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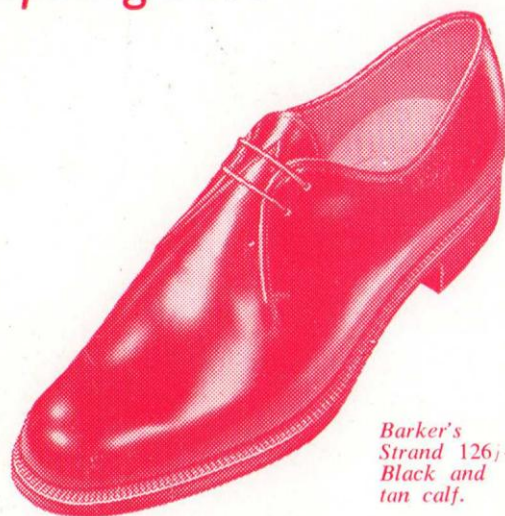
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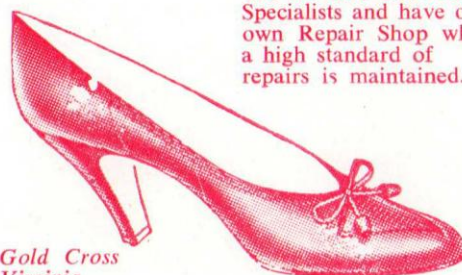
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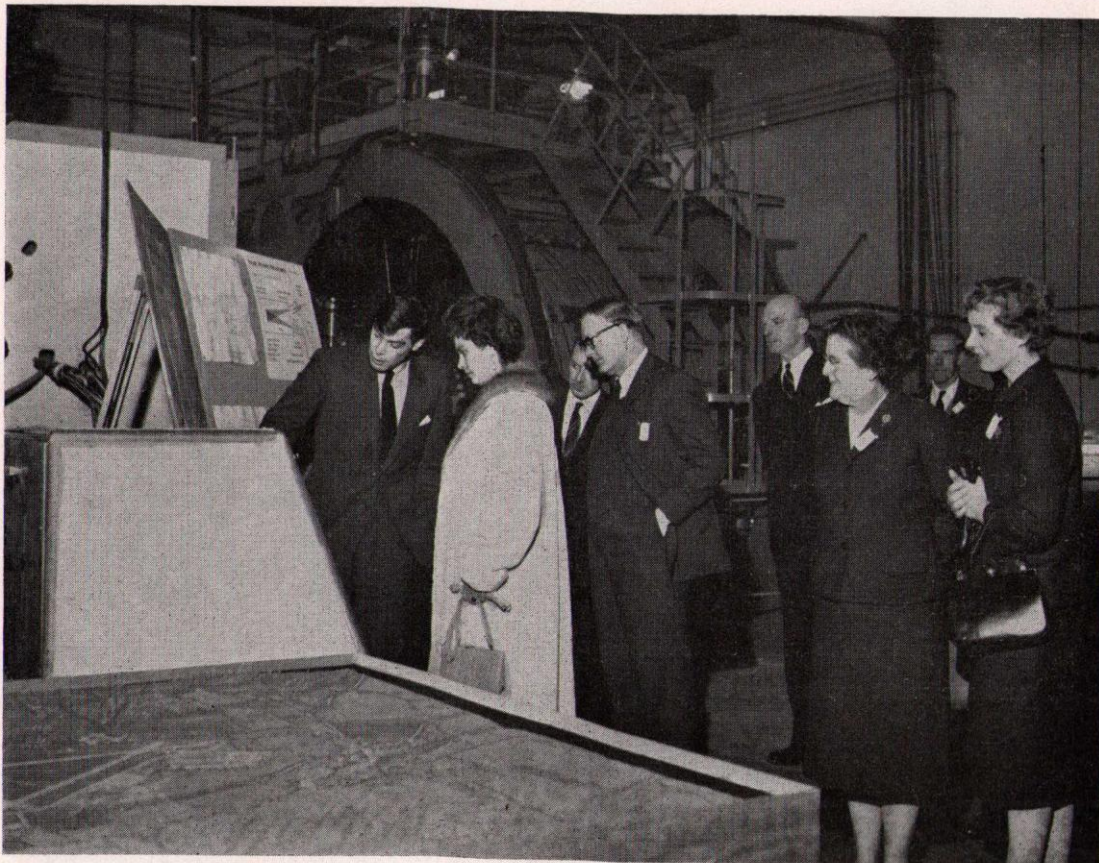


Leisure Magazine of the United Kingdom Atomic Energy Research Group

NUMBER 32
SPRING 1961

HARLEQUIN

Harwell - Bracknell - Amersham - Wantage - Oxford - Culham



Mr. R. S. Pease discusses a demonstration of plasma phenomena with Her Majesty the Queen of the Hellenes, with, left to right, Mr. H. C. Cole, Controlled Thermonuclear Reactions Divisions, Sir William Penney, Brigadier G. B. Bell, Lady Penney and Mrs. H. Hyder, Secretary to Sir William.

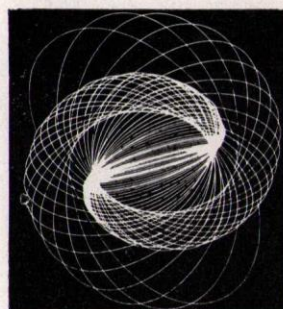
This issue of *Harlequin* devotes some space to the role of the secretary which, as this photograph shows, is not confined to the office.



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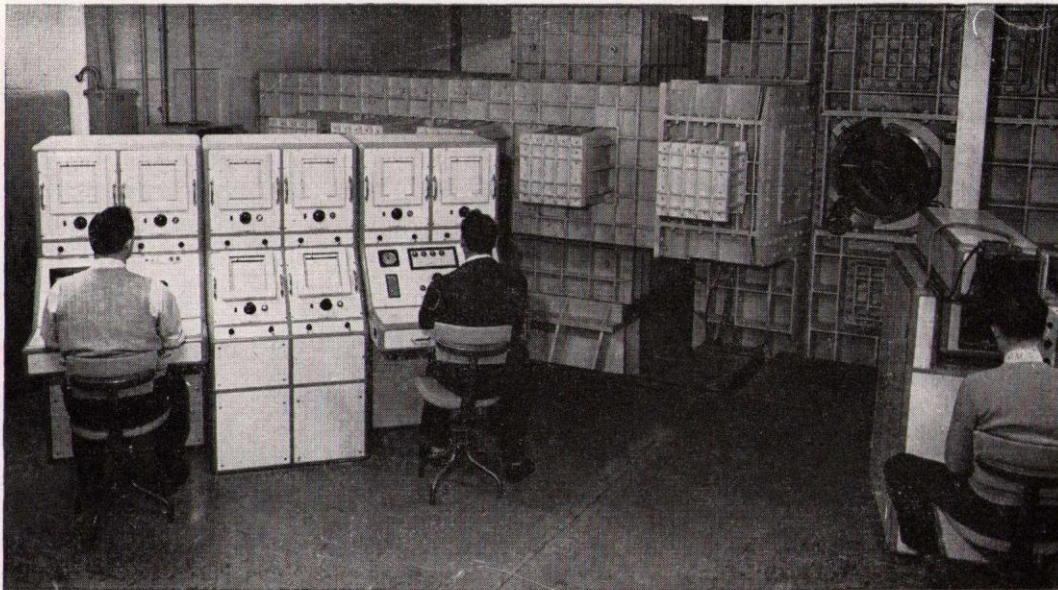


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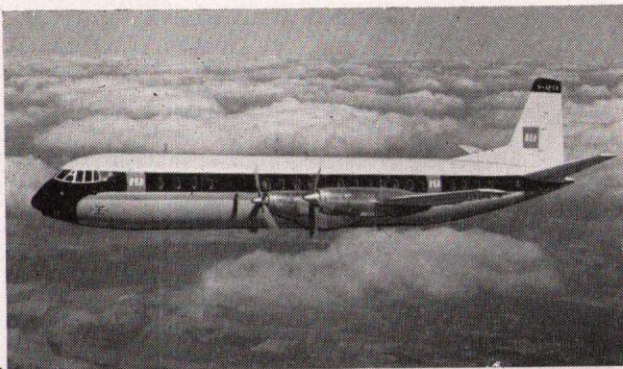
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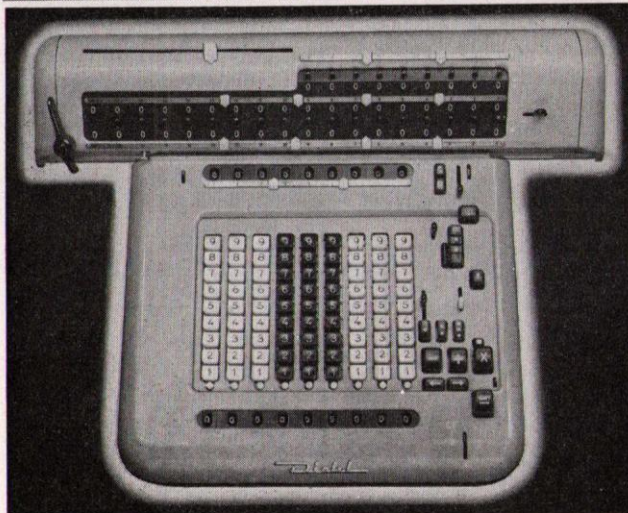
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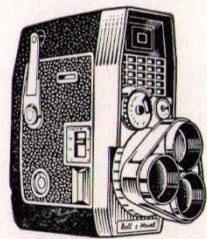
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EDITORIAL

TO COMMUNICATE is the order of the day. Messages come to us through many different media: through radio, television and films; through posters; through newspapers and magazines; through official pronouncements that are poked into our letter boxes and into our in-trays. Much of what is printed we will only want to flick through. We are interested in ourselves; and in our immediate working group, in which we hope to find and share some pride of achievement; we are interested, too, in the activities of the wider social group of which we are a part. The persistent prayer is "Give us this day our daily news . . ."

We need to communicate with one another because we live and work in a complex society, because although there are so many of us we are more isolated, and at the same time more dependent on each other, than we have ever been. In the Research Group, the need to know what is going on has become more pressing and — because of the size and complexity of the Group — more difficult to satisfy. As the Duke of Edinburgh said recently, at a function to mark the tenth anniversary of the British Association of Industrial Editors: "We can all agree that there is a need for house journals . . . and we can all agree that it is not an easy matter to run them."

When staff number only two or three hundred, personal contact and the "grapevine" will together serve some of the functions of a news-sheet. As an organisation grows in its thousands, not one but several publications become necessary, each carrying out its particular function: for the specialist there is the need for a specialized journal of reports ("horizontal communications"); and for everyone there is a need for general news and announcements to be made available at regular times ("vertical communications" that must be two-way). Topicality, which a monthly cannot achieve, is given by a weekly such as the "A.E.R.E. News", but — to paraphrase again — man cannot live by news alone.

We need to exchange ideas and news and share experiences; and we need more attractive ways of presenting them and of preserving them for the future. This is where *Harlequin* comes in; but it, too, has its limitations. It has none of the full-time staff of most house journals so that time to produce it must be borrowed from other activities. It is true to say that, if the time between publication dates is to be shortened, the grass in the garden must be allowed to lengthen!

If by some economy — as, in this issue, the omission of pages such as the art supplement — more money becomes available to spend on production, how should this money be spent?

Not, we think, on better quality paper, or on colour, but on improving the standard of the contributions submitted. Any publication will be a failure if its editor has to write a large proportion of the pages himself; looking back we find some issues of *Harlequin* in which two-thirds of the pages had to be completed in this way. It has, therefore been decided that the prize money that can be won by successful contributions shall be doubled.

For the contributor there is now the prospect of an adequate financial return. For the editor there is the hope that *Harlequin* will remain a magazine that is not just flicked through, but a magazine which is *read*.



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Harwell Life No. 1

Romance is not hard to find if you look for it, and this is as true of Harwell as of anywhere, if you are one of those who find "books in the running brooks, sermons in stones and good in everything".

To see Harwell on a winter morning, when approaching from one of the surrounding hills, is a romantic sight indeed. The great mass of buildings lying like a dream city among the solitudes of the downs, the red light winking from the tower and the myriad chains of lights that pick out the scene, are a sight never to be forgotten.

This city, not of "dreaming spires" but of dreaming science, with its great hangars and other buildings, each housing some special branch of research or activity, and the far off, remotely interesting outposts of activity on the airfield, arouses wonder in us, and here are the people, the human element which gives the place its life. Here each does a specialised job and each excels at it, for no one is ordinary. There is that in every man and woman which makes them an acquisition, some ability or qualification, some record or experience which is a surprise indeed, for people are surpris-

ing, and at times unexpected, coming as many of them do from the North Berkshire countryside, with its vast tracts of cultivated land extending to the very downs themselves.

Berkshire, with its combine harvesters and white-faced Hereford cattle, its racing stables, above all its long traditions and links with history — what more romantic setting could one find around the Atomic Establishment, where once King Alfred had his kingdom and where the sound of the Blowing Stone echoed among the hills and valleys, where almost cheek by jowl one finds the ancient Icknield Way and the Rutherford Avenue; or where horses race across the downs in view of motor coaches travelling where once aircraft took off. There's Romance enough surely, the romance of discovery and achievement, the wonder of man and his many ramifications.

Let no one say that the age of romance has gone, for it is always with us, sometimes in strange forms, it is true; but romance is there if we look for it, and for the unexpected, the exciting and the magical, beneath the commonplace.

D. H. WATSON (General Worker IV)

'SCIENCE is an imaginative adventure of the mind seeking truth in a world of mystery.' I have often used this quotation from a talk by Sir Cyril Hinshelwood, and yet I find it one of the tragedies of modern education that so many intelligent people have gained from their schooling a different view of science: the notion that physics is just the collection of facts such as that the density of marble is 2.7 grams per c.c., and of formulae like kinetic energy equals $\frac{1}{2}mv^2$; that botany is merely the classification of plants, and that chemistry is either the creation of smells and smoke or listing the preparation and properties of compounds. There is a vague generalised consciousness that science has contributed much to the pattern of modern life: television and 'hi-fi', plastics and penicillin, atomic energy and automation, rockets and satellites, and so on. But these, if thought about at all, are more often considered to be just the products of technology and engineering. There is little understanding of how much these developments have depended on principles and concepts created in the minds of scientists; and I mean *created*.

Consider this statement:

*... all experience is an arch wherethro'
Gleams that untravelled world, whose margin
fades
For ever and for ever when I move.*

And this one:

Every body continues in its state of rest or of uniform motion in a straight line unless it is caused by an external force to change that state.

When we read Tennyson's statement we say, 'how true!' Through the eye of the poet we look at some things differently, we may be moved, we may understand much better than before. We appreciate the beauty of the language. Moreover, on reading some poems we may experience a revelation altering our whole outlook. In a similar way, for many, Newton's statement has cleared away mists, sometimes at once, sometimes only gradually, for in science the light of understanding can be seen clearly only by a prepared mind already striving to seek the truth.

Newton's statement ended a long period of groping and stumbling, and illuminated the

The Making of Scientists

by Dr. F. A. Vick

path ahead so clearly that it has been converted into a broad highway by the steps of Newton's followers. The facts in front of Newton were available to educated men of his day. The problems of motion had intrigued men's minds for over 2,000 years, and for most of this long period the ideas of Aristotle and his followers were dominant, for they appeared to be supported by observation and common sense. But difficulties arose from attempts to reconcile quantitative deductions from these ideas with measurements on, for example, falling bodies, and by the end of the fourteenth century a few natural philosophers were questioning the authority of Aristotle.

These questionings came to fruition in the experiments of Galileo, a contemporary of Shakespeare. His work was of the greatest importance, especially his revival of an experimental and analytical approach and his concept of acceleration, but on the whole his study of motion was concerned with particular cases like projectiles. Newton's statement, on the other hand, represents a leap forward in insight and imagination, a great generalisation not at all obvious from observation of moving objects.



The Times.

It includes the idea of force and of inertia, and paves the way to the measurement of force by measurement of changes of motion. From the statement, made about 1687, and now called Newton's first law of motion, it is evident that for a planet to move in a nearly circular (or elliptical) path there must be a force acting continuously upon it, otherwise it would move in a straight line for ever.

This is a complete break-away from the ideas inherited from the Greeks. Inquiry about the nature of that force led Newton to another remarkable generalisation, his universal law of gravitation, that links together in one simple statement the attraction of falling bodies to the earth, of planets to the sun, of the components of the distant nebulae to each other. The simplicity and universality of such statements carry with them a certain beauty, like the shape of a Greek vase or a Georgian arrangement of windows. They give us an insight into the workings of Nature that enables us to make predictions and to erect a whole new edifice in the world of science. Remember that these statements, these laws, formulated by Newton are not just collections of facts; they were not immediately made evident by observation or experiment; they are achievements of the

human imagination and insight hardly equalled by any poet.

Newton's first law illustrates another point, that the physical sciences are based on an act of faith. 'Every body continues . . .'. This can never be proved. It is inconceivable that scientists will ever be able to observe the motions of every body in the universe, yet people like me dedicate their lives to physics in the faith that in similar circumstances all matter of a given kind behaves in the same way, always has done, and always will do. Like all faiths, this one is strengthened by experience, in the light of which we venture forth into the untravelled world.

If we look carefully at science we see that it is full of these theoretical concepts, these creations of the human mind. Some of them, like the nuclear atom, have become so familiar that we now hardly realise that they were originally introduced as completely new concepts not directly observed. It is these concepts that enable us to generalise and to perceive relationships between apparently isolated facts. Some concepts, especially in physics, are so abstract that we are impeded if we try to visualise them in terms of mechanical models. Yet they are essential in deepening an understanding of the material world, of the whole universe. Without them the development of satellites, television and atomic power stations would have been, if not impossible, at least long delayed.

Science is an imaginative adventure of the mind. But the imagination must not be uncontrolled. Always there must be recourse to observation and experiment to determine whether indeed our concepts, our new relationships, our interpretation of behaviour, are leading us towards the truth that we seek. Many will be the disappointments, and we learn humility when confronted with the workings of nature, but our experience builds an arch through which we see ahead more clearly. Our progress in the untravelled world is hardly ever direct, or smooth, or unimpeded. For advances in science are normally made by tortuous paths with occasional leaps ahead, made possible by the imagination of a prepared mind, by new observations, or by the use of new tools forged by advances in techniques.

Towards the end of his life, Helmholtz, a nineteenth-century physicist, wrote:

'I am fain to compare myself with a wanderer who, not knowing the path, climbs slowly and painfully upwards and often has to retrace his steps because he can go no further — then, whether by taking thought or from luck, discovers a new track that leads him on a little, till at length when he reaches the summit he finds to his shame that there is a royal road, by which he might have ascended, had he only had the wits to find the right approach to it. In my works I naturally said nothing about my mistakes to the reader, but only described the made track by which he may reach the same heights without difficulty.'

Most textbooks naturally describe only the royal road. This being so, it is all the more unfortunate that some descriptions of the so-called scientific method may lead one to believe that it is a mechanical process by which we need only to put forward hypotheses, design and carry out experiments, and out will pop the answer.

Nothing could be further from the truth, for scientific investigation is an art. One does not make a scientist just by training him in all the techniques, any more than a close study of Prout's *Harmony* will of itself produce a composer. So he who wishes to become something more than a technician must have his imagination stimulated, must have his curiosity re-awakened, must be ready to undertake adventures of the mind that will make as many or more demands of him than the adventures leading to the Duke of Edinburgh's award. He must learn and practise the elementary techniques of scientific exploration in preparation for the more exacting ones to follow. He must study deeply the discoveries of previous travellers, not only because he will need the knowledge but also to stretch and toughen his mind. He must not travel with blinkers on but must combine depth with breadth so as better to be able to navigate.

There can be much common ground between the teaching of science to intending scientists and to non-scientists — ground that does not necessarily include the density of marble!

Members of the first group must, of course, in addition be subjected to all the discipline and rigours of intensive study in preparation for professional competence. In addition to, and not instead of! Members of both groups must learn by experience what it means to ask questions of Nature and to interpret the answers. They must learn how disagreements over interpretations are gradually resolved and a consensus of opinion reached in ways that know nothing of national, political or religious boundaries. They must come to realise that a scientific theory is a living thing, growing and changing its shape, and that as it grows it becomes more comprehensive and coherent and that its beauty is enhanced as it gains in stature. They must appreciate that a true scientist must have integrity and humility if his search for truth is to be rewarded. They must understand the deliberate and self-imposed limitations of a scientist's studies. A physicist, for example, deliberately abstracts from all the phenomena around him those that can be studied by his own methods. This means he is qualified to reveal only certain aspects of truth, and he must not be blamed if he refuses, as a physicist, to speak with authority about other aspects. Above all, our sixth former must become deeply conscious that science really is an imaginative adventure of the mind seeking some aspects of the truth in a world of mystery.

It is most encouraging to see in some universities and schools and in adult education a growing desire to re-orient the teaching of science, and a growing realisation that there are not really two entirely different types of mind, scientific and not scientific. In this day and age there is hardly any educational movement that is of greater importance.

Every body continues in its state of rest or of uniform motion in a straight line unless it is caused by a force to change that state.

Let us help to provide a force that will overcome any inertia that is delaying our scientists and students of the arts from going forward together into the untravelled world.

Based on a talk in the BBC Third Programme January, 1959, and reprinted with acknowledgement to "The Listener".



New Wine

TO THOSE who take an interest in the odd things which go on around them under the guise of everyday life the impact of an imported new society is fascinating. The effect of the "Atomic" estates in Abingdon has already been studied, and social scientists of the future may well write their theses on such records as may be available of the integration or rejection of the Harwell culture into that of Berkshire. One of the ways in which this has been done is the examination of the membership of local organisations already in existence before the influx and the effect on their activities of the newcomers. We, the invaders, tend perhaps to over-rate our effect, and cold statistics correct impressions of change. It sometimes appears that the injection of new blood may carry with it seeds of disintegration. Only time and uncommitted examination can provide an accurate picture of the results of this particular social experiment.

People entering a new area are drawn into local organisations by a variety of means. They may be lonely and be attracted by a poster in the Public Library. They may have special interests and deliberately go out and look for kindred souls. The Churches must be a strong factor. Sport, of course, is another. The image presented to the public by the various organisations must play a major part in people's decisions on what to do with their leisure.

It has been interesting to follow the effect of the new populations on one Association which has been in existence for many years and try to evaluate the changes which have taken place in a comparatively short space of time.

The Workers' Educational Association is, in formal terms, a "responsible body" charged by the Ministry of Education with the provision of adult education in non-vocational subjects. Broadly, the division of responsibility is such that the Local Education Authority, through its Evening Institutes, will teach you to play the piano, but the W.E.A. will put on a course in Musical Appreciation. The Association is not wealthy and starts off with several millstones round its neck. Popular reactions vary by way of ideas of cloth caps and Working Men's Institutes, from "Of course, you're a Communist organisation" to "My dear, you are much too intellectual for me". In fact, the Berks, Bucks and Oxon District during the year 1959-60 had a class composition of 33.6% housewives, 11.0% manual workers, 11.8% teachers, 9.0% professional and senior administrative workers, 9.6% not in paid work, 1.7% unknown and the remainder of non-manual, technical and supervisory workers. Subjects studied in courses varying in length from six to twenty-four meetings covered such things as History, Literature and Art of Heraldry, Recent Advances in Scientific Research, Contemporary Spain, Comparative Religions, Anthropology, Astronomy, Subtopia, Living in a Multi-Racial Association, Domestic Architecture through the Ages, and Opera and Symphonic Music for Listeners. This list is by no means comprehensive.

In its early days, at the beginning of the century, the driving force of the W.E.A. came from men like R. H. Tawney and the late William Temple, Archbishop of Canterbury,

who believed that our society suffered from the limitations of the formal educational system. The need to remedy this is no longer so important, but the belief which underlay the desire to make education available to those who were forced to go to work at fourteen, the belief that a democratic society needs informed discussion and a concern for its values is still central to the Association. One of its chief manifestations now lies in the desire to break down the barriers of specialisation: to make the results of specialised study comprehensible to the non-specialist and to widen the interest of the specialist himself.

This district is particularly fortunate in that the presence of Oxford makes the task of finding tutors in such a variety of subjects far easier than in some other parts of the country. The Association works in close liaison with the Oxford University Delegacy for Extra-Mural Studies, which takes direct responsibility for the longer and more extensive courses. The Delegacy has a staff of tutors of whom the senior is, at the moment, Raymond Williams.

The new population has come to play a large part in the local branches of the W.E.A. In one centre, a flagging organisation was revived with a membership which was 75% "Atomic". This has not been without effect on the subjects studied. The tendency to veer towards the contemporary and to enlarge the area of study has been accelerated. Subjects with some scientific basis such as Anthropology, Ornithology and Archaeology have come

to the fore. Five years ago a course on Jazz was revolutionary and not really accepted by the organisers; a county organiser reported approvingly of a tutor busily engaged in drawing an ingenious and comprehensive chart on the blackboard, the arrival of four other young men from Harwell and eight young men of a type never seen in a W.E.A. class before; the experimental nature of the course was stressed . . . Jazz is now a standard subject if required.

There has been a growth of courses having up to 50% outdoor content. Bird Watching and Geology cannot be studied indoors. Some misgivings were expressed at this departure from tradition: the Ministry might not approve. However, it is now accepted that there are some subjects in which the excursion is in fact as much a part of the course as the playing of a gramophone record or the use of a film strip.

The long term effect is harder to assess. It may be that as the community absorbs its new residents their effect will be lessened. There is the point, too, that active people tend to be active in several spheres and do not really replace the old officers who devoted all their efforts to one interest. The Harwell populations are to a certain degree shifting ones — this may mean a lack of stability and continuity.

Certainly, to the alert observer, whether committed or not, this mingling of the two streams, the one stable, the other changing, is of constant interest and, indeed, delight. ★



Croquet Reborn

IN 1661, Pepys records that on April 2nd "I went to St. James's Park, where I saw the Duke of York playing at Pele-Mele." This game, in which the palle (or ball) was struck through a mall (or hoop) not only was a fore-runner of modern croquet, but also gave its name to Pall Mall, which developed in 1656 out of one of London's playing alleys.

The game in anything like a modern form, however, reached England from Ireland at the end of the 1850's, though Lord Longdale and Mr. John Jaques — whose firm still makes the official ball — developed a more ladylike version than the Irish game, at which whole villages would play each other, each player armed with a suitably knotty lump of oak.

In 1865, *A Book of Young Ladies' Pastimes* could write: —

"No house can be considered complete in its appointments if the several sets of croquet, suitable to the requirements of all sizes and ages of its occupants and of their friends, form no part of the menage."

At this stage there were as many variants of the rules as there were courts, and such laws as there were could easily be bent under cover of the crinolines that were then 'de rigueur'.

As *Croquet — a New Game of Skill* pointed out in 1867: "There are two modes of playing the game. The first is the severe and self-glorifying style advocated by writers. There is also the social and jolly style where a young lady is known to carry her ball in the ample folds of her dress (after it has ungallantly been driven off) to a position which she prefers."

In 1867 the laws were modified, and for ten years or so tournaments were arranged, songs and dances composed about it, and immortal-

ity finally guaranteed it by the croquet match in *Alice in Wonderland*, with flamingoes and hedgehogs for equipment.

Thereafter the game declined, and in *The Tone and Manners of Good Society* — companion to *Society Small Talk* — of 1893 the chapter on afternoon parties describes croquet as 'rather old fashioned now'. Until fairly recently the game was played chiefly by retired Indian Army Officers and their wives on the lawns of such places as the Cheltenham Croquet Club.

Since the last war, however, the game has revived spectacularly, and now international Rugby, Lawn Tennis, Hockey, Chess and Bridge players are numbered among the leading croquet players. And, of course, Atomic Scientists. The game has developed a degree of sophistication comparable to snooker, and yet can be fairly easily learnt and enjoyed by people of all ages.

At Harwell there has been a croquet club flourishing for some two years. A successful knock-out tournament was held last August and is to be repeated. A 'ladder' is also in operation which new members are welcome to join. A pleasanter way of spending a lunch hour or summer evening would be hard to find.

For tuition consult the Secretary, D. Pepper, Ext. 3181, or telephone, J. C. Kay, Ext. 2049. We can assure intending players that neither crinoline or boater is any longer considered essential.



MEETING the librarian of the Atomic Energy Research Establishment at Harwell is a memorable experience, as unexpected as it is refreshing. For the person in charge of this outstanding collection of the world's literature on atomic energy is a woman—Miss Marion Gosset; and a woman, moreover, of great charm as well as distinction.

The library at Harwell, with a staff of 47, is Miss Gosset's own creation, built up since 1946 to the point where it now absorbs each year some 4,000 volumes and 13,000 reports on its subject.

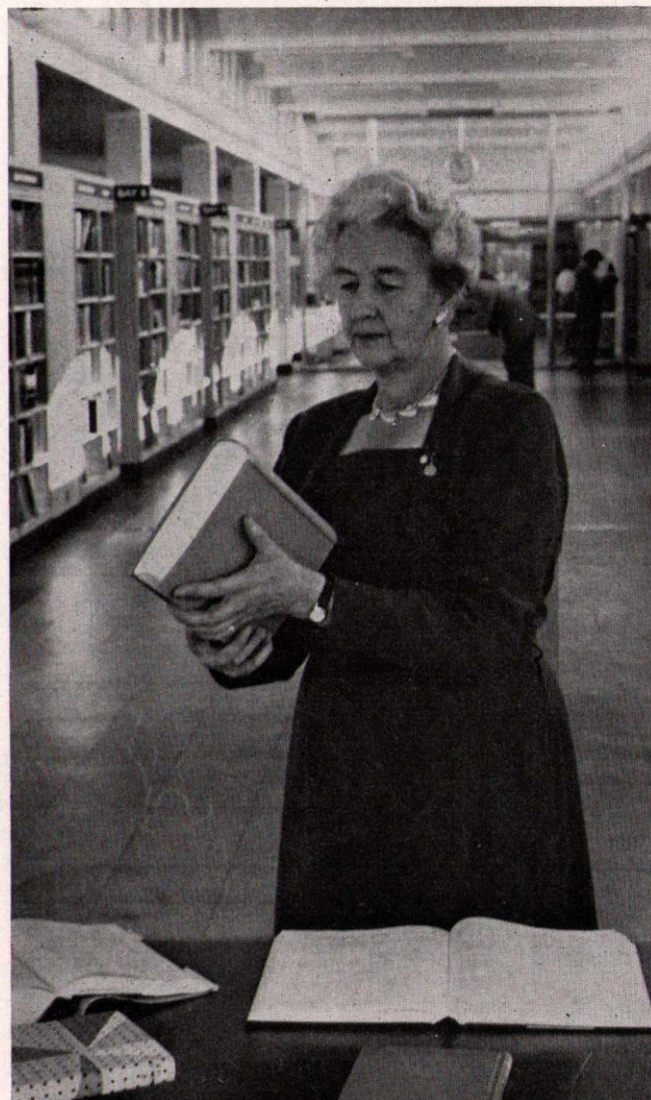
How did she come to this important work? Moving quickly across her office, with blue carpet and clerestory lighting (a bit monkish, didn't I think?), she produced a photograph taken at an official dinner of the International Conference on Documentation held in 1938 at Lady Margaret Hall, Oxford. "I was conference secretary", she explained. "And when I went back to my job as head of the cataloguing department at the Science Museum Library in South Kensington, it was with the satisfaction of knowing that that conference had given my sort of library, the special library, recognition at last.

Looking further back, Miss Gosset recalled: "I was the only child of middle-aged parents. My father was a retired Army officer, my mother was Irish and had been on the stage. And what I am today, for better or worse, I owe to her."

It was her mother she explained, who decided she should go to the Royal College of Science after gaining a distinction in Chemistry in the Junior London examination. She got her degree and did research for a year in Professor H. B. Baker's laboratory. But when she began to look for a job, she met the slump of 1925. Fortunately, the Science Museum Library asked her to compile a list of periodicals: "I expected to be there for a few months, but I stayed for 20 years; and left in 1946 to start the Harwell library from scratch."

Of Sir John Cockcroft, then the Director of the A.E.R.E., Miss Gosset recalled how immensely helpful he was "because he believed in the importance of the library. If you are a librarian, you are always fighting for the library's status". And as an indication of her own status, it was interesting to learn that she had

Profiles



Librarian at Harwell

recently been to Vienna for a month to advise the International Atomic Energy Agency on information and library services.

We walked round the hushed library with its light oak, white walls, and blue leather ("I hate functional furniture", said the librarian); then into the security section, where a visitor must show a temporary pass to the guard. Just one foot of the library lies within the perimeter of the secret world of Harwell—the rest is outside the security fence—and in this secret section are safety doors and rows of steel cabinets protecting classified reports.

Harwell is bleakly situated on an old aerodrome in Berkshire, but Miss Gosset lives near the village of Yattendon, not far away, where she has a flat in a Victorian house.

It was not surprising to hear that this impressive woman has "masses of friends"—particularly at Cambridge—reads a great deal, and thoroughly enjoys meetings of the local Women's Institute. "I really do feel," she remarked, "that people are terribly important."

With acknowledgements to 'The Times'.

★ ★ ★
Chief Fire Officer



Among those in the Authority to receive the M.B.E. in the New Year's Honours List was W. J. Neal, Harwell's Chief Fire Officer, who is seen speaking here at a dinner to mark the occasion of the award. On the left is his son, D. W. Neal of Engineering Division, and on the right of the photograph is seen N. N. Ferguson, Chief Administrative Officer.

This honour reflects also on the whole Fire Section which is featured in photographs on pages 36 and 37.



1961 Previewed by Taurus

Our Down-to-Earth Astrologer

You may think it unfair of me to wait for the year to have got under way before taking out the crystal ball. There is no man in *outer space* yet, but other things are already on the move.

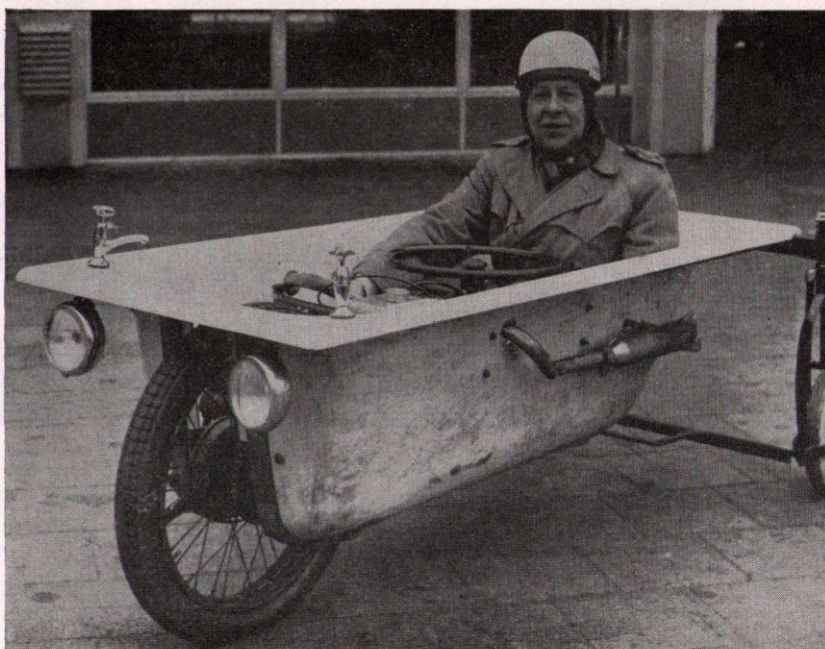
You have heard of caravans fitted with bathrooms — though perhaps not of one with a built-in swimming pool. This exists in a £1,650 super design. It's not much of a swimming pool, true. In fact, it's little more than a glorified hip-bath, but status is achieved. I predict that there will be more than just one caravanner in the swim before long.

Cocktail cabinets, yes, but there is still no plan for a bath to be supplied among the optional extras for the 1961 motor car. I present a prototype of the next best thing — revolutionary design that is the next best thing to a bath in a car. It reduces the body work, if not the driver, to bare essentials, and I applaud its clean lines. At the front there seem to be two 'tapped' sources of power: Whether or not they will come into action at any given moment I am not prepared to predict. I am particularly impressed with the steering, a twin coster action from the back wheels. There will be no attempt yet to give this design a weather-proof finish, but I predict that when it rains all incidental water caught in the car will disappear down an outlet hole. For the 1961 Motor Show? No, I predict that this new design will not be available: fortunately for the manufacturers of component parts,

the trend is not for simplification but for more and more new components and accessories!

In this modern age so much of yesterday's science fiction becomes today's science fact, and often the humour of today must be treated with all seriousness tomorrow. One of last year's cartoons by Michael Heath suggested the smallest car of the future powered by roller skates, but this has already become more than an artist's pipe dream.

I learn that motorised roller skates that can cruise at 17 miles an hour have been put on sale in Detroit — though it's true that there is not yet the overhead weather protection. A flexible shaft drives the wheels from an engine which is strapped on the skater's back. A 'supercharged'



model capable of 40 miles an hour is also available.

Predictions about its future are difficult to make. Will learners have to carry experienced skaters pick-a-back? What will be the legal position for these motorized pedestrians at zebra crossings? And who—the Pedestrian Association or the A.A.—will provide the defence? These are more difficult predictions. But what about other more interesting trends for 1961?

It is not safe to predict — though another authority* has said it — that this will be a busy year for the Stock Exchange, agricultural interests will receive a boost, another royal romance will blossom, and fish will bite well in July.

Nor is it safe to predict that, by arrangement with the American Government, Britain will be allowed room for an experimental beetle in a forthcoming American satellite — both beetle and its plastic capsule to be entirely British; that to avert chaos on the railways research will begin on a revolutionary scheme to use vapour from boiling water to turn wheels round.

It is safe to predict that more money than ever before will be spent on vital statistics; that the most sensational design of 1961 will be the first completely backless bra. It will be engineered by bridge builders, and, when you come across it, you will find that it is wired to clip on.

It's safe to predict that some men will rant about women's trousers; some women will rail against the bikini; some men will revile dyed hair, painted faces and stiletto heels.

And it's safe to predict that, unlike the experimental models we examined at the start of our little survey, these last-named inventions have, like sex, come to stay.

Away with pipe-dreams, cloudy with wishful thinking. Away with prophecies, gloomy or happy. I look at 1961 and wish only what could happen, if only . . .

It could happen that we win the Ashes without any bickering over bent-arm bowling.

And that the sun shines all summer.

**Old More's Almanack.*



*Men who face the future?
What they face is shown overleaf.*

OUR TAME PHOTOGRAPHER 1962 PREVIEWED BY HOMOLKA,

In the field of contemporary Art imagination and gimmicks are already several hundred years ahead of technique and medium. In 1961 we foresee the rise of the Semantic School of Art where the idea is not painted on canvas but described in words. Artists will thus avoid the stigma of having their masterpieces described as indescribable.

Ladies' dresses will almost certainly be shorter, the upwards trend culminating (probably in autumn 1961) in the dress being worn as a sort of muff around the neck. The area thus vacated will be covered (in the interests of modesty) by long tight pantaloons reaching from the bust to just above the knee. The style will be called the 'Mushroom Line'. ★



These photographs were taken during a friendly match at Wantage last season between the A.E.R.E. and Wantage Chess Clubs.

Both clubs are in the Oxford and District Chess League. A.E.R.E. (formed in 1947; secretary, Dr. J. B. Sykes) have this year won the Division I championship for the third year in succession, and also reached the quarter-final of the National Club Championship. Wantage (formed in 1956; secretary, Mr. H. E. Crooks) have a strong nucleus of players from W.R.L., while others are from Wantage town and district and from A.E.R.E. Two promising Wantage juniors, Stephen Dawson and Timothy Tozer (junior champion 1959-60), both 13 years of age, have been members of the club since 1957 and are seen in the smaller photograph.

Over the page were (from top) the first five members of the Wantage team:— W. F. Guy (schoolmaster), H. E. Crooks (Medical, A.E.R.E.) I. D. Clarke (W.R.L.), R. W. Hummel (W.R.L.), B. L. Tozer (C.T.R., A.E.R.E.).

Above are their A.E.R.E. opponents: J. B. Sykes (Library), J. Orchard-Webb (Nuclear Physics), J. F. Gibbs (Electronics), J. M. Richards (Electronics) and K. I. Archer (R.R.D.).

In the smaller picture, from top left: J. A. Cade, B. Lumsden, T. Tozer, S. Dawson, playing A. G. Hewitt, F. Hudswell, C. A. Steed and H. W. Jones.



In case any chess player thinks that the experts don't know the right way to place the board and men, and have clocks that run backwards, it should be explained that the Editor of 'Harlequin', for his own nefarious purposes, has turned the picture round before printing it.

(Photos: Studio Atlanta)

The Harwell Secretary

TO MANY people a secretary is just a voice on the telephone or someone who brings in the tea, and it may come as a surprise to them to know how much training is necessary before a new recruit at Harwell emerges as a fully-fledged secretary.

Most girls who come to Harwell with an ambition to achieve a secretarial post are already armed with some knowledge of the basic skills of shorthand and typing. Once they arrive, however, every effort is made to ensure that a uniformly high standard in these skills is maintained. Classes are held in both shorthand and typing, and tests are given at regular intervals. The classes are backed up by a spell in the two typing pools, where new recruits spend at least a week. One pool provides a typing and stenographic service for the site, the other is solely concerned with the preparation of documents for reproduction. The majority of reports and committee papers are produced in the latter and valuable experience is gained in stencil and Xerox methods, as well as an opportunity to become familiar with the typing of scientific documents on a wide variety of machines. This is particularly useful if the ultimate destination is one of the scientific divisions.

When the newcomer has jumped the hurdle of the Grade I typing and shorthand test, she may, if her experience and ability permit, be posted to a job which calls for a fair degree of secretarial work. This is the real training ground for the clerical officer/secretary position. While she is there, she takes a proficiency test in typing and shorthand, and attends a two-day course on the qualities required of secretaries in general, and of those at Harwell in particular. She is also provided with a very useful Handbook for Secretaries, which gives comprehensive information on office methods and services available to ensure the smooth running of an office.



Now she is ready to take on a secretarial post. As one would expect in a scientific establishment of this size, secretarial jobs vary in character in different parts of the site, and demand a variety of qualities. In a scientific division a secretary very often acts as typist for a whole section as well as being the secretary of the section head. Here she has a large amount of scientific typing to deal with, and must also be able to identify technical documents for filing and library borrowing purposes. In administrative offices, where the officer is not concerned with scientific work in a laboratory, and where there is a good deal more day-to-day paper work, her duties are more likely to be confined to serving one person, and she will probably have more to do with arranging meetings and keeping her chief's appointments book.

Wherever a secretary's job is, however, her most valuable assets are her experience, intelligence and common sense. She must have a knowledge of filing methods, and be able to produce papers at a moment's notice, make foolproof travel arrangements — and this involves understanding Bradshaw — be helpful without being indiscreet, keep her temper under trying circumstances, remember how many spoonfuls of sugar, get through a substantial amount of typing, often with constant interruptions, and much more besides. It is not surprising that good secretaries are hard to come by and, when acquired, are prized above rubies. ★



I Have a Secretary

. . . she is very kind to me — makes my tea (this always crops up in discussions on secretaries, so let's get rid of it now!), smiles nicely at me first thing in the morning (and all day for that matter), she puts files in front of me, and takes them away again when I've done something on them; she even fixes my haircuts and my lesser appointments and insists on my keeping them. She does lots of other things

for me too, but I still wonder — “Is she the perfect Secretary?”

How does one get the perfect secretary? Are they born like that or do they acquire perfection after years of experience? Is it my fault or hers if she isn't perfect? What am I to her — her “boss”, her “chief”, her “master” or merely “him” (small “h”)? Those of us who have a secretary have pretty clear ideas of what we expect. We want someone to leave us to get on with our work, and to do for us everything we needn't absolutely do for ourselves; but if we don't get just that what do we do about it? Obviously, the easiest thing is to ask her to be moved. This doesn't really achieve anything (unless the poor thing is either cross-eyed or quite hopeless). It only serves to frustrate her, and gives us someone new to try to get used to.

On the other hand, we can point out in a firm and friendly way just how we want everything done. This requires the use of much tact and discretion. After all, having a secretary has points in common with having a wife, and any man who has pointed out in a firm and friendly way to his wife just how he wants everything done knows the reception that he will get in the long run. No, clearly both sides must contribute, both sides must give and take a bit. Fortunately, the dice are loaded a bit on my side, because the union is not irrevocable and can be terminated if things just don't work out. But the girl who expects to make the grade as a secretary without doing her bit of insisting and contributing something positive is foredoomed to failure.

The acid test of a secretary is how we get on when she's not there. If she's first-class we miss her terribly, but things don't stop because, of course, she has organised the office so that we can find things, and work can just struggle



on — but, of course, we leave the “washing-up” (figuratively) in a heap for her to deal with on her return. If she's just a pleasant girl we miss her because we have to answer our own telephone and get our own papers out of the “in-tray” in her office . . .

But if we just long to get a “relief” in so that we can get on with the work without the fearful battle against what seem insuperable odds there is but one solution — pack it in and start again with another girl: it was probably our fault anyhow, and she'll be much the happier for a change.

(Name of author withheld for obvious reasons, after all he's got his secretary to live with! One might envy him if she resembles our dream secretary, left; but more likely she resembles the specimen above whose clothes are as out-of-date as the files she should have returned to Security Records!)

In the next issue we will have another look at “The Perfect Secretary”.)

ANSWERS TO “HARLEQUIN” QUIZ 1960: 1. 26th August, 1952; 2. All came from Pudsey, Yorks.; 3. The “Bishop” in chess (“Fool” in France, “Elephant” in Russia); 4. Kingston-upon-Hull, Cumberland C.C., and Leeds C.B., authorities car registration letters; 5. B.O.A.C. once converted a fleet of Argonauts to carry radioactive isotopes from Harwell overseas; 6. Gave their names to the flowers, fuchsia, gardenia and Dahlia; 7. Badges of Warwick, Somerset and Glamorgan County Cricket Teams; 8. “Narnia” — Lion, Witch and Wardrobe, by C. S. Lewis; 9. “Toad” of Toad Hall — Wind in the Willows, by Kenneth Grahame; 10. “Mothers of large families with claims to commonsense” — Bad Child's Book of Beasts, by Hilaire Belloc; 11. “Tom” — Water Babies; 12. The pushmi-pullyu — Dr. Dolittle, by Hugh Lofting; 13. Fast-moving filaments of air, just below the stratosphere, which affect the speed of aeroplanes in a peculiar way, and affect the weather; 14. An evil spirit which reigns over the C., the biggest whirlpool in Britain between the Isle of Jura and Mull; 15. A sea animal, or the lungs of the crab; 16. A tidal stream between Dunnet Head (Caithness) and Orkney; 17. In the pancreas; 18. It is Key West, Florida; 19. The first Duke of Wellington; 20. St. Thomas Aquinas. Two guineas have been awarded to A. Hall, Bld. 329.

Experimental Psychic Research

by

P. F. Smith (N.I.R.N.S.)

Member of the Society for Psychic Research

PSYCHIC research, though still associated by many people merely with ghosts and spiritualism, is nevertheless concerned with the study of a wide range of very puzzling phenomena, and after a somewhat stormy infancy has now established itself as a respectable experimental science. In this brief review we shall look mostly at those branches of psychic research which are amenable to controlled experiment; an example is telepathy, or "thought-transference", which is one aspect of what is now called Extra-Sensory Perception or E.S.P.

Ever since the beginnings of civilisation there have been cases reported of apparent telepathy, prophetic dreams, meaningful visions, ghosts, etc., but though such stories are numerous, the possibility of inaccurate reporting, exaggeration or deliberate deception makes it in many cases impossible to decide how true they are.

The first organised attempt to investigate these phenomena came in 1882, when a group of British men and women of academic standing formed the Society for Psychic Research. Their first investigations were mainly concerned with haunted houses, with 'messages from the dead' alleged to be given by mediums when in a trance, and with thought-transference. It was quickly realised that while investigation of ghosts relied mainly on people's accounts of their observations, actual experiments could be carried out in telepathy. In a typical series of tests one person would look at a drawing of an object or a number, while a second person, separated from the first by a screen or in a different room, would try to draw or guess the object. At that time, however, statistical methods were in their infancy and it was not possible to assess accurately the significance of the results—i.e., to decide whether or not the number of correct guesses could reasonably be ascribed to mere chance.

By 1916 probability theory was reasonably well understood, and between that date and 1930 a number of statistical card-guessing experiments were carried out. In these the subject would be asked to guess the identity of, say, a playing card chosen at random and looked at by another person. After many thousands of such guesses the total number correct would be compared with the score which was expected on the basis of chance alone. The odds against their score being simply the result of chance coincidence was then calculated, and, if these odds exceeded say 1000 to 1, it could be reasonably assumed (but not for certain) that some factor other than chance had been at work. Of course, precautions must be taken to eliminate the possibility of cheating, errors in recording the results, etc., and to make sure that the sequence of target cards is properly random.

Many of the early experiments were failures, or else the results could be attributed to weaknesses in

the experimental method. In the early 1930's, however, a new situation arose when J. B. Rhine began an intensive series of card-guessing experiments at Duke University in America, which yielded highly significant results. Instead of playing cards, Rhine used packs of 25 cards containing 5 each of the symbols square, circle, star, cross, and wavy lines. Instead of the expected average score 5/25, many of his subjects averaged 7 or 8 out of 25, a small but persistent effect. Moreover a subsequent control check, in which the subjects' guesses were systematically matched against a different random sequence of cards, yielded (as it should) a score which was very close to the chance expectation of 5/25.

Rhine also showed that there are three distinct effects to be investigated:

- (1) Telepathy, in which the subject guesses at a card thought of by another person.
- (2) Clairvoyance, in which the subject guesses at a card selected at random, but not looked at by anyone until after the guess.
- (3) Precognition, in which the subject guesses at a card which is randomly selected at some time after his guess. He appeared to demonstrate the existence of all three of these phenomena, though the evidence for precognition was less convincing.

The storm of hostile criticism which followed came mainly from the psychologists, since the consequences of ESP were completely contrary to the current psychological theories, and in much of the criticism personal bias was regrettably allowed to override scientific judgement. Eventually, however, improvements in the experimental conditions resulted in a verdict of satisfaction from the 1938 symposium of the American Psychological Association, which had been convened for the express purpose of discussing the validity of the ESP experiments. In the previous year the annual meeting of the American Institute of Mathematical Statistics had given its approval to the statistical procedure by which the significance of the results was calculated.

In one of Rhine's most impressive experiments the subject and experimenter were in different buildings and the odds against the results being due to chance were 10^{20} —1 (100 trillion to one).



"PUNCH"

Of the many attempts made in other countries to confirm Rhine's results, the most famous is that of the English mathematician Dr. S. G. Soal, who was once openly sceptical of the American results after his own attempts to duplicate them between 1934 and 1939 had completely failed. Eventually, however, he discovered two particularly gifted subjects, and in a series of well-designed and witnessed experiments produced results that surpassed those obtained even by Rhine's best subjects. One subject, Mrs. Stewart, scored 9,410 correct out of a total of 37,100 guesses (in a period of 4 years), compared with a chance expectation of 7,420. The odds against chance here are about 10^{70} to 1. His other subject, Basil Shackleton, achieved odds of 10^{35} to 1, and produced one of the best examples of the so-called displacement effect; that is, his guesses corresponded not with the target card but with the card chosen immediately afterwards, an effect which had been observed by other experimenters.

Thus we arrive, in this brief historical sketch, at the present day. Apart from the unlikely alternative hypothesis of deliberate deception by a large number of reputable experimenters, subjects, and witnesses, the results seem to force us to the conclusion that ESP is a genuine phenomenon. But since even the best subjects have not been able to maintain their high scoring indefinitely (the longest period was four years by Mrs. Stewart), not a single repeatable experiment is yet available, and thus, although the effects of distance, drugs, hypnosis, personality, attitude, etc., have all been tried, no properties of ESP apart from its existence have been established with any degree of certainty. The main difficulty is that the action of deliberately and consciously making a guess inevitably introduces a large random "background" on top of any ESP effect that may be present, and it may be that if a technique could be evolved for making guesses at a subconscious level, a considerable reduction in the "background" would result. Experiments in this field are at present in progress.

Progress in other branches of psychic research is even more difficult. Attempts are still being made to study the abilities of mediums, and to investigate the so-called "spontaneous phenomena", which include apparitions, poltergeists, and dreams and hallu-

cinations of an apparently extra-sensory nature.

As far as other branches of psychic research are more spectacular, the conditions are difficult if not impossible to control, and it therefore becomes difficult to establish their genuineness. Though the majority of such investigations succeed in attributing the phenomena either to natural causes or to deliberate fraud, there still remains a hard core of well-authenticated cases for which no explanation is available. One important consequence of the experimental work on ESP is that most of the remarkably accurate statements about dead persons made by mediums when in a trance state can be attributed to an unconscious telepathic gift on their part rather than to actual messages from the dead person, and there is therefore still no unambiguous evidence for survival after death.

Finally let us glance at some research which is of particular interest to physicists. The phenomenon is called psychokinesis, which is the alleged ability to influence physical processes by mental concentration. For a long time physical phenomena such as sudden drops in temperature had been reported in connection with stories of ghosts, and stories of "levitation" in far eastern countries are notorious; so that when gamblers asserted their belief that they could influence the fall of dice by will-power, Professor Rhine immediately began a series of laboratory experiments to test this hypothesis. Although he claimed to have obtained significant results, they depended mainly on secondary statistical effects rather than a clear-cut above-chance score as in the case of ESP. Similar experiments in other countries to confirm these results have usually failed, although a recent attempt in this country to influence the movements of paramecia (small living creatures observed with a microscope) was apparently successful. There are a number of complicating factors in assessing these results, and it is here sufficient to say that the evidence for psychokinesis is still controversial, and many more experiments are needed before it can be regarded as satisfactorily established.

Psychic research is today working under happier conditions than at any time in its history. In contrast to its earlier days, there is now very little open hostility to its findings, and, indeed, research grants and higher degrees have been awarded by the Universities of London, Oxford and Cambridge for work in this field. Even so, most of the research still has to be done as a spare-time occupation, although at Duke University in America a proper research department has been formed, and "parapsychology", as it is called, is one of the undergraduate subjects.

For anyone who wishes to learn more about psychic research, reliable introductory books are "The Sixth Sense" by Rosalind Heywood, and "Modern Experiments in Telepathy" by Soal and Bateman. Rhine has written several interesting books, but the sweeping philosophical conclusions that he draws from his results are usually regarded as being rather premature. The latest developments are published in the quarterly Journal of the Society for Psychic Research, which is now available to anyone at 15 shillings a year. Further details about the society and its activities may be obtained from the author (Building R1), who would also be interested to hear of any occurrences which come within the scope of this subject.

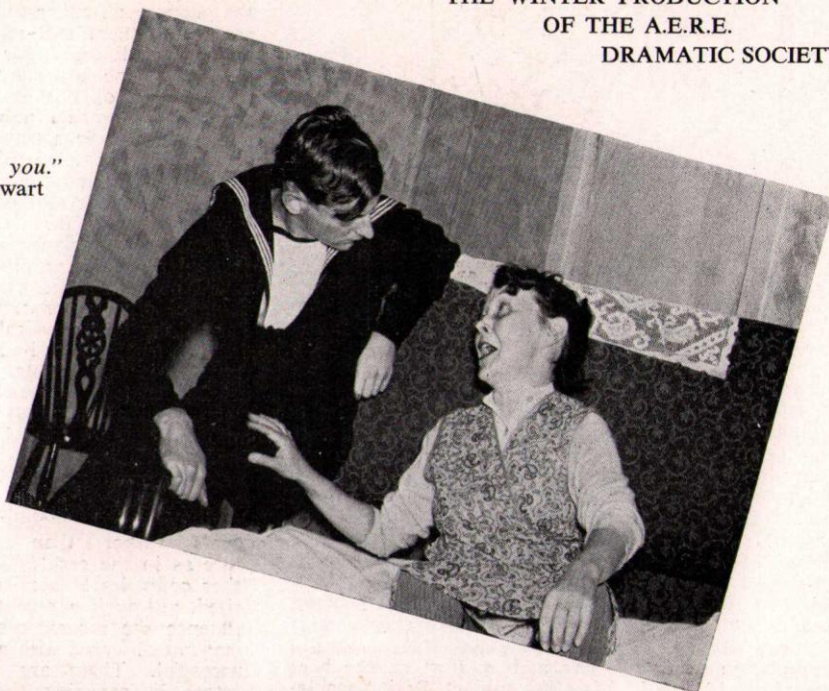
★ ★ ★ ★ ★

Scenes from:

"SAILOR BEWARE!"

THE WINTER PRODUCTION
OF THE A.E.R.E.
DRAMATIC SOCIETY

"Don't tell Emma I told you."
Brian Charlton, Mary Stewart



"What do you want to go to the pub for?"
Brian Charlton, Anne Jeffery, Malcolm Mackenzie, Tony Jackson,
Jill Paddon, Shirley Mills, Mary Stewart

Photos by
Geoff. Webb
(Eng. Div.)



"Shirley, darling!"
The Cast



"Emma! Have you been drinking?"
Anne Jeffery, Tony Jackson

★ Play readings and theatre visits are being arranged during the coming months — prior to the next production. The secretary is B. Charlton, Building 351.



"I could do with a cup of tea."
Tony Jackson

The A.E.R.E. Fire Section is ready to act at a moment's notice and is potentially mobile within twenty seconds. It is equipped with two fire appliances which carry 400 and 300 gallons of water respectively. Both appliances are fitted with fog guns attached to their hose-reel equipment which atomise the water so that fires can be extinguished with the minimum of damage. The latest machine is equipped with high pressure fog apparatus which can be used at 600 p.s.i. and carries twelve 50lb CO₂ gas cylinders operated through high pressure $\frac{3}{4}$ " tubing for use on electrical and solvent fires.

Powders are carried for dealing with metal fires. The appliance is also fitted with an extractor for removing smoke or fumes from buildings.



The Fire Section also maintain and drive the ambulances. Although most of the firemen have gained their first-aid certificates, when an ambulance is needed somewhere on the site, it must first proceed to the Medical Division and pick up the Duty Sister. This last piece of information should be noted, as it can play a large part in the retention of one's temper when, having 'phoned for the ambulance, one sees it making off in the opposite direction.

The characteristic versatility of fire brigades is not lacking at A.E.R.E. Although cats-up-trees and children-with-heads-through-railings are comparatively rare occurrences here, the fireman's daily round may include (as it did recently at Building 220) supplying a building with water from a hydrant while the main supply is cut off.



Contrary to popular belief, they do NOT sit about all day playing cards and polishing equipment. Instead they are actively engaged in the prevention of fire. This they do by checking fire extinguishers during normal working hours and actually looking for fires, or potential fires, after working hours.

The special problems which Harwell presents to fire fighters have been ably anticipated and dealt with. Sodium fires, radiation backgrounds, electrical dangers and chemical hazards are all taken in their stride.



They are the local reigning champions in the Open Major Pump competition for works fire brigades in the County of Berkshire, having completed the entire prescribed operation in 30 seconds. The silver cup and certificate which they received for this have a prominent place in the central control room. The Chief Fire Officer informs us that, since the event, they have improved their time and now complete the procedure in 21 seconds.



By arrangement with the Division concerned, they also give to Divisional staff instruction in the rudiments of fire prevention and demonstrations in the use of fire extinguishers. In the photograph above, Jasmine Davey hits the target for our photographer.



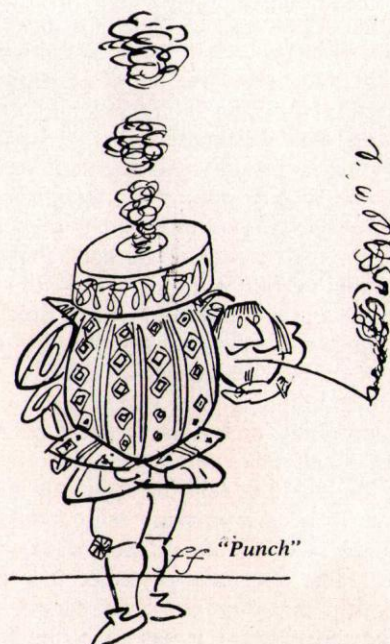
**ST. JOHN AMBULANCE BRIGADE
A.E.R.E. COMBINED AMBULANCE/NURSING CADET DIVISION**

A team of five nursing cadets from this newly combined division was successful in winning the Katherine Byland Trophy at the county First Aid competition held in Wantage on Saturday, 25th March. A.E.R.E. will now be representing Berkshire in the regional competition which is to be held in Slough in July. A second place in the Artificial Respiration Section was also gained by one of the ambulance cadets. These results are very encouraging, particularly as this is only the second time the cadets have participated in competition work.



It's the tobacco that mounts

HOMOLKA



THERE is a story that when Sir Walter Raleigh started to smoke for the first time in England a servant threw a bucket of water over his head. Be that as it may, there is certainly no surprise shown nowadays at human beings belching forth smoke from their mouths, noses and, in some cases, their ears. Indeed, if a passer-by's head suddenly burst into flames most onlookers would laconically assume that it was an advertising stunt or an I.T.V. programme.

What *did* civilised man do before smoking was invented? Beat his wife; kill off a few peasants; attack the neighbouring country? Well, civilised man still does these things — *and* smokes. Ergo, smoking must be an addition to civilised behaviour and not an alternative. Having firmly established this fact, let us, in the limited space allowed by the *Harlequin* editor, take a look at this embellishment.

Starting to smoke

Medical books give highly generalised accounts of why we start smoking. Briefly, boys do it because other boys do it. Girls do it because boys do it. It is generally agreed that the first furtive "drag" of a fag-end behind the tool shed is far from ecstatic. The real bliss is in the fellowship of dirty-faced conspirators and

the danger of being found out. Smoking seems, therefore, to be an acquired taste, like octopus-eating, only to be fully appreciated after an initial degree of stomach-heaving and the green-face-nadgers.

Of course, some people do start later in life, but here the reasons are less extrovert. Unhappy love affairs, boredom, inferiority complex and, above all, *suggestion* are indicated. Suggestion is so strong in human habits that if squirting tomato sauce up one's nose ever took the place of smoking tobacco people would adopt it without any qualms.

Types of smokers

Pipe and cigarette are the two main classes of smokers. There are minor variations of these — cigars, "reefers", hookahs, nose-pipes, etc., but, basically, any smoker is either a "sucker" or a "gasper".

There is a widespread impression that pipe smoking indicates a calm, reflective, reasonable character whereas cigarette smokers are restless, impetuous people. This idea is fostered a lot by popular books and films, viz., "John St. John Featherstone's clean-cut British face was enhanced by a briar pipe gripped firmly between his strong, white, British teeth." (Merely smoking a pipe makes one's teeth a

filthy brown colour: biting it makes them look like shark fins). Or, "Eustace Tremble's foxy, pallid face perspired as he tremblingly lit cigarette after cigarette."

All this is something of a popular fallacy. My great grandmother smoked a pipe and she was as highly strung as a tennis racket. This, of course, is not conclusive evidence. But there is no real evidence either that meditative people favour a pipe. They *look* meditative because pipe smoking is a full time occupation. Consider these vagaries of pipe smoking. If you try to talk quickly it falls out of your mouth and sets your trousers (or skirt) on fire. You cannot nick it and stick it behind your ear like a cigarette, and if you place it on the edge of the table it rolls off and sets the carpet on fire. If you sit nursing it, it belches out acrid fumes, redolent of a refuse fire; or, worse, it goes out. The only safe place for it is back in your mouth. Another worrying aspect of a pipe is that, once going, it has got to be kept going -- like an outboard motor. You cannot stop it any old time you like. If you pour some water on it, it takes days to dry out. If you happen to be some place where it is suitable to knock it out -- say a wet moor or the top of a mountain -- it is going to cost you something like fourpence a knock for a medium-sized pipe. No -- pipe smokers are not calm, philosophical people. They are *pre-occupied* people.

Health aspect

Vast sums of money are spent trying to show that (1) smoking is bad for us, (2) smoking is good for us, (3) smoking does not affect us either way. The conclusions accepted depend on whether you are a smoker or a non-smoker (or a tobacco manufacturer, either smoker or non-smoker). The question is too controversial to be discussed in the space allowed by the unco-operative *Harlequin* editor, but perhaps a few words on the psychological aspect can be squeezed in.

Is tobacco habit-forming? Yes. Everything points to its being a habit. Nicotines Anonymous have on record many examples of its insidiousness. One of their patients -- a member of the M.R.C. staff at Harwell -- was a rabid pipe smoker. One morning, he could not find his pipe. Fighting down the initial panic, he stopped whimpering and running wildly around and sat down to tackle the problem in a calm,

scientific manner. Step by step he retraced his movements throughout the morning and came to the conclusion that he had never at any time put the pipe down. He looked along his nose and sure enough, there it was, still in his mouth gurgling away merrily.

This and many similar incidents suggest that it is not the physical act of smoking which satisfies but the *knowledge* that we are smoking. An interesting experiment carried out at Mill Hill more or less clinches this theory. A tobacco addict who normally became very bad tempered unless he had a cigarette every hour was denied tobacco for two hours. He was then anaesthetised and placed in a tobacco-smoke filled room for twenty minutes. When he regained consciousness, far from being satisfied, he attacked the doctor with a bed pan.

A great exponent of the "knowledge" theory was Dr. Hamish McGonigle, the eminent Scottish physiologist. He used to walk the streets of Aberdeen making sucking noises and repeating over and over to himself, "I am smoking a pipe." At Christmas he changed it to, "I am smoking a cigar". Unfortunately, when he tried the same thing in a London street he was taken away by two men in white coats and has not been heard of since.

Giving it up

People talk about giving up smoking in much the same way as they would discuss divorce. This indicates what a big step it is.

The two main reasons for giving up are Money and Health. People who give up smoking for monetary reasons are not worth bothering about. It is rather an unethical reason, and the T.V. sets, new cars, alimony and debts paid, etc., are poor recompense for the loss of such a sociable, relaxing habit. The reason of health is much trickier. Have you ever gone to your doctor and asked him outright, "Should I give up smoking?" Hiding his nicotine-stained fingers he will treat you to a long technico-philosophical talk that would put a Russian diplomat to shame and will leave you none the wiser. It is rather like asking another motorist if you should be fined for parking.

There are more altruistic reasons for giving up smoking: loss of friends, habitual arson, mortification of the flesh, etc., but oddly enough these are rarely quoted.

Non-smokers

It takes great strength of character to be a non-smoker nowadays. To make the confession, "No, thank you, I don't smoke", in just the correct tone, is not easy. A shade too much severity suggests pride and probably hypocrisy, hiding other more vicious habits. A hint of apology is fatal: it gives the impression of being a mean old skinflint who would really like to smoke. A trace of jocularly suggests a cocky, self-assured type, secretly laughing at the harmless little human frailties of others. In fact, no matter how a non-smoker admits his parsimony, it sounds a pretty damning indictment to the normal healthy smoker. The truth of the matter is that, deep down, smokers distrust non-smokers. There is a psychological gulf between them.

Consider the atmosphere at, say, an interview for a job. You sit down in front of the great man, trying hard to look nonchalant, relaxed, but secretly juddering and longing for a fag. He — obviously a non-smoker — says in an offhand tone "Smoke if you want." This you interpret as "Smoke if you must. Go ahead. Stink my office out just to steady your inadequate nerves." No matter how good your chances are, this little incident fogs the issue. Even if you get the job you will never feel quite at ease with this man.

Compare this with the typical tobacco-addicted interviewer. Right away he offers you a cigarette (or accepts one of yours, if it is an Authority interview). You both light up and in two minutes the room is filled with a comfortable, relaxing fug. This sets the atmosphere right from scratch — easy, friendly, *human*. He might well turn you down, or even chuck you out. But there will always remain that intimate, nicotinic link.

What we smoke

Finally, why do we smoke what we smoke? In this heyday of high pressure advertising nobody really believes that "it's the tobacco that counts". Granted, there is a select minority of smoking connoisseurs who buy their "Woodbines" or "Thick Black" because they like being asphyxiated or poisoned. But the majority of us subconsciously choose our brand because of its *name*. Think of the names of popular cigarettes smoked before women start-

ed wearing trousers and signing Hire Purchase forms—"Capstan", "Players", "Four Square", all with strong male connotation. Nowadays we have things like "Matinee", "Strand", "Bachelor", names likely to appeal to the female taste (especially "Bachelor").

Pipe smokers have an even wider range of startling names in which to indulge their fancies, for example:

"*St. Bruno*" — billed as a "man's tobacco". (As few women smoke pipes, the logic is rather vague, but the selling effect is probably good). It has a nice doggy, crickety, outdoor ring, likely to appeal to crickety, outdoor types (and, possibly, dogs).

"*Cut Golden Bar*" has an exotic sound, suggestive of opium dreams in some lush, pagan setting. Girls should be a bit wary of men who smoke this stuff.

"*Erinmore*" gives a manly, rather a romantic impression with a suspicion of sex appeal — "What has he got that other men haven't?" (The answer is a faint incense-like smell which hangs about for days and causes havoc with some types of women).

"*Condor*" conjures up a strong, predatory, merciless atmosphere. It is probably favoured by virile, no-nonsense types. (This is one of the few cases where the tobacco really fits the name . . . and then some! Try it!).

"*Digger Flake*" — another virile sounding brand. With one ounce of this, one can escape into the outback, stuff a jumbuck into the billy and live like a man.

"*Tom Long*" has a jolly, everyday sound. Should be appreciated by short, perky men.

The attractions of many other brands are even more obvious: "*Whiskey Flake*" (for mild alcoholics?) — "*Three Nuns*" (for the more spiritual smoker?) — "*Baby's Bottom*" (for the infant-persecuted father?).

It would be an interesting study to try and correlate people's characters with their choices of tobacco. There might even be scope here for psychiatric treatment. Apparently Sir William Simpson, who was turned down four times by an Admiralty Board, used to smoke "Navy Cut". The editor of *Harlequin* smokes — of all things — "Parson's Pleasure".

The author of the piece of nonsense you have just read smokes — yes, that's right — "No Name". ★

FIVE GUINEAS AWARD . . .

. . . will be made for the most diverting evidence fabricated by a reader of *Harlequin* of what can be done on the lunatic fringe of orthodox photography. The winning entry will be selected from those submitted to the summer and autumn issues of *Harlequin* and all photographs will be eligible also for the Ten Guinea Competition for the best idea of the year. If not ready for the Summer issue (closing date May 29th) your entry can be delayed until July 31st for the Autumn issue.

The bottle was photographed as a straightforward studio still-life with the message written on its outer surface. (The illusion of its having been written on the inside of the bottle is helped by the characteristic reversal of the E).

With a similar lighting set-up, the man was photographed separately and his image on the negative was 'blocked out'. (Blocking out consists of painting carefully round the negative image with a light-proof paint so that when printed in the normal way the subject would have a perfectly plain white background).

The negative of the bottle was then exposed in the enlarger and a pencil outline of the bottle-image drawn on the printing frame. With the negative of the man substituted for the one of the bottle the image of the man was located correctly within the outline sketch of the bottle.

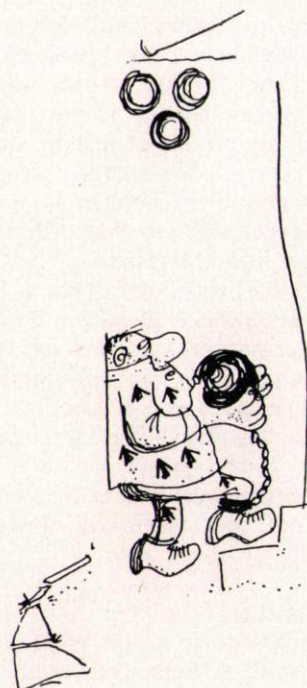
The printing paper bearing the undeveloped image of the bottle was then put back in the enlarger frame and the exposure made for the negative of the man. The super-imposed images came up together on the finished print; blocking-out of the background on the negative of the man meant that for his negative only the man himself came through.

The exposure for the man was intentionally made a little weaker and 'flatter' than would normally be desirable: this enhances the feeling of his being seen through glass.

The chief thing to guard against in trying this one is the danger of the 'horizon line' being so strong as to show through the legs of the man. Remember that the images are super-imposed and anything in the background will still be visible through the figure, making him look transparent.

And who ever heard of a transparent man in a bottle?

"OFF-BEAT PHOTOGRAPHY"







“Off-Beat Photography” *

MAURICE RICKARDS, the author of the above book, is one of the few outsiders who have been allowed into Harwell with a camera. We have been pleased to meet him also in recent years at the Conventions of the British Association of Industrial Editors. He has, we found, a reputation for saying the unexpected, as over the breakfast table: “And why do you call your magazine *Harlequin*?”

In the world of photography his unexpectedness and inventive approach have earned him a reputation both sides of the Atlantic. Ranging from the humorous to the horrific, from the fanciful to the strikingly beautiful this work has an impact that makes it at its best too startling to reproduce in “*Harlequin*”.

Maurice Rickards is not just a photographer but an industrial artist and as such he brings to what some may call the “cold technology of the camera” the warm approach of the artist, together with equipment which he describes as “a fair quantity of miscellaneous junk in

the shape of string, scissors, granulated sugar, halfpennies and the like — and an off-beat approach to life in general”.

A writer of novels and of features for radio and television, Rickards describes in an engaging style how the pictures in his book were obtained. By arrangement with the publishers we reproduce two examples in the hope that readers with a camera, dark-room and some imagination can carry on where Rickards leaves off.

Some of the pictures in the book may be beyond the resources of the reader to approach, as one at least required the co-operation of several dozen models out in a London street at 6.30 a.m. on a Sunday morning!

But the author suggests that most of the effects can be matched and improved upon by the average amateur.

*Studio Books, 161 Fleet Street, and obtainable from the A.E.R.E. Bookshop, 10/6.

‘Who is the fairest of them all?’

This shot seeks to capture the irrepressible (and abundantly justified) optimism of Woman. In just a few hours our heroine will look as lovely as her pre-view in the mirror. We are privileged to witness the reality of her act of faith . . .

The model posed for the shot in two distinct capacities. In each case she was ‘talked into’ the atmosphere required. When the final print was made the entire mirror section of the table was cut out from a print of the glamorous shot and stuck down over the mirror in the un-glamorous one.

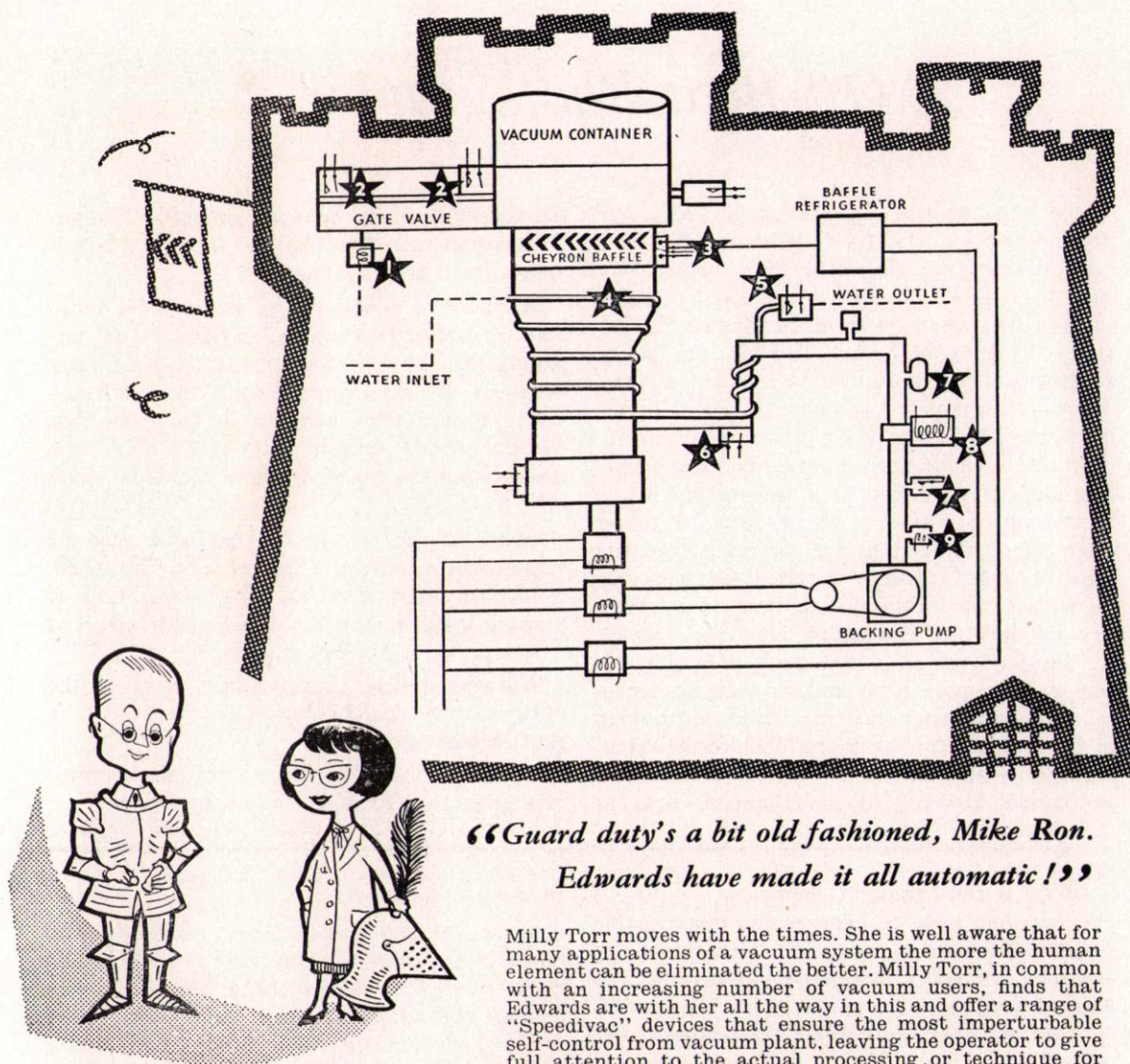
Notice that the lid of the jewel-box on the left-hand side of the dressing table is reflected in the mirror. The jewel-box was in exactly the same position while the glamorous shot was being taken. Although they are not reflected in the mirror, the other objects on the dressing table (ash-tray, tea-cup, etc.) were not there for the glamorous version; they would have destroyed the atmosphere in the mind of the

model as she posed.

If you try this trick yourself, remember that when photographing reflections in mirrors you must focus not on the surface of the mirror but on the reflected image itself. This image is the same distance ‘behind’ the mirror as the reflected object in front of it.

Watch out too that you don’t alter the lighting between the two shots. The camera must, of course, remain in exactly the same position if the mirror-part of the glamorous picture is to fit exactly over the other one. And pay attention to the lighting of the background in the mirror-image. For this shot the wall on the opposite side of the room was illuminated so as to throw up a clear silhouette of the girl.

If you want to avoid the ‘stuck-down’ effect on the finished print you can make a photocopy of the picture; this will give you somewhat poorer photographic quality but will completely disguise how you dunnit.



*“Guard duty’s a bit old fashioned, Mike Ron.
Edwards have made it all automatic!”*

Milly Torr moves with the times. She is well aware that for many applications of a vacuum system the more the human element can be eliminated the better. Milly Torr, in common with an increasing number of vacuum users, finds that Edwards are with her all the way in this and offer a range of “Speedivac” devices that ensure the most imperturbable self-control from vacuum plant, leaving the operator to give full attention to the actual processing or technique for which the high vacuum is being employed. Some of these “Speedivac” devices are indicated in the diagram above. Their functions are:—

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- ★ 6 Thermal switch indicating that pump fluid temperature is correct.
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MR11

Hire Car Holiday

A. L. Pullen (O. & M.)

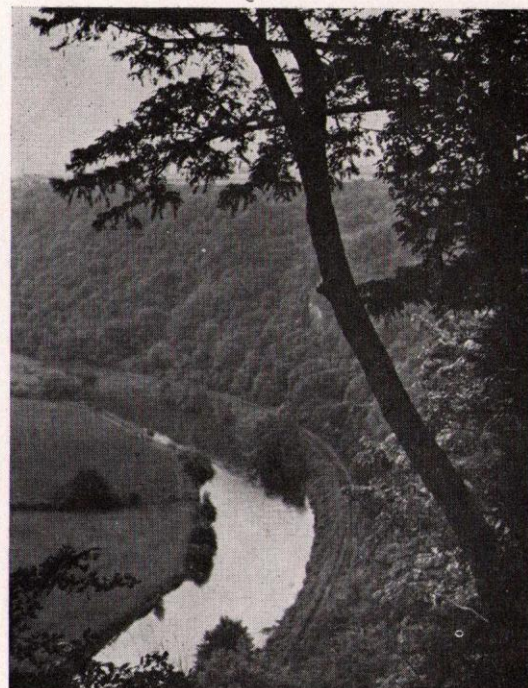
IT WAS an article in a motoring paper that did it. I happened to pick up the magazine in a train one day and, idly flipping through the pages, was suddenly stopped in my mental tracks by a heading: "The £.s.d. of motoring". With an uneasy feeling I began to read.

The article broke down the cost of motoring into various sub-headings. There was depreciation, for example, a paltry £100 a year upwards. Interest on capital absorbed by the car purchase totted up to a further £35 a year. Then there were additions for such trifling matters as insurance, tax, repairs, maintenance, garaging and so forth, which brought the total per year for a medium size car to £300 before a drop of petrol had been used. At my estimated ten thousand miles a year, my motoring seemed a pretty dear luxury.

"But," I thought to myself, "at least I save the cost of maintenance and repairs, because I do them myself." The article had something to say on that, too. "If you do your own maintenance, of course," it said, "you will save on garage bills, but the time you spend would probably be more remuneratively employed in doing something else for which you are better trained or equipped."

I sold my car a week later, and looked forward to a rapid increase in my capital, not to mention the improvement in my health which would result in the extra time now available for open-air pursuits. My family accepted the new situation with philosophical resignation, and I was heartened in my decision by the comments of my pedestrian friends.

"You're much better off without the car," they said, "Think of all the time you used to spend fiddling with it. Now you'll be able to get down to your garden, or see the country from a bus or bike, without worrying about whether someone is going to put a hundred pound dent in your property." It *did* seem to make sense. "Come holiday time," they pursued, "you'll get aboard the old flyer, read a



Horseshoe Bend of the Wye.

nice book, and hey presto! You're at your destination."

"What good commonsense they talked!" I said to myself, although I had to admit to a feeling of loss every time I looked in the empty garage.

We managed all right without the car for a few months, but our weekend routes seemed monotonously alike, and the inevitable wait for a bus at the end of the day took some of the gilt off the gingerbread. Then came the holidays.

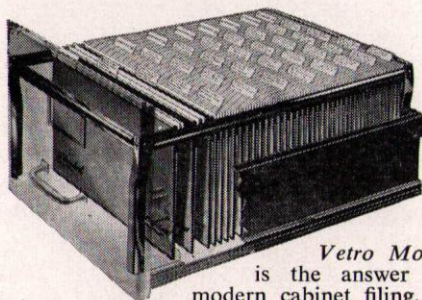
In the past it had all been too easy. We never made up our minds where we were going until the last minute, then into the old car went our luggage, blankets in case we couldn't get fixed up with accommodation, and cooking gear for those occasions when we couldn't find a suitable cafe or hotel, and off we went, perhaps to Cornwall, perhaps to the Continent; it all depended on how much money we had and the chances of a booking on the cross-Channel ferries. Now it was clear that I should have to make plans like other holiday-makers. I didn't like the idea at all.

I liked it even less when one of the most die-

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hard pedestrians among my colleagues came into work one morning with a very worried countenance.

"What's the matter, George?" I asked.

"Can't book a seat on any train for North Devon. I've tried every train from 4 a.m. on. Wait till the wife hears this. There'll be the devil to pay."

He took a half-day's leave the next day and made the rounds of booking offices and travel agencies, but reported complete failure when I saw him at the office the following day. Was this to be my fate, too?

An advertisement in the evening paper caught my eye.

"Self-drive cars," it read. "From £1 a day. Late-model A.40's, Consuls, etc."

I was saved! All I had to do was ring up one or two numbers, and take my pick from hundreds of nearly new cars. I was soon on the telephone, the evening paper opened at my elbow.

"Sorry," said the voice at the other end, "we're all booked up for that period."

I tried another number. Same answer. Then another. They were fully booked, too. I was getting desperate. On the fifth call, I struck oil. Yes, they had a car. A virtually new convertible (I liked the sound of that!) but the cost? Sixteen pounds a week plus 6d. a mile over 40 miles a day, plus petrol and oil. Not so good. I tried a few more numbers, and soon it was borne on me that this self-drive car hire business wasn't as simple as it seemed to be.

To start with, no two firms seemed to have the same idea about tariffs for the hire. One firm had an Austin A.35, for which the basic charge was £10 a week, plus a surcharge of 4d. a mile for any miles in excess of 30 a day. So, if I covered 700 miles in a week, it would cost me nearly £19 plus, say, £4 for petrol. Several firms operated a "No mileage charge" system, but when I added it up, the end result seemed to be much the same as the basic charge plus a surcharge, unless I was going to run up a pretty heavy mileage. In the end, I laid out a schedule showing all the various offers and their costs for various mileages, and finally settled on a year-old 1½ litre saloon with sunshine roof and radio.

Early one summer Sunday I collected the car and drove it away from the garage, hoping

that I looked every inch the owner. The family were waiting expectantly for me, and expressed pleasant surprise with the car. I had to admit that there was something to be said for the independence and freedom of one's own transport.

Our party consisted of four adults and our daughter, and though we had expected to be rather cramped we found that we had plenty of room, and the car coped easily with the load. Our plan was to make a sort of circular tour of Southern England and Wales, and to start with an easy first day to see how we got on. So we were quickly under way, and heading for one of our favourite areas, the Surrey hills. Our route took us through Ockham and Pyrford, with its ancient church and beautifully-preserved Norman doorway, and its eerie old mill beside the River Wey, up over Newlands Corner, down to Silent Pool (where Tennyson saw "the netted sunbeams dance") and on to the beautiful country round Box Hill. Here we called to see Polesden Lacy, one-time home of playwright Sheridan, and until a recent fire a favourite Sunday rendezvous for many Londoners.

From Polesden Lacy we motored briskly down to the Sussex coast and followed it along from Brighton through Worthing to Littlehampton, where we turned inland to visit Arundel before picking up the coast again at Chichester. At Bracklesham Bay the water was pleasantly warm but the beach much too crowded — yet only a few years ago this was a place known to few. The yachts and dinghies of lucky sailing folk bobbed on the blue water off Birdham and Itchenor and we looked enviously at them from the windows of our car, then turned reluctantly homeward over the lovely wooded hills near Petersfield.

Our first day had been a complete success and we were sufficiently emboldened by a favourable Met. report on the wireless that evening to abandon all caution, and pack our bags ready for a full-scale attack on our planned route. After an early start, we were at Winchester for elevenses. Coming out of the restaurant, we found a light rain falling, but by the time we reached the New Forest it had cleared, and a strong sun sparkled dazzlingly off the wet leaves.

The celebrated wild ponies did not seem

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very wild to us, and as soon as I slowed the car to get a better view of them one pony cantered smartly across the grass towards us.

"Oh, do stop!" cried our daughter.

We did, and the pony poked his head through the open rear window, to the immense delight of daughter and the consternation of mother-in-law, who sat petrified as the pony thrust his face within an inch of hers.

A stentorian bellow startled us, and we looked up to see an officious coach driver shouting something about "Don't you know that's dangerous?" whilst his passengers looked down upon us with the sickly smiles which people seem to assume in such circumstances. We politely pointed out that there was a whole queue of ponies lining up at the other side of his coach, and muttering something uncomplimentary he let in the clutch with a bang, leaving the ponies looking very downcast and disappointed.

Bournemouth was crowded, and we wasted little time there, but took the ferry over to Studland, which revived wartime memories for me of practice shoots with seven inch rockets from tank landing craft in preparation for the D-Day landings.

We had some difficulty in finding accommodation in the area, and only succeeded late at night in locating rooms at Swanage, after knocking up practically every hotel and boarding house in the town. On the following day the sun greeted us warmly, and with a good breakfast inside us we were in high spirits for the next leg of our journey.

At Kimmeridge we had to pay a shilling fee to enter the little road that leads to the cove, but as this charge seems to keep the place pretty unspoilt we judged it well worth while. It was gloriously hot at Lulworth, but the flies and the commercialisation were too much for us, and we did not tarry there. Weymouth, too, looked uninviting, masses of caravans lending the approach road a rather sordid air, and so we turned our wheels inland once more, past Cerne Abbas, where the Long Man strides nakedly over the hill, and on to the cathedral city of Wells for a welcome tea. Over the ridge of the Cotswolds in the setting sun we sped, to drop down through Gloucester for our next halt near the Forest of Dean.

We stayed here for the next couple of days, exploring the many delightful lanes and beauty



Anne Hathaway's Cottage

spots of the area. One run took us via Goodrich Castle, with its fairy-tale gateway on the Ross road, to Symonds Yat and its breathtaking view over the Horseshoe Bend of the Wye past Tintern Abbey to Chepstow, and so back to our H.Q. The next day saw us off to another early start, and by noon we were through the Black Country of Wales and paddling in the sea at lovely Rhossili on the Gower Coast, surely the most unspoilt piece of coastline to be found so near to a densely populated industrial area.

Our week was nearly up, and the miles were piling on top of each other with expensive rapidity, but there remained the Cotswolds to see before our itinerary was complete. So to Tewkesbury we went next, to see the massive and perfect abbey, the inn made famous by John Halifax, Gentleman, and the ancient Bear Hotel on the bridge. Thence to Grafton (what *did* John Drinkwater see in it?) and Winchcombe, from which, if you have the time, there is a grand walk over the hill to Cheltenham. We didn't have time for the walk, but we did manage a quick look round Sudeley Castle before heading for Broadway.

Before reaching this Mecca of American tourists we sidestepped off the road through Stanton, an absolute gem among Cotswold villages, and through the park to Stanway and so into Broadway. The mellowed stone and mullioned windows of the old and wonderfully preserved houses of this famous place were reflected in the glitter of lines of parked cars, and, feeling



rather dismayed by this intrusion of the twentieth century into the peace of a Cotswold afternoon, we pressed on to Stratford, where Morris dancers made merry on the green near the Memorial Theatre. Our last call that day was at Blenheim Palace, and after a most agreeable tea at Woodstock we motored the final miles home.

We still had a day left of our car-hire and, as Mother-in-Law and Sister-in-Law had a train to catch in London, what better choice could have been made for our last day's visiting than London itself? Traffic was curiously light, perhaps because we were going against the stream, and we were able to do all the usual sights, and drink in several of the more famous pubs, from *Jack Straw's Castle* to the *Prospect of Whitby*, before depositing the in-laws at Kings Cross Station.

Our week had been completely trouble-free from the mechanical point of view and there is undoubtedly a very pleasant sense of relaxation in driving someone else's car, about which you have no need to worry if something does go wrong. Unfortunately for my good resolutions, the trip stimulated once more my car-owning instincts; I am now busy on the depressing task of working out just how many houses I could buy, or how many Continental holidays we could have, if only I could bring myself to part with my car . . . Indeed, I am rapidly coming round to the idea of owning some antique hack for the odd journey for which it just isn't worth while, or convenient, to hire a car, and of hiring a car for the annual holiday, or for long trips to friends or relations. This would enable me to try all sorts of different models; it would add interest to my motoring, and would enable me to discourse learnedly on the oversteering tendencies of some French cars, the relative merits of front and rear wheel drives, and so forth. A few photographs of myself posed beside the various cars which I had hired would also be useful prestige-boosters among people not familiar with the old iron in my garage. Didn't I read somewhere that Diana Dors got her first million merely by hiring a Rolls-Royce to convey her to a theatrical agent's premises? There must be a moral in this. I wonder if I should try an advertisement in the A.E.R.E. News "Cars Wanted" section? ★

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Caldecott House

LET US look very briefly at its history. The land on which it stands belonged from very early times to Abingdon Abbey and was granted with Manor Mills and many acres to one "Rainold" as military tenant (1100).

His family took the name of "St. Helen" and remained in residence until 1371.

The Manor was then acquired by the third Baron, St. Armand, whose son, Almaric, succeeded him and later presented a piece of land to St. Helen's Church on which the Long Alley Almshouses were eventually built.

In 1486 the Manor rights and land were purchased by Sir John Golafre who was an important land owner, member of Parliament and High Sheriff of Berkshire. He generously gave the whole property to the Guild of the Holy Cross, which was a great religious fraternity or guild in medieval times, for the administration of charity and for beautifying the Church of St. Helen in Abingdon, Berkshire.

This guild was dissolved after the reign of Henry VIII and all its remaining properties incorporated into the Foundation of Christ's Hospital, which is still administered by a Master and Governors under Royal Charter.

The Manor House of St. Helen's eventually disappeared, but the Moat remains; the land was divided up and farmed and the Mills were carried on. Details of the leases, rents and names of the tenants are recorded in the minutes of Christ's Hospital.

So far it has not been possible to find the name of the original builder of Caldecott House, but it may have been built on the site of a small house or barn. It is a typical 18th century building, with a fine staircase and large well-lighted rooms, and is dated 1738 on the south side. We know that the well-known Jacobite historian Dr. Thomas Carte died there on April 2nd 1754, but there is no evidence that he owned it, and he was buried at Yattendon. We certainly know that Clement Saxton lived there: he was a pupil of Abingdon School and later a steward (1760) and was High Sheriff (1778) and a Lieut. Col. in the Berkshire Militia.

He died at Caldecott House in 1810, and his nephew Charles Saxton lived there for a time. The Saxtons were a very important Abingdon family.

The next owners (the Lintall family) must have added the large drawing room about 1820 and probably enlarged the kitchens. They were followed by William Musson, whose relatives in the U.S.A. still take an interest in the fortunes of the house.

Thomas Hyde bought the greater part of the estate (agricultural land) from Christ's Hospital in 1869, and



he built the stables and lodge in 1870.

In 1896 Major General Bailie came into residence, made extensive alterations and additions on the north side and designed the South garden with its modern decorative stone arches.

Each owner has contributed something of value, and so the house has gradually grown to its present form.

Through the last war it was used by the Air Ministry, and much of the agricultural land of the Hyde estate has been acquired by the Borough and is now covered with new housing estates.

It is good to see the names of people connected with the Manor and Caldecott House commemorated in Golafre Road, Saxton Road and the Hyde.

In 1945 Dr. Barnardo's Homes bought the house and grounds, and there began a new and very important chapter in its history.

It is fitting that the house which for over 220 years has been a gracious and pleasant home should now extend its shelter and influence to young people in need.—U. LIVERSIDGE.

THOMAS JOHN BARNARDO

THERE was born in Dublin in 1845 a boy who was to become one of the greatest of the great social reformers of the latter half of the nineteenth century.

His boyhood was very ordinary: not by any means clever at school and, possibly because he was very small, not good at games.

In 1866 we find him in London, studying to become a missionary. He felt himself called upon to preach, and the challenge of speaking in the open air and at meetings in East London, where many came to question, to scoff, and to scorn, was, all unknown to young Barnardo, equipping him for his greater work.

Great as was the need for missionaries in China, the need for medical missionaries was even greater, and so Barnardo became a student at the famous London Hospital. His ability to carry on the busy life of a medical student and, at the same time, to preach in the squalid streets and alleys of East London showed his strength of body and mind and his apparently boundless energy.

With some friends he found a dilapidated donkey shed and opened it as a Ragged School. Not inappropriately the address of the new premises was Hope Place.

One night after lessons were over, whilst Barnardo was turning out the gas jets he noticed that one boy had not gone out whilst the others had left. Jim Jarvis was reminded that it was time he was off home, but so insistently did he beg to be allowed to stay that Barnardo asked him a number of ques-



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ions, and found to his amazement that the boy had no home. "But where do you sleep?" he asked, and back came the startling answer that he slept wherever he could. The previous night he had been fortunate, for his resting place had been a haycart.

With overwhelming force it came to Barnardo that in the highways and byways of London there might be other children, homeless, destitute, helpless and ill-prepared to withstand the trials of cold, hunger, and exposure. So Barnardo took the lad to his lodgings and gave him a meal. Together they later set out in order that the boy could make good his promise to show Barnardo lots of other "lays" where boys were sleeping out.

Jim led the way to a blind alley where he and Barnardo had to climb a high wall, at the top of which, in a gutter "sheltered" by another wall, were eleven boys all sound asleep. No covering of any kind was upon them. The rags they wore were mere apologies for clothes; their ages about nine to fourteen, although there was one big fellow who might well have been eighteen. Barnardo realised the terrible fact that they were all absolutely homeless and destitute, and that these youngsters must be typical of many others.

Jim was looked after and a few days later was found a home with a nearby Christian family, but the help that Barnardo and his friends could give to other waifs was necessarily limited by their private means.

At a missionary meeting a few days later it happened that the advertised speaker failed to appear, and in the emergency Barnardo, whose work in East London was known to the organiser of the meeting, was asked to tell the large audience of his experiences in the East End. He did so. Again and again he tried to stop, but there were always many anxious to learn more.

Barnardo's statements were reported to the Press, resulting in a great deal of correspondence, many refusing to believe his "stories"; others, whilst not disbelieving, thought the picture of conditions in the East End had been over-painted. But one of those who read his speech at the Agricultural Hall was the Earl of Shaftesbury who, with his wide knowledge of social conditions, had often been surprised by some new social problem of which he was previously unaware, and who decided to invite to a private dinner a mixed party of his friends, young Barnardo and a few of his disbelievers. The young medical student was obliged to answer many questions, and towards the end of the evening someone suggested that to prove his statements he should show them some of the places where boys were sleeping out. So at a late hour a party of about twenty set out for Billingsgate Fish Market near London Bridge where, under a large tarpaulin stretched over a great pile of boxes, they found sleeping a frightened, pathetic-looking youngster. His fears quietened, the boy was asked if there were others under the tarpaulin, and was offered a reward if he would get them out. He did so, and soon there were assembled seventy-three homeless, hungry, and uncared-for boys. Did anyone want further proof?

In 1870 Barnardo received a remarkable letter from Samuel Smith, M.P., offering to provide £1,000 for the establishment of a Home for destitute children if, instead of going to China, Dr. Barnardo would remain in England. He consented, believing

it to be God's will for him. In that year he opened his first Home for boys at 18 Stepney Causeway. In 1873 he married, and then, assisted by the generous gift of a house, he started a Home for Girls at Barking, which eventually developed into the present Village Home.

Dr. Barnardo's Homes grew and expanded. Homes have been opened all over the kingdom, until today, over ninety years after the rescue of Jim Jarvis, they care for 7,500 children (the largest family in the world), and over 150,000 have passed through the rescue doors.

One day a boy asked Dr. Barnardo to allow him to enter the Home for boys at Stepney. This the Doctor was willing to do, for the lad was in need, but unfortunately the Home was already full; and so "Carrots" (the boy's nick-name) was given money and asked to return a week later, when room would be found for him.

Before the day fixed for his admission the boy was found dead from privation and exposure. Ill-clad, under-fed, and without proper shelter, he had been unable to withstand the severe weather. Barnardo later confessed that he could not rid himself of the feeling that in some way he was responsible for the boy's death, since he had turned "Carrots" from his door. After many hours of thought and prayer, he erected over the door of the Home a signboard, which read; "No destitute Child Ever Refused Admission."



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This has been the Charter of the Homes ever since, and in spite of many difficulties — for often the need has outrun the rate of financial aid — this act of faith by the Founder has been honorably observed and the Homes have always been willing to admit — and still admit — any destitute child at any hour of the day or night.

Barnardo died in 1905 at the age of sixty, worn out in the cause of children, but not before he had rescued over 60,000 little ones and had made both the public and the government far more aware of the problems of childhood, and brought a marked improvement in conditions in schools and institutions.

The work started by him has gone on, and a further 90,000 children have been admitted in the Homes since the good Doctor died.

Since the war, the policy of the Homes has been to bring up their boys and girls in small family groups. County homes have been found for the children, and there are now 110 Branches.

It was the practice of Dr. Barnardo, and still is the practice of the Council of the Homes, to train every boy and girl in some trade or occupation in which he or she is able to earn sufficient to be self-supporting. With this in view, special Branches have been established, such as the Parkstone Sea-Training School in Dorset, where boys are trained for the Royal Navy and the Merchant Navy, and the William Baker Technical School, Goldings, near Hertford, where boys are trained to become carpenters, sheet-metal workers, boot-repairers, printers and cabinet makers. Girls can receive part of their training as Nurses either in the Australasian Hospital or in one of the Hospital Homes. They can also train as Nursery Nurses in one of the Nursery Homes. Others become librarians, shorthand-typists, clerks, etc. After training is completed suitable posts are found, and the progress of the Barnardo Old Boys and Girls is carefully watched, and any necessary guidance given or advice offered. Every effort is made to achieve the object that every boy and girl shall become a Christian and a self-supporting citizen, capable of taking his or her full part in the life of the nation.

CALDECOTT HOUSE, ABINGDON

THIS is one of the many homes, spread over the country, helping children in need of care.

Caldecott House we found to be a mixed home where brothers and sisters are kept together instead of being separated. The young children are divided in groups called "families", each under the care of two "aunties", one for the boys and one for the girls. In these groups they remain until they are fourteen, each sharing in the day-to-day activities of running the Home. The teenage children go into separate groups sleeping either in double or single rooms, taking care of their own clothing and in general looking after themselves.

All remain in the care of the Superintendent and his wife until they go out to work or to a Barnardo Technical School. One boy has secured an apprenticeship with the U.K.A.E.A. and another has gained a county scholarship to Oxford. In general, the boys appeared to have done remarkably well in their apprenticeships and in their endeavours.

The first "Gold Standard" Duke of Edinburgh award to be won by a member of a youth club was won by a boy at Caldecott House. A crippled boy was also the first to win the Bronze Award, taking



the course for normal boys and not the handicapped course. Three boys from the Home recently gained an award for rescuing a horse trapped by the floods, using canoes they had made themselves.

Government legislation has made no difference at all to the voluntary character of the work of Dr. Barnardo's Homes; they still retain their independence and still look to the public for the support necessary to maintain all their child-care activities.

The Homes are always open to the public: the Abingdon Superintendent, Mr. Walter Brampton, who works there with his wife, is glad to meet visitors.⁽¹⁾

Interest in the children is particularly welcomed on their birthdays and on festive occasions with invitations to the visitor's home, although donations should be sent to the London headquarters of Dr. Barnardo's Homes.⁽²⁾

Gifts of fruit, vegetables and clothing are always most welcome at the Home in Caldecott Road.

'Harlequin' was pleased to find that some members of Harwell had already visited Caldecott House and that the wives of some staff were giving regular help in the undertaking.

Caldecott Fete: Saturday, May 27th. Those who may not like to visit on their own will remember the *Open Day* fixed for Saturday, June 24th, when the staff and children will be standing by to take you round the Home.

⁽¹⁾ *Caldecott House: Abingdon 563.*

⁽²⁾ *18-26 Stepney Causeway, E.1.*

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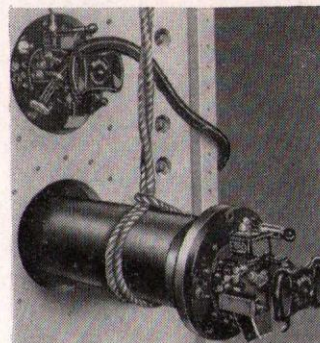
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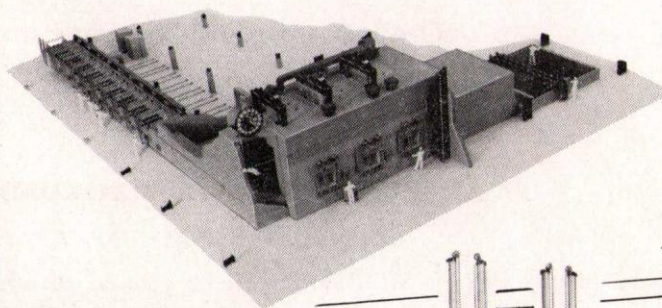
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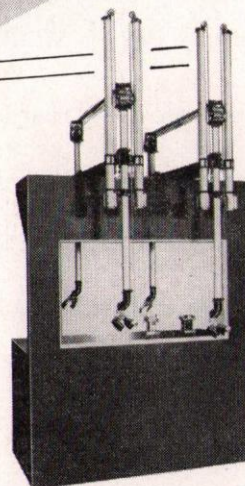
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THE COAT OF ARMS — GENERAL SERVICES DEPARTMENT

The Coat of Arms was designed by a triumvirate of four-per-centaurs seeking alms. The shield is divided into six segments. At the top is shown a storeman militant in a cavity sable over a legend non veritable; a nymph kneeling with aqua pura in a bucket standing; a sausage rampant in a queue dormant CL not CDLIII. The inferior row depicts a coach omnibus and obsolescent with a cheval courant dieselbus non est; domus desirable sans tenant; penguins proliferating ex presses printing. The zigzag lines symbolise the normal methods of administration.

The supporters, the beasts on either side of the shield, are fantasticons — fabulous, ferocious, heraldic non-conformists. The sinister one curiously enough is the chien guardant leading a constable bitten sedentary on his grass. The more dexterous beast depicts staff supportant divisionales complete with têtes duplicantes and mains tripliques right, left and underhand. In the field is a serf seated regardant chevaux (slow).

Surmounting the shield is a helmet worn on the heads of conflagration crushers. The mantling sprouting from the helmet is printed black on white (see Rep. 11).

Above the helmet is a sun of Scotland, and this is the only part of the arms that can properly be independent of the whole. The motto "the least from the most" can be more freely rendered "there will be no increase in complement".

(for 'Harlequin's' 'Coat of Arms' Competition, turn to next page)

“ Harlequin ” 1960 Twenty-Five Guinea Contest

Readers were invited to register their votes so that awards could be made based on the most eligible entries printed in *Harlequin* during the year.

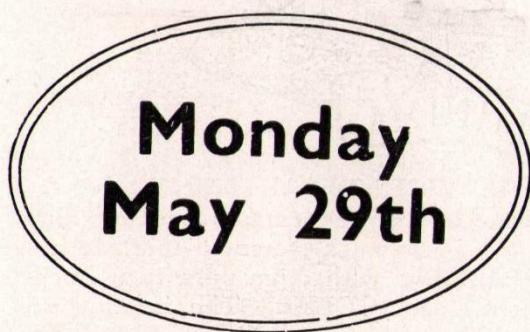
1. For the best informative article (not commissioned): *The Downs before Domesday*: Shirley Kay, Ickleton House, Blewbury.
2. For the best humorous article: *Making the Most of your Office*: “Henry Butler”—whose true identity will be revealed only to *Harlequin*’s auditors.
3. For the most original idea: *The Reason Why (I stay at Harwell)*: ROT (anonymity similarly concealed).

For 1961, awards will be Doubled

Ten Guineas

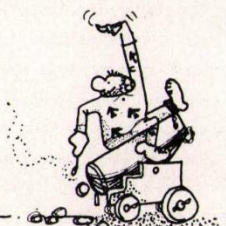
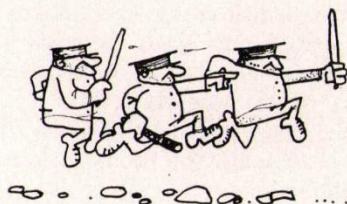
- | | | |
|---|--------|-------|
| I. For the best informative article, not commissioned | ... | ditto |
| II. For the best humorous article | | ditto |
| III. For the most original idea | | ditto |

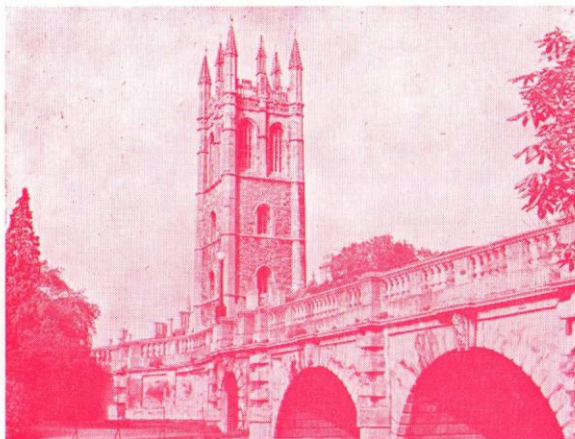
CREST COMPETITION. For the most diverting design for a Divisional or Departmental Crest — designed along the lines of the example on the previous page — and which can be printed in the Summer or Autumn issues of *Harlequin*, FIVE GUINEAS will be awarded. If not ready for the Summer issue (closing date May 29th) your entry can be delayed until July 31st for the Autumn issue.



This is the closing date for Round Two contributions for sections I, II and III.

The address is “HARLEQUIN”, 329, for *internal* mail; “HARLEQUIN”, A.E.R.E., HARWELL, DIDCOT, BERKS, for *external* mail.





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