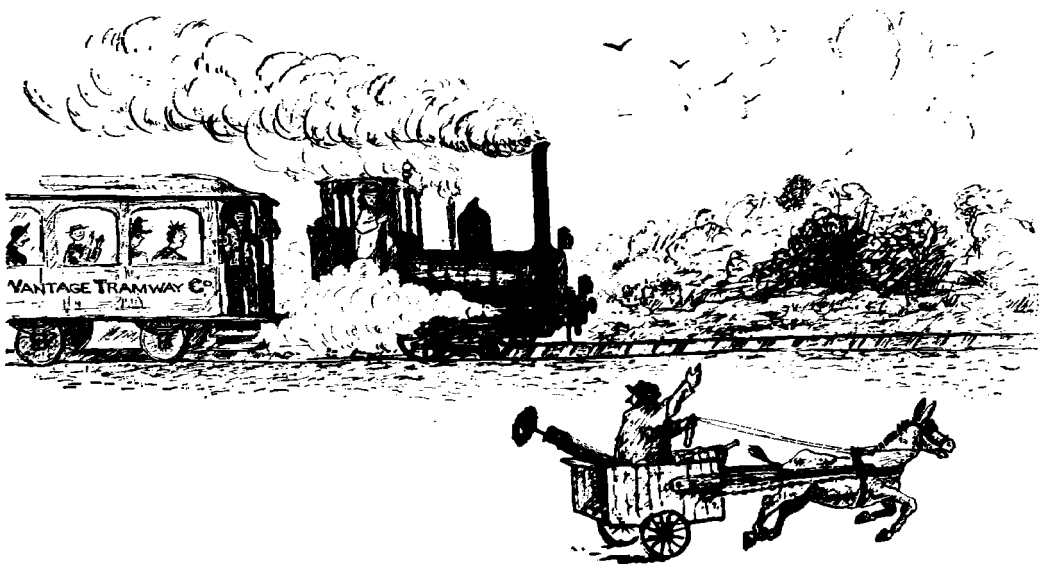



Less welcome, it appears, is the heroine of the epic to be enacted at the New Theatre, Oxford, this season.

Making an unauthorised entry into the home of three quadrupeds, she finds her intrusion somewhat resented. . . . but no more about the plot, in case we spoil it for you!

★






ARTHUR HITCHCOCK, the Grove celebrity referred to in the cartoon, was the grandfather of Dennis Hitchcock of Chemical Engineering Division, Harwell.

It was in 1923 that Mr. Arthur Hitchcock, who did chimney sweeping and went his rounds with a donkey and cart (partly through having lost a leg while working on the Great Western Railway some years before), was returning from Hanney by the side of the road along which the tram ran. The animal took fright when about to be overtaken and, despite Mr. Hitchcock's efforts to stop, it was never overtaken!

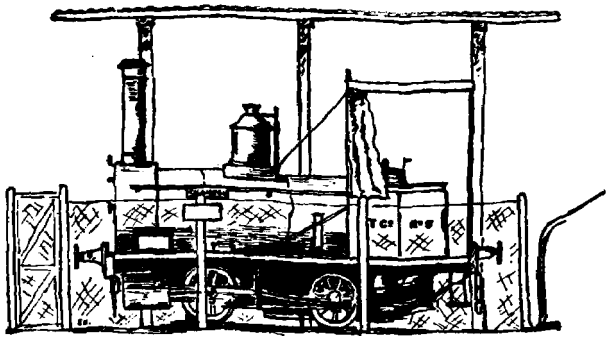
The cartoon postcard of 1923 has found its way all over the world and is still on sale at Wantage.

The doggerel of 1955, overleaf, which also records the event, is less well known. We print it, unedited, in its original form.

Best forgotten altogether is a more recent postscript on the event by an unknown pen, which reflects the first impact of the Harwell establishment on the local community!

*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.*
E.C.F. Sept. 1923

*That's what they said and so we're told*
*In days we now describe as old*
*Since moke and tram and all for us*
*Are knocked to nowhere by the bus.*
*But now to speed us on our way,*
*The Atom comes in dust to lay*
*The ghost of moke and tram and bus,*
*And us, the cause of all this fuss.*



"Jane"
R.I.P.

# Moke versus Smoke

*Jane*

*My name is Jane and I may be plain,*
*But I was the Wantage Rd.–Wantage train,*
*It's several years since I retired*
*But in my "box" I'm still admired*
*By folks who come from far to see*
*"The Wantage Flier" that was me!*
*Along the roadside I would puff*
*Without much fuss I'd do my stuff*
*And all who wanted Wantage Town*
*And came by rail; they used to frown*
*When from their coaches they'd descend*
*Thinking they'd reached their journey's end*
*To find that it was still two miles*
*Into the Town; but soon came smiles*
*When told that "Jane" was standing by,*
*"Isn't she cute!" you'd hear them cry,*
*And as I chugged along the track*
*Motorists waved and passed some crack*
*Which I ignored; with all their tales*
*They'd never get me off the rails.*
*My gentle nature proved to be*
*the undoing of little me*
*The story is still fondly told*
*and picture postcards still are sold*
*Of donkey cart and sweep complete*
*ahead of Jane by more than feet*

*I'll tell you how it came to pass*
*That I was beat by Hitchcock's ass*
*It's owner—Arthur Hitchcock—had*
*for several years right from a lad*
*worked on the railway next to me*
*but when he lost a leg you see*
*He had to get another job*
*to earn himself an honest bob;*
*A chimney sweep he then became*
*and earned himself undying fame;*
*One day an artist by the road*
*watched both myself and trap I'm told*
*and as old Hitchcock's moke I spy*
*I gave a "toot" to pass him by*
*But Neddy was unused to fun*
*and startled he commenced to run*
*and though I belched forth tons of smoke*
*I could not catch that frightened moke.*
*Into the town the trap he bore*
*With Arthur Hitchcock on its floor;*
*From that day forth and ever after*
*I was the object of men's laughter*
*But he laughs best whose laugh is last*
*Old Hitchcock and his moke have passed*
*But I still stand in stately grace*
*At Wantage Road where I'm encased.*

HARRY WHEATON, 1955.

LOCAL TOWN No. 2

- The nearby centre of a huge rural area, it has been described as the ideal of what an English country market town should be. With a variegated beauty of its own in the fine old buildings, streets and roofs, the town itself has probably more of everything needed in present day life than any town of its size.
- More a business town than an industrial centre, the days when corn and cattle markets are held present the animated and busy picture of what a thriving and flourishing community should look like.
- History records that it was the scene of blood and violence. In the 17th century, it was of great strategical importance to both sides during the Civil War. In the 18th Century, it was the scene of bread riots when poor people assembled in the Market Place to demonstrate against the high price of bread, upsetting sacks of corn, overturning the stalls of the traders, wrecking the houses of two unpopular tradesmen and raiding the mills. In the 19th Century, farm labourers demanding higher wages and new machinery marched on some local farms, breaking up all farm machines, setting barns and ricks on fire and, in some cases, burning down the houses.
- Its 200 odd factories are today classified as "light industries" and are all invisible from the main streets. They include marine engineering, the production of diesel engines for coastal steamers, household furniture, light aircraft, gliders and sailplanes (exported to all parts of the world), gear cutting and precision engineering of aeroplane component parts.
- One guinea will be awarded to the sender of the first entry opened which correctly identifies this local town. *For conditions of entry see page 62.*

Some time ago the following paragraph was published in the " Diarists " column of the " Oxford Mail " :—

"What intriguing story lies behind part of a letter discovered in an old book, one of a number purchased recently by Blackwell's, and found by a member of the staff who was leafing through the volume ?

"The note has no beginning and no end, so there is no clue to the writer, but it is in an educated hand, on a piece of good quality note-paper, and is probably getting on for a hundred years old.

"*By the way,* it begins, *I was told at the Market on Thursday that two women were in Oban last week on their way to see me.*

"*I was in the south then and they put back at Oban. Who the devil are they and what do they want here* ?

"It ends : *I was told they were not ladies ; let me know.*

"Perhaps some literary-minded reader might care to write a short story based on these few sentences."

*R. T. Fenn, Oxford Office,* responds to the challenge with this hitherto unpublished account of:

# *The WOMEN of OBAN*

Sir Montague Geekie chuckled as he read the final letter of his day's correspondence. " Poor Stuart, " he murmured, " how scared of women. Even so, it makes me curious ".

He picked up the letter on top of the pile in front of him and perused it again. After noting on a pad various points from the opening pages, he turned to the last sheet but one which read, " By the way, I was told at the Market on Thursday that two women were in Oban last week on their way here to see me. I was in the south and they put back to Oban. Who the devil are they and what do they want here ? I was told that they were not ladies ; let me know."

The final page of the letter concluded with the news that the writer was unexpectedly returning to Dumfries, where he had been the previous week, when the women were enquiring for him at Oban. He hoped, however, to call on Sir Montague a few days later. The letter was signed Stuart Duncan.

Sir Montague went to a bookcase at the side of the room, extracted a reference book and returned to his desk. After thumbing through the pages he found the place he sought, then using the page from the letter which referred to the women from Oban as a bookmark, he closed the book and laid it aside. " I'll see Stuart about two things at once when he calls, " he said to himself.

The men, however, were destined never to meet again, for within a few days they were both dead !

Later that morning Sir Montague saddled his favourite mare and set out to ride through his estate before calling on his lawyer, but in his pre-occupation with legal matters he was careless in adjusting the saddle. Coming to the large field which marked the end of his estate, he urged his steed to a gallop. The mare faltered just before the boundary hedge, then made a despairing leap. This, combined with the ill-fitting saddle, was sufficient to throw the rider off. He landed heavily on the road on the other side of the hedge and broke his neck.

The finding of the riderless horse led to the discovery a short while afterwards of the dead man's body. The accident shocked the neighbourhood, for Sir Montague had been a popular landowner ; but soon even more startling events were to arouse the populace in that small town near Oban.

Stuart Duncan, oblivious of the tragedy which had overtaken his friend, completed his mission in Dumfries and rode home northwards, transacting business en route. Despite the large sum of money he carried, the trader travelled alone ; and when, at the end of the third day, he found himself only fifteen miles from home, he decided to ride on through the night.

Three parts of the journey had been completed without incident when a heavy thunderstorm broke out. Duncan pressed on, intending to take shelter in a glen that lay just ahead.

The road narrowed, the banks became steeper and the overhanging trees and bushes grew denser. Heavy, dark clouds scudded across the sky, revealing only occasional glimpses of a fitful moon. There being no visible place of refuge for himself and his horse, Duncan rode on. Above the intermittent rumbles of thunder the steady 'clip-clop' of the horse's hooves echoed along the narrow, winding road.

The wind and the rain began to abate and, topping a slight rise, Duncan paused. Suddenly he received a violent blow on the back of the head from a cudgel wielded by a man who darted out from among the bushes along the road's edge. The blow was delivered with such force that the unsuspecting rider fell dead from his horse, which bolted in fright. The assailant hastily rifled the dead man's pockets and made off into the night.

For the second time within a few days the finding of a riderless horse led to the discovery of a dead man ; but on this occasion it was a matter of murder !

The news quickly spread through the district. An even greater sensation was caused by the appearance in town of two gypsy women—mother and daughter,—who claimed to know the identity of the murderer. In addition, rumour said, they had foretold the crime !

Their story, as related to the police, was that on three nights in succession they had both dreamed of the death of the trader. Their premonitions, they claimed, were so vivid, their indentification of Duncan so certain, that they had travelled to market to warn him, only to find he was away on business. They then predicted that a friend of Duncan would also die when out riding, but his name was not revealed to them.

Their dreams, they said, also gave them a clear description of the murderer, and a check on this information led the police to arrest a gypsy 'King' known to be travelling through that area. He was subsequently tried and found guilty. The two women, after the trial, were well rewarded. Then they disappeared and were never seen in the district again.

The story of these strange events might have faded for ever into obscurity ; but nearly one hundred years later a bundle of books, once the property of Sir Montague Geekie, was being examined after purchase by a member of the staff of the Oxford firm of Blackwell's. Leafing through one of the volumes he discovered the page of Duncan's letter which had remained there undisturbed since those final, fatal days in the lives of its sender and recipient. . . ★

# INVENTION *as a hobby*

BY THE VERY NATURE of his occupation, the inventor is blessed (or cursed) with "divine discontent": he is permanently at war with existing conditions, for if things were just right the inventor's service would not be required. The manufacturer, on the other hand, is by nature conservative: after spending a good deal of time and money in promoting new ideas, he doesn't want to see them changed overnight. Thus the inventor imagines a short-sighted prejudice against innovations; he sees things which need reforming, the things which others miss. Manufacturing experience, valuable as it is, sometimes closes the mind to the reception of new ways of doing old things. The inventor sees what he imagines to be the remedy—the essential idea is there—the difficulty is to put theory into practice. Great patience and ingenuity are required, so it is no wonder that the inventor, his brain always taut in a strain of receptivity, leads a mentally strenuous life, and his lot is not a happy one. Yet he keeps on!

Of neglected inventors one could list many sad examples. Nearly two thousand years ago it was stated that a prophet is not without honour save in his own country, and very often today inventors are not honoured among State departments, industrialists and manufacturers with whom they hope to co-operate. The Admiralty laughed at Symington, the Scottish inventor of the steamship, who died in poverty; and British manufacturers allowed the Germans to exploit Sir William Perkins' invention of aniline dye. Kay, the Walmersley genius who invented the flying shuttle, died in poverty in an attic in Paris; Hargreaves, of spinning-jenny fame, spent much of his life fighting the manufacturers who robbed him of his patents and made a fortune from them. The Government originally scorned Bell's telephone and rejected the offer to purchase it. De Forest, who added the grid to radio valves, was unable to sell his patent, and let it lapse rather than pay the fee needed to renew it.

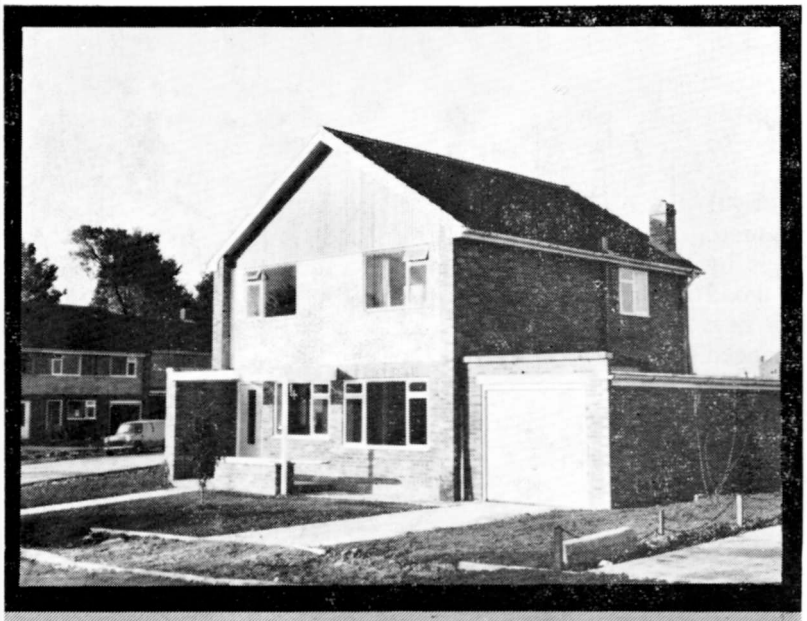
The power of invention is not dependent on formal technical education. There are plenty of people with science degrees who get top marks in an examination and teach others to do the same, yet they fail to apply their knowledge in a *practical* way.

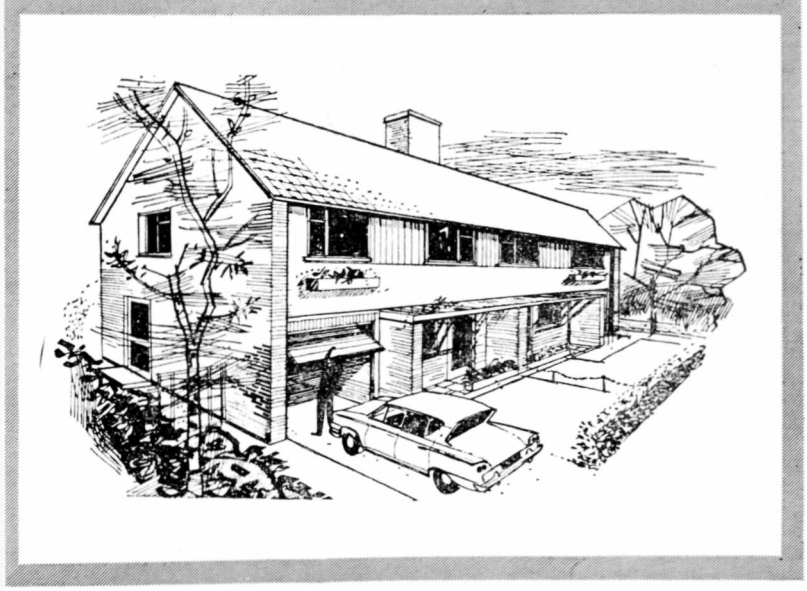
John Ericsson, inventor of the Monitor, the armoured vessel which defeated the Merrimac in the American Civil War (and who had many other inventions to his credit), once remarked "It was very fortunate I did not go to a technical school. Had I taken a course at such an institution I should have acquired such a belief in authorities that I should never have been able to develop originality and make my own way in physics and mechanics".

Of course, one must be careful not to appear to deride all academic knowledge. Study gives knowledge of how to analyse the problem. For example, anyone with a sound knowledge of physics and mechanics would know that a perpetual motion machine is impossible. The fact remains, however, that lack of technical knowledge has not prevented some inventors from making good, although one should preferably apply oneself to those subjects with which one is familiar.

In the research and design departments of big firms, the necessary data and experience are nearly always available. Tests can be made under practical conditions in great engineering shops and laboratories after skilled draughtsmen have worked out details on the drawing board. All these research workers eventually pay their way by saving cash on existing products or by bringing in money with new ones. Can a free-lance inventor with a modest workshop compete with this formidable corps? It would hardly appear so, yet private individuals have invented the safety razor, electric car starter, case-hardening steel, monotype, Diesel engine, crystal radio detector, bakelite, gyro compass and calcium carbide. These 'outsiders'

# Your Housing I.Q. High or Low ?





Before you study the pictures, let us tell you that this is an "AD" — aimed at your sales resistance? Your reasoning? Or just something you know anyway! "Just a House?" Could be anywhere — or could it? Property? An Investment? Does it really mean so much to a property owner or is this "Englishmans Home His Castle" just an old wives tale? And is owning a nice house "Keeping up with the Joneses" — or does it really give a sense of pride and moral stability? How much would it have cost two years ago — 12 months from now — 10 years from now? Have you banked more money than that anyway? Paid the Tax man? — or just don't know? Are you sure your retirement calculations have been related to the known constant of rising prices? or will materails — labour costs and land prices become cheaper? and finally — IF YOU BOUGHT A HOUSE — would you consider — is it in U.D.C. or R.D.C. — and what does that imply anyway? Is it "cheap?" — "Dear?" and CAN YOU tell a house which is just that much better? What is an N.H.B.R.C. CERTIFICATE? Its safeguard and re-sale value? the re-sale potential of a house? — position — height of land — type of land — future development factor — standard or workmanship — design — modification and extras applicability? and above all — THE THE BUILDER'S REPUTATION. EASIER NOT TO THINK? — PAY THE "LANDLORD"? — RENT A "COUNCIL" HOUSE? (Our Sales Representative has sold himself one of the above properties — to be near his own teapot?) — We wonder?

THE "AD?" Top picture is a type D.B. 4 bedroomed detached price £3885.

Lower picture is Type A.1 integral garage — 4 bedroomed semi-detached price £3250.

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have often the advantage of approaching problems from an entirely new standpoint, seeing "with child-like eyes things that are hidden from the wise". There are some great vested interests today which maintain large corps of paid research workers, developing an essential idea originally thought out by a free-lance. Delve into the history of most big industries and you will find that they were founded on the inventions, not of famous men of science, but of persons who were at the time obscure mechanics.

Though it is perfectly true that one should not put all one's eggs in a single basket, specialisation is the key to success in free-lance inventing, as it is in many undertakings. There is no harm in manufacturing your own invention. If you sell it outright, the responsibility for improvement lies with the purchaser; but if you promote the idea yourself, do not rest on your laurels and regard your position as secure. Be always on the look-out for variations of the basic invention. If you don't exploit them, others will!

It was declared in 1906 that no combination of known substances, known forms of machinery and known forms of force could be united in a practical machine by which men should fly. The frustrated ambition of Icarus was still the unfulfilled dream of the newly-dawned 20th century; yet aeronautics as a science has followed on the heels, not of men who were laboratory hermit scientists, but of daring adventurers who risked their necks in "flying bird cages".

And when the adventurers had succeeded, science came along to explain how it was done!

(*Photo*: *Studio Atalanta*)

End-of-line Harwell apprentices sign the blue book after receiving their diplomas and tankards at the 10th Annual Dinner.

# *Are you*
# BUYING A HOUSE?

By R. S. Campbell *Senior Housing Administrator A.E.R.E. Harwell*

IN A PREVIOUS ISSUE of "Harlequin" I wrote about some of the ways in which a would-be house purchaser could borrow capital to set the wheels in motion. In this article I intend to assume that a promise of a mortgage has been given and to take you through some of the trials, tribulations and excitements you will encounter from the moment you begin the search for your house.

To tell a man what kind of house he should buy is one of the quickest ways I know of making an enemy for life; but I can safely point to three broad divisions from which the choice can be made. First of all there is the house which has been, or is being, lived in. This will have a character of its own which you can see for yourself and a history which you can learn from others. Secondly, there is the new house on a developing estate; here you can examine the plans and specification, find out something about the standing–financial and professional–of the builder and, if there is one, look at the show house, Thirdly, you can search for a piece of land and employ your own architect to design to your personal requirements. This last method may or may not produce the perfect house but at least you will have the satisfaction of knowing that the mistakes you have to live with are your own. In this article I am going to write mainly about the first and second categories, but some of what I say will apply to the architecturally designed house.

As important as the building itself is its location, especially for those of us who work at Harwell and are of that rare species, rural commuters, living in a town and working in the country. It may be elementary, but it is worth while taking pen and paper and writing down the places or districts which won't do. Is there a reasonable bus service for getting to work? The house may be the cheapest available, but do you relish the walk of a mile or so to the nearest bus service pick-up point? If you have a family you must ask questions about education. For example, will your youngest child like a village school after going to a large school with hundreds of others? You may, too, have to rule out a particular town because of a local land shortage which has put the price way beyond your pocket. These, and other personal aspects, should be faced as early as possible, and when you have narrowed the field to practical proportions you can consider yourself some way towards success.

The next step is to get the feel of the market by telling the professional sellers of houses—estate agents—that you would like to have details of those which are for sale in the districts you have in mind. Without obligation—the seller pays the estate agent's fees—they will send you information on old and new houses for sale. You can also watch the local papers for advertisements from people who prefer to sell privately. Get out and have a look at as many as you can, comparing like with like, new with old and generally sizing up what you are likely to get for your money.

This is the time to examine your financial position very carefully; although you are, at this point, poised but uncommitted, there will come a time when you will see a house that takes your fancy above all others and you will be asked to make a deposit. I think it is worth while making clear what is involved when this happens. The amount can vary from as much as 10% of the purchase price on an old house to as little as £50 on a plot in a newly developing estate. It all depends on the vendor's requirements, but whatever sum is involved it may be needed very quickly. If your capital is tied up and difficult to get hold of immediately, a word with your bank about the possibility of a short term bridging loan might not be a bad thing.

A deposit is generally required by the vendor or his agent as a token of goodwill that you are seriously in the market for the house, but it should always be made 'subject to contract'. It is a good idea for a deposit to be paid through your solicitor, who will safeguard your interests if anything should occur which would prevent your completing the purchase. You may find, for example, on second thoughts that the house is not so suitable as you imagined, or that it does not measure up to survey, or perhaps, worst of all, that you cannot get the necessary loan to enable you to buy. If you have paid a deposit 'subject to contract' you are not finally committed, and you have a breathing space until the contract is signed. Neither is the vendor finally committed at this stage, so that if a higher offer comes along from another prospective purchaser he has the right to sell to the highest bidder, although it is customary, in such cases, for the vendor to come back to the original buyer to see if he is prepared to raise his price.

As soon as you have paid a deposit you must seek outside help from the experts—in particular a solicitor, a surveyor and, of course, a lender, known as the mortgagee, in the shape of a Building Society, Local Authority or Insurance Company. What these experts do, and what it costs to employ them often puzzles the prospective house-purchaser. In the remainder of this article I hope to clear away some of the mists which envelop their activities.

When your mortgagee makes you a loan to help you purchase the house you will, of course, have to pay interest on the loan and repay the capital over an agreed number of years. In making you a loan the mortgagee will incur expenses which you, the borrower, will have to pay. Firstly, there is the preparation of the agreement between you and mortgagee. This is known as the Mortgage Deed. The costs involved are the fees of the mortgagee's solicitor for preparing this document and the stamp duty payable to the Inland Revenue. Secondly, there is the cost of the mortgagee's survey of the house. No lending body will advance money unless it is sure that the investment is a sound one at the proposed purchase price. For this reason the mortgagee will have the property surveyed and valued and the resultant report will help to decide how much may be borrowed by the purchaser. The cost of this survey must be paid by the borrower. It is payable in advance and is not returnable in the event of the loan not going through. Another possible expense in connection with raising a loan is a premium on what is known as an excess guarantee policy. Many mortgagees limit their advance to a percentage of the valuation of the property, but in certain circumstances they may make an advance in excess of this sum if it is covered by a guarantee. This is generally provided by an indemnity company who specialises in this sort of thing and a once-and-for-all premium is payable by the borrower on the excess sum allowed.

Your second expert is a surveyor. But, you will say, the mortgagee has already had the house surveyed so why should I have additional expense? The simple answer is that the mortgagee's survey is more a market price valuation than a structural survey and, in any case, is confidential to the mortgagee. It is necessary for the would-be purchaser to employ his own surveyor if he wants a structural report on a house. In my opinion, for what one would term a second-hand house, it is well worth the money it will cost. Nothing can be more disastrous than to drain your finances to the last penny only to find, shortly after you have moved in, that there are several hundreds of pounds worth of essential repairs to be done. No house is perfect and you must not be put

off by minor deficiencies, but where there are serious defects you should pause before you sign the contract. It may, of course, be that the price being asked reflects the amount of work which will be necessary to rectify the damage, but whatever the position is you must be able to form a realistic picture of what the remedial work will cost.

The third expert, and one with whom you cannot dispense under any circumstances is a solicitor. A solicitor's fees and any stamp duty which may be payable to the Inland Revenue are broadly known as the legal expenses of house purchase. These fees are based on a scale which rises with the price of the house, and for his fee a solicitor will, in the interests of his client, critically examine the contract for sale. He will ensure that the deeds to the property are in order and that the seller has the right to sell. He should seek out and tell the buyer of any encumbrances on the property and, finally, if all proceeds well, he will complete a conveyance which will transfer the property to you, the new owner. Stamp duty is payable only on conveyances of property costing over £3,500 and is also on a sliding scale according to price.

How much does all this cost—the fees of your solicitor, the mortgagee's expenses and your surveyor's charges? I cannot be exact in this because it varies from house to house depending on such factors as the price, the amount of the mortgage, whether or not the land upon which it stands has been registered at the Central Land Registry and whether a guarantee premium has to be paid. As a very rough guide you can take a round figure of 3% of the purchase price on houses costing up to £3,000, increasing from 3½ to 4% on higher priced properties. These figures may be plus or minus depending upon whether you are involved in all of the expenses I have mentioned or only some of them.

For the outlay of much thought and hard cash come the responsibility—and the satisfaction—of owning your own property, and the day—generally wet—when you see your furniture carried across the threshold of your new home. ★

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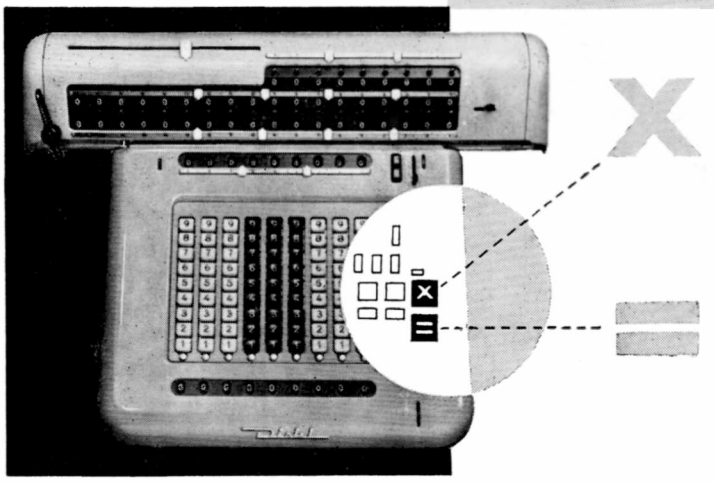

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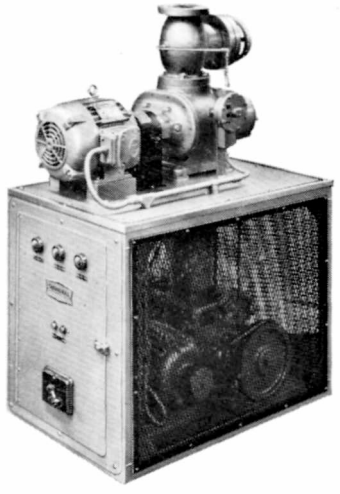

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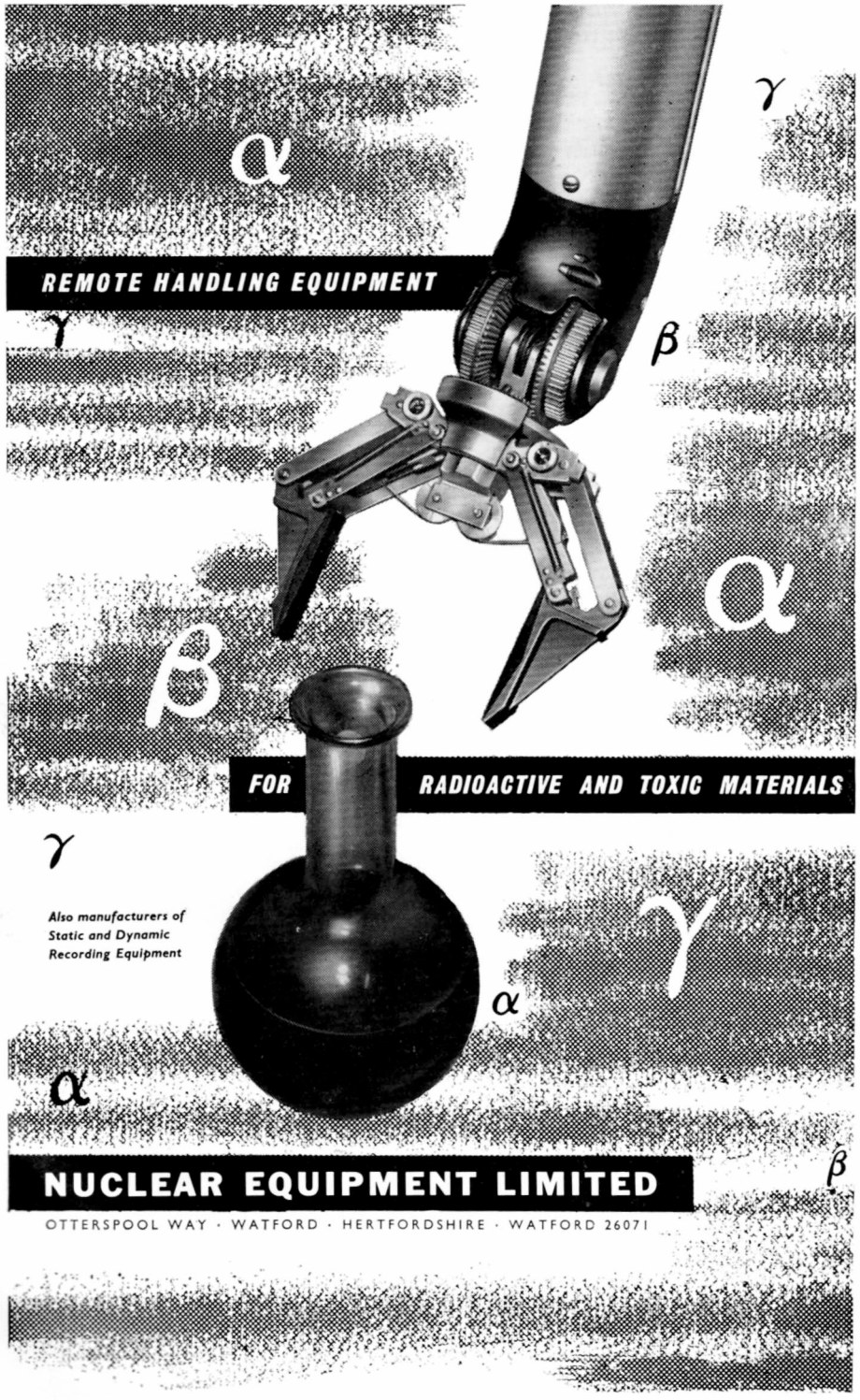
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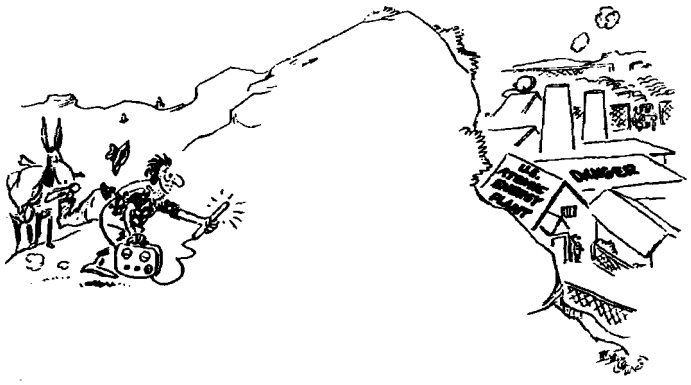



"... TICK—TICK—TICK—TICK—TICK . . ."

*Energia Nucleare*

# *Harlequin Competitions for Contributors*

## 1962

Readers are invited to register their votes by 14th January so that awards of five guineas can be made based on the most eligible entries published during the year. Items listed are in the order in which they appeared, starting with Spring issue:

I For the best informative article (not commissioned):—*Guernsey; Fortunate Find; An Alien at Argonne; A Roof Over One's Head; Pegasus in Training; The Wantage Flier; An Unusual School; Grim's Ditch.*

II For the best humorous article:—*La Donna e Wobbly; Scientific Colloquia.*

III For the most original idea:—"*It does say 'Culham'!*"; *Observations from Oxford Office; Reactor Cartoon; Women of Oban.*

## 1963

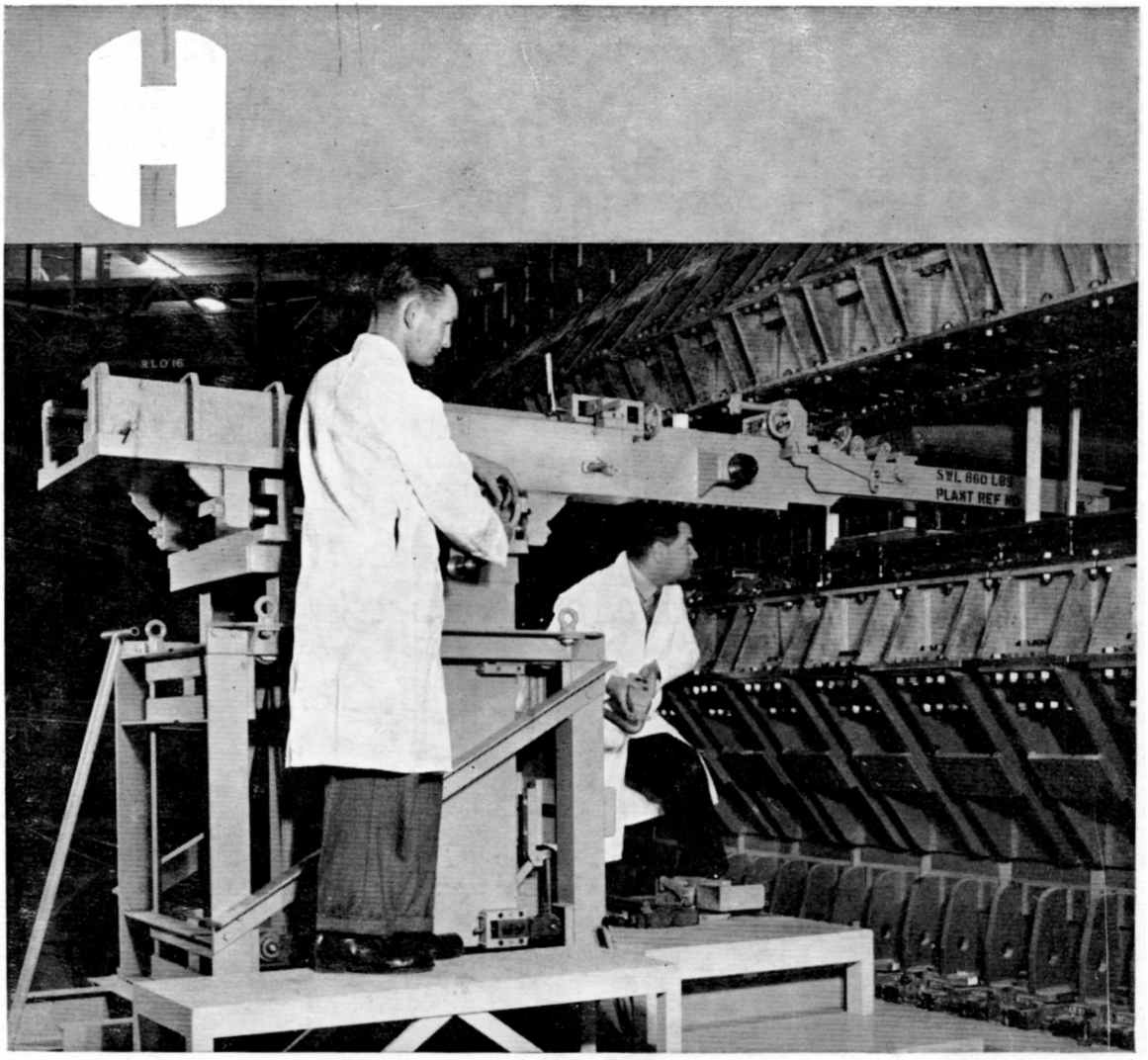
TWELVE CHRISTMAS HAMPERS

The thirteen items listed above come from ten contributors, some of whom made up no more than half a page towards the two or three hundred required in a year. One successful contributor for every thousand readers!

This year there will be no closing date for contributions, which will instead be welcome at any time. Christmas hampers will be awarded to the first *twelve* readers to have their ideas accepted for publication in an issue of 1963. Remember, there were only *ten* contributors last year, some of whom did not have their work ready until the fag-end of the year! If you have felt that 'Harlequin' has a literary Goliath whom you felt incapable of beating, now is your chance by being on the move first. You may not feel you have a literary gem, but like David you can achieve something even with a modest pebble — *if* you get it in first!

LOCAL TOWN COMPETITION (page 46)

As a condition of entry competitors submitting the name of the town are asked to vote on the above. (Other readers' votes will also be counted and be greatly appreciated). Closing date:—Monday, 14th January, 1963.



Installation of Upper Pole Piece
for 'NIMROD' magnet at
Rutherford Laboratory

**HALL ENGINEERING LIMITED**

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