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Harlequin

Leisure Magazine of the United Kingdom Atomic Energy Research Group and Associated Organisations

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COVER PICTURE

A CHRISTMAS CARD-LIKE SCENE ON A BERKSHIRE FARM

Vol.XXVIII No. 11(106)

. . . FROM

THE DIRECTOR

So much has happened during this year that it is extremely difficult to present a brief summary here. Perhaps the most outstanding thought in our minds is the energy situation. The fourfold increase in the price of oil has created difficulties in the UK as elsewhere and has produced an energy crisis which has affected the climate in which Harwell works quite considerably.

The Government's announcement in July to build the British SGHW reactor ended the long public debate over the merits of the British SGHW versus the American LWR, the Canadian CANDU reactor and other systems. We are of course all pleased to welcome this vote of confidence in British technology. The decision does not, however, completely rule out all other systems for the future and these are still being looked into with interest. As many of you will know I have been chairing a study group which has been looking into various aspects of the American LWR, and in the spring I led an Authority team to the USA to spend some time looking at their systems. My report is nearing completion and will soon be with the Nuclear Inspector.

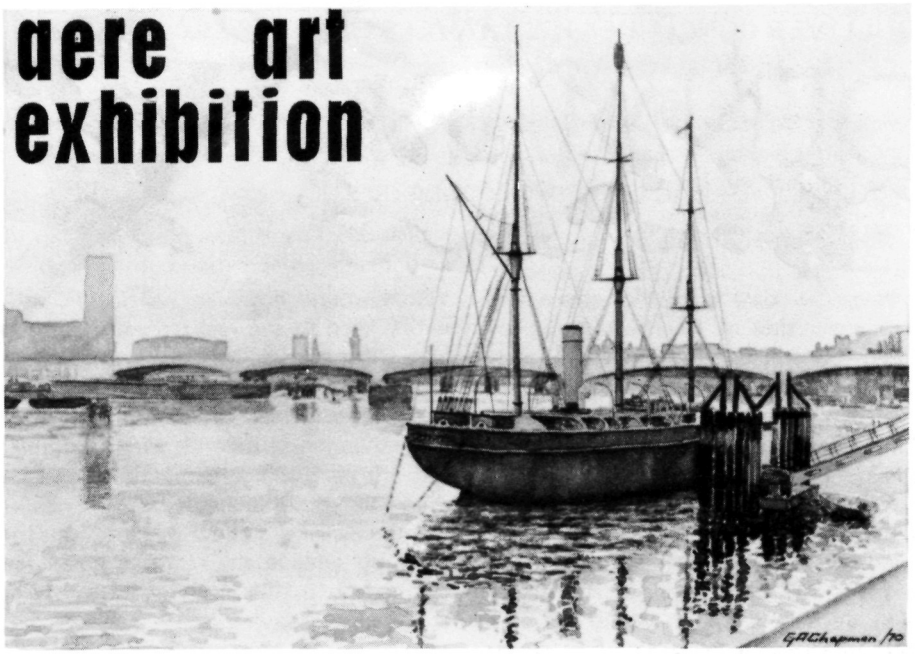
One of the results of Government thinking on energy is the Energy Technology Support Unit (ETSU) which was set up within the laboratory in April after an announcement by the Secretary of State for Energy. Dr. Dawson, who heads the Unit, works closely with the Department of Energy, and thus I am closely involved both as Director of Harwell and in my new role as the Chief Scientist in the Department. ETSU is working primarily on programmes of new energy resources and energy conservation and I regard it as very important for Harwell because it pushes us into the forefront of energy laboratories and ensures contact with all major energy producers and consumers.

Within the Research Group itself it is very exciting to see all the programmes of work developing and new ones beginning. The Industrial Programme, both non-nuclear and applied nuclear, is doing very well indeed and I attach very special importance to it because it gives a unique interface with both industry and Government Departments in this country. The rundown of staff at both laboratories which has been carried out for some years has now stopped and the laboratories are stabilising their numbers. In fact there has been sizable recruitment this year and a number of staff have joined us since the spring. I see this as being very significant to the Research Group's standing because it is public recognition that there is an important job for us to do, and we can now recruit to get the right people into programmes where they are needed.

My appointment as Chief Scientist in the Department of Energy at the beginning of July is one which is taking up a great deal of my time at the moment. I find the post very challenging and of course, as yet, I am still learning what the job is all about.

May I end this note by wishing you and your families a peaceful Christmas from my wife and myself, and hope that the New Year will bring new achievements and success to you and to the laboratories of the Research Group.

aere art exhibition



"Discovery in the Thames" by Gordon Chapman (Eng. Div.)
Work by other Harwell artists will be featured in later issues.

The seventeenth annual AERE Harwell art exhibition in the Cockcroft Hall gave an overall impression of decrease in quality art exhibition in the Cockcroft Hall gave an overall impression of decrease in quality with increase in quantity. The general standard seemed to be lower than in previous exhibitions, probably due to the absence of works by locally established artists and the increased number of exhibits by relatively inexperienced painters. The format of the exhibition was also—unavoidably—disadvantageous, due to some overcrowding and shortage of viewing distance from many of the paintings.

Of the limited number of worthwhile landscapes in oils, C.B. Scott-Keston's "The Barn" was perhaps the most impressive. The chromatic complementing of the landscape low key greens by the red-brown barn was artistically done without the usual over-contrast too often found, and the soft-sensitive brushwork gave a misty, lyrical quality to the painting.

The aesthetic, non-conformist composition contributed to the charm of "Duckpond" by Pamela Gibbons. The cool, neutral hues and delicate tones of this small oil painting were handled in an attractive impressionistic style. In a gentler style, but equally impressive, was "Dovedale, Derbyshire" by Mrs. L.V. Dolley. A rather soft aspect of this countryside was depicted by the use of subdued rich autumn tones and pleasing atmospheric perspective. More imaginative was Mrs. Dolley's still-life "Treasured Things". Here, a delphian, non-stylized composition is achieved by the use of quiet brown, red and green colour masses of fascinating bric-a-brac.

The paintings of E. Storey could never be criticised as stereotyped, although the quality fluctuates from time to time. His "naïve" approach is shown in his evening impression, "The Harbour", with a fine rhythmic opposition of line and form. The lowering purplish grey background with high-lighted water was balanced, both in tone and form, by slightly distorted boats and spidery black cranes.

D.J. Warren in his "The Mill, Sturminster Newton" has used heavy but controlled brush strokes to convey the texture of the subject. Effective light and shade of mainly green-blue hues tended to make the tones hard, but none-the-less there was an individuality in the technique.

The characteristic portrayal of facial expression with flat, uniform medium was seen in the excellent portrait, "Mrs. Phyll Craig", by Jessie Mole. There was superb suggestion of the philosophical contentment found in the active elderly in this discerningly painted portrait of a lady occupied in pottery. Even the posture of the hand contributed to the feeling for the subject. "Sue", by Cynthia Davis, presented a more idealised, lighter aspect of portraiture. Non-fussy brush work with rather homogeneous, obtuse tones gave the painting an unostentatious quality which showed an appreciation of understatement in portraiture and still conveyed something of the model—which seemed to be a certain tenseness.

Two paintings in gouache impressed by the obvious sympathetic use of the medium. G.C. Best's "Amroth Beach" was depicted in clean, definitive line, the spotted, pointillism-like pebble foreground being enhanced by a plain, subfuscous middle-distance. The absence of sky was another pleasing feature. Doris Burrell's gouache "Maytime" was not one of the best examples of this artist's work but nevertheless was attractive, well painted and imaginative. The flash of pink blossom and spiky, semi-abstract trees was emphasised by a background of dull earth colours and sombre greens.

A usual feature of this exhibition is the fine water-colour work and excellent drawings. This year was no exception. Of the several good water-colours, two were particularly worthy of comment. Rachel Houghton has previously shown an expertise with this medium, and her "Spring Landscape" was well up to her high standard. Light flowing strokes with broad, clean washes gave this skilful composition a spontaneity and freshness. Another of her exhibits, "Winter Trees", was more imaginative in treatment, having a neutral, cold grey-blue motif with fingers of bare trees rising from an abstruse base. " 'Discovery' in the Thames" by G.A. Chapman was a pleasing example of conventionally used water-colour with fluid, loose washes and clear delineation. A cool, retreating background used to highlight the well-drawn main subject indicated a good sense of colour value.

Nigel Douglas's "Shasta Daisies", although the least striking of his several paintings, was possibly the most impressive by virtue of its freshness and impulsiveness. Done in his inimitable free impasto, the blue-white daisies bursting from a sombre, convoluted background had all the exuberant vitality characteristic of this artist's work.

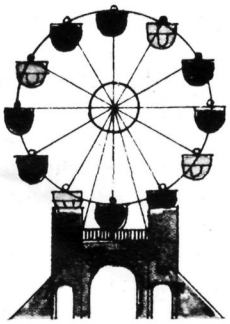
The tongue-in-cheek, cartoon-like, delightful pencil drawing, "The Quay", by Vic Hitchman supplied a welcome relief to the too many ponderous, artifacted oil paintings round about. Mr. Hitchman reveals a whimsical insight into the earthy antics of a quayside including a buxom virago being slapped with a fish and a mongrel-looking dog doing its doggy thing to the lamp-post—and all drawn with sure professional line and proper atmospheric perspective.

Our thanks are due to G.C. Best for organising the exhibition, which, although not so successful artistically as in recent years, attracted a record viewing, and over £56 was collected for Guide Dogs for the Blind. V.J.H.

GULLIVER CONCLUDES HIS TRAVELS IN

DENMARK

– land of the welcoming heart!



When the day came for the more commercial side of Denmark to be explored—Copenhagen—we made an early start as there were some 200 miles to be covered by afternoon. The speed limit of 50mph imposed during the oil crisis still remains—not so much, we were told, to help the balance of payments as to enjoy the reduction in accidents which it was found the ban brought about. Certainly, it works. It is enforced on the better roads by helicopters, in which the crew time your passage between marks on the road and can radio down your number to the ground patrol. We did not object: petrol was 70p per gallon for 4-star, the scenery pleasant, and it is nicer to have the only corpses on the roads those of hedgehogs, and the nearest to an accident seen in several hundred miles, a 10mph near-miss at some traffic lights.

We crossed from Jutland to the Island of Funen by one of the two modern bridges and with no toll to pay; tickets had been booked for the ferry to take us from Funen to Zealand. Soon we were on the outskirts of the capital in which live one million out of the country's five million Danes.

Somewhere, however, we had taken a wrong turning and realized we should be on a different side of the City. In finding our address for the evening we were once again to be helped by the friendliness of the inhabitants, one of whom climbed into the back and gave directions until we drew alongside an empty taxi. Then it was once again "Follow that car" until it drew up outside the required hotel. He climbed out of his taxi for a handshake and then was gone!

After moving our cases in for the night we made for the city centre, not by road but by train. First stop was the Tivoli with its gardens, open-air theatres and rooftop restaurants: all that one hopes the new Battersea Park might become, but it is consoling to remember that the Tivoli has been evolving for 300 years, and that the idea came from Britain's Royal Vauxhall Gardens, which were enjoyed over here until the middle of the last century.

It was expensive, of course, as was the coffee we sipped outside a hotel on one of the main streets—nearly one pound for two cups—but we were in Copenhagen, a city which has earned a reputation as the Paris of the north. In the highest sense, as a centre of culture and art the Danes are proud of this, some of them referring to Paris as the "Copenhagen of the South"!

There is another side, as there is in Paris, of course, catering for the tourist industry. We found it down some side streets where "Live Shows" were discreetly advertised. Had I gone in I imagine I would find no Danes, but representatives of all nations looking not so much at the performance as at one another, and wondering what sort of person it was who would pay good money to be there.

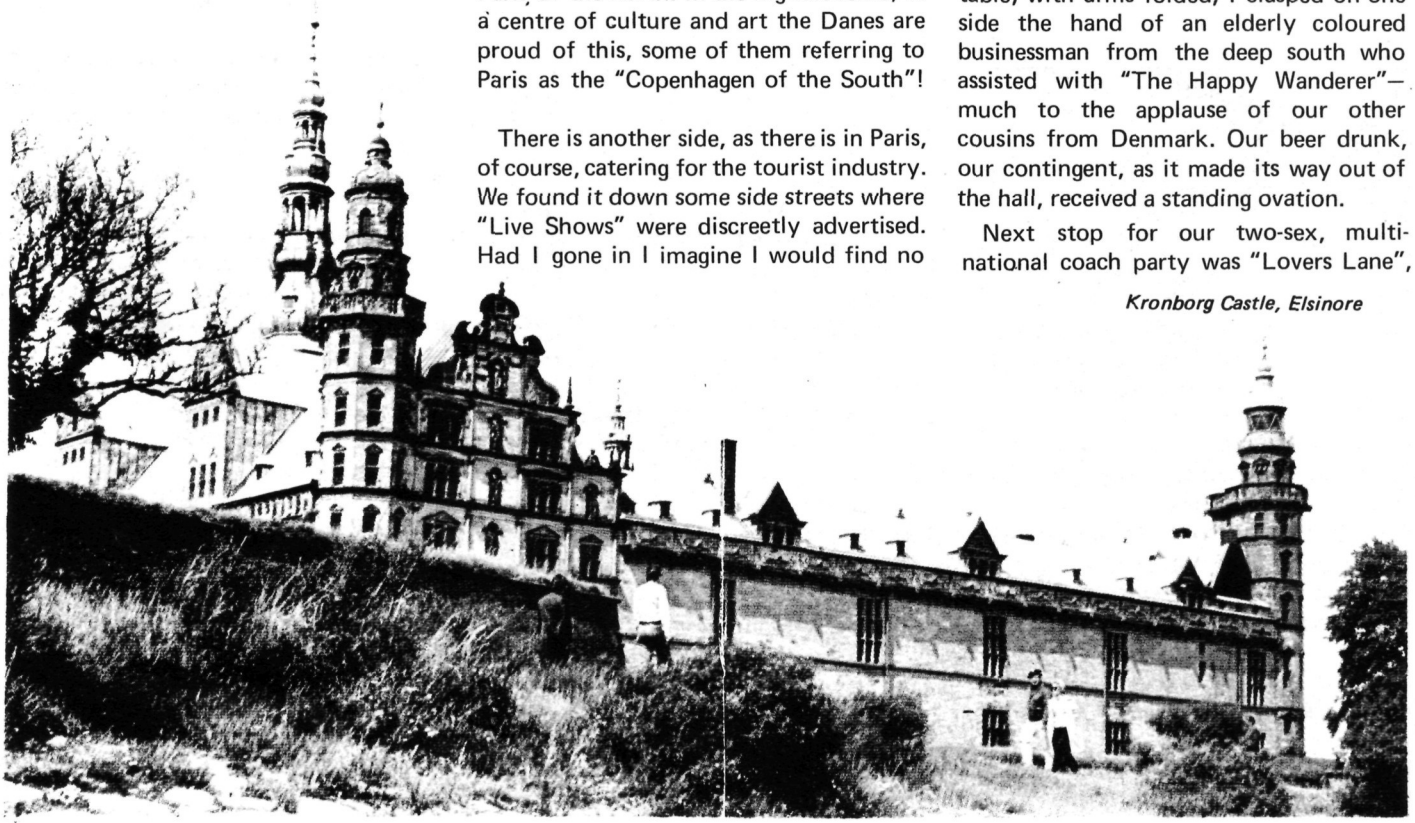
Curiosity, in the same way, caused us to enrol for an evening's study of the night life conducted by coach from the City Hall Square. After a short drive through the illuminated city, we were to visit three different night spots, to experience what the hand-out described as "The Gay Uninhibited Atmosphere of the City".

Our lady guide stood at the front of the coach, and introduced all this in a variety of languages; and then we were off.

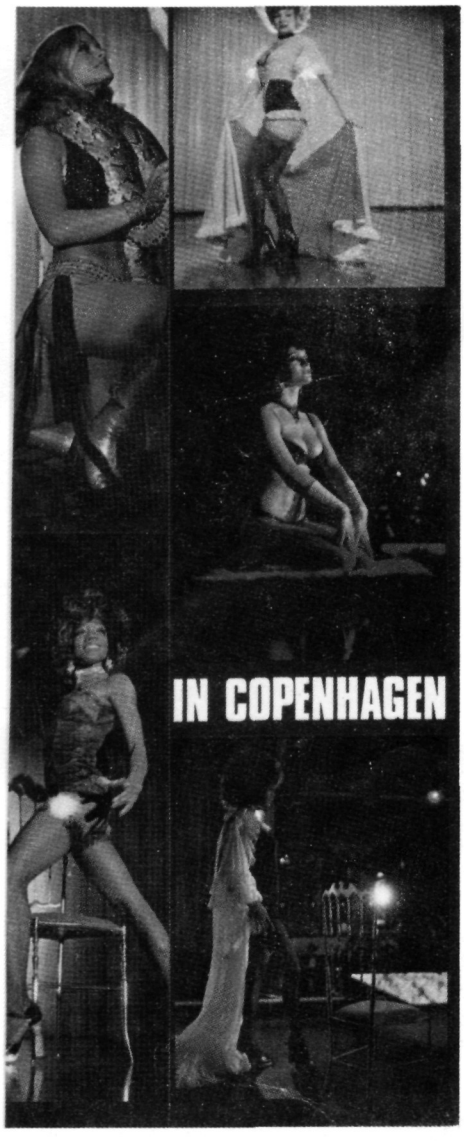
First stop was Vin and Ølgod "To meet a variety of Danes—including diplomats, politicians, business-men, some of our lovely Danish girls and a good sampling of ordinary Danish working men—all enjoying a wonderful stein of Danish draft beer, fresh from the tap, or singing old Danish favourites!"

The beer cellar was once the City Jail, with heavy chains still on the walls, but the atmosphere of young people, beer, song and music combined in a gaiety that was infectious. Even the Japanese in our party were called on for a song, which was set out for them in the song book provided. Never have I felt more at home with our cousins from America than when it came for a song in English. Standing on the form beside our long table, with arms folded, I clasped on one side the hand of an elderly coloured businessman from the deep south who assisted with "The Happy Wanderer"—much to the applause of our other cousins from Denmark. Our beer drunk, our contingent, as it made its way out of the hall, received a standing ovation.

Next stop for our two-sex, multi-national coach party was "Lovers Lane",



Kronborg Castle, Elsinore



described as an "International strip-tease variete night club", where, in contrast, we were served with champagne. In contrast, too, the atmosphere was very subdued, and although the club remained open until 5am we were not sorry to be moving on.

The night tour ended in traditional Copenhagener way with open-faced sandwiches, wine and coffee while watching a floor show. This was even duller, but it was a consolation, as we were dropped back in the city centre at midnight, to reflect that if the night spots had been charged for individually, and with transport tips, cover charges and drinks not inclusive, the evening would have cost much more than nine pounds a head.

With our hotel on the north side of Copenhagen, we were already en route the following morning, taking the car north to Kronborg Castle at Elsinore, which Shakespeare had made the setting of Hamlet. From the ramparts and fortifications the old Swedish town of Halsingborg could be seen two miles across water which, during a recent cold winter, could be walked across. More memorable for me than the treasures or the structure, like a vast ship at the edge of sea, was what lay underneath. Here were the largest, most gloomy dungeons I have ever seen, and my sympathy went to unknown political prisoners who had been held in the gloom of one triangular-shaped chamber which, by a partition, could be made smaller and smaller. It was pleasant to remind oneself that this would have been at least 300 years ago; pleasant also to find the bright sunshine once again as we continued our way to explore the beaches of the northern coast.

Returning to our hotel by a different route, after a day of sunshine and pleasant scenery, there was no temptation to return to the man-made pleasures of Copenhagen's night-life. After dinner at the hotel, Danish television was enjoyed over coffee before a walk down to a nearby lake.

The following day was the one for catching the ferry boat back to the Island of Funen, then crossing back to Jutland for the boat from Esbjerg. This was done in good time, allowing two hours near our destination's end for a final swim at the beach we had come to love.

Sitting on the boat watching Denmark grow smaller on the horizon, I reflected that the greatest attraction of the country is the Dane. Although climate and scenery

are important, more to be valued is a way of life that has no cleavage between town and country, nor between class and sex, a way of life that seems more balanced and enlightened.

Disembarking at Harwich, one felt that the traffic controller, with loud voice and with braces showing, compared badly with his Danish counterpart. As we drove out of the port, trying to get used once again to driving on the left-hand side, we wished we didn't have to, that soon Britain would get further in step with the rest of the world. When we came to the major road with a difficult turn across the traffic, we felt that visiting Danes would miss the traffic lights which their own Authority would have installed here.

As we waited to cross, had we heard a request: "Please to tell me the road for Harwell" . . . or "Oxford" . . . or even "The Shakespeare Country" we should immediately have said:

"Follow this car!"

With the staff of the Bungalow Stables are, left to right: Sir Ralf Glyn, MP for Abingdon, Mr. Len Cundell, Mr. Jack Waugh and Pat Lodge, head lad.

HARWELL'S FIRST ESTABLISHMENT

More original research by John Butterfield (Eng. Div.)

The laboratories of the Atomic Energy Authority at Harwell were built on the site of a pre-war airfield. The Air Ministry had purchased part of this land from a Mr. Leonard A. Cundell, racehorse trainer. His establishment consisted of a large bungalow together with about 30 loose boxes and ancillary buildings. It was situated on the south eastern corner of the site, roughly where the Chilton prefabs now stand.

The many successes of the Bungalow Stables and of Len Cundell have been amply recorded elsewhere, but it is interesting and often amusing to look back at the lives and work of the original occupants of the site.

Len Cundell moved his horses into the "Bungalow" stables from the "Lime Tree House" stables in Chilton village at the latter part of 1923. Already he was well-established as a trainer, and had produced many winners, both on the flat and over jumps. His assistant trainer was J.C. Waugh, his nephew, who had served his apprenticeship at "Lime Tree House" under Len Cundell and himself won many races over hurdles for the Chilton Stables.

As can be seen from the group photograph, some of the staff of the early 1930s would today still have been at school. The apprentices came to Len Cundell from all over the country, some from very poor homes, some from wealthy families, but all sharing the one burning ambition—to be a jockey. Very few were to become famous in this most competitive of professions but most of them did well. Probably the best remembered apprentice from the Bungalow Stables was Charlie Spares, who later won the Derby on Arctic Prince for Willy Stephenson of Royston.

Although the lads were small in stature, they were as hard as nails. Each lad had to care for two horses. It was a seven-day week, and each day lasted from six in the morning till six in the evening. When the lads first came to the stables, many of them had to be taught to ride, and they were given lessons on a quiet hack before being introduced to the highly spirited thoroughbreds.

One young apprentice, a little cockney, had his first lessons on the novices' hack, a very gentle animal which, being rather a common sort of horse and fairly aged, had a very broad muzzle and somewhat ponderous lower lip. Eventually, the great day came when the boy was allowed to ride out with the string, but when the old horse felt the turf beneath him he got excited and took off, bucking his worried young rider "out of the front door". The boy held on to the reins and was dragged for a few yards until the good-natured horse decided to stop. Jack Waugh galloped up to make sure no bones were broken and found the lad sitting under the horse and looking with astonishment at the rather large mouth. "Blimey, guvnor", he blurted apologetically, "No wonder I can't hold him. He's got double fick lips!"

On another occasion, a rather wild two-year-old took off with a young apprentice and threw him rather heavily. Once more Jack Waugh went to investigate, and found the rider lying quite motionless in the grass. "Are you all right, lad?" he asked, fearing the worst for the limp figure. Slowly one eye opened: "I'm all right sir, but I'm unconscious—don't tell anybody!"

The little chap in the centre of the group, with the very large cap and holding the headcollar, looks as though butter wouldn't melt in his mouth, but it seems he was a holy terror. His name was Horace Whighthouse, but they nicknamed him Dumps. He came from a fairly wealthy family and was probably well used to having his own way. One day he excelled himself by attacking Jack Waugh with a stable fork. Jack disarmed him and made sure he wouldn't try such tricks in future, but his temperament made him unsuitable for working with blood horses, and he eventually left racing, while he was still in one piece.

The lad holding the horse, G. Bowen, was later to become J.C. Waugh's head lad, and seen standing next to him is Lesley Tidy, who rode many winners before becoming Willy Stephenson's travelling head lad.

Mickey Orbell, who worked at the stables, but is not in the photograph, had a special way with horses. One of his charges was a horse called All Green. This horse had a special way with people—he hated them—he was a good horse, and had won races, but in the stable he was a vicious devil who had left at least one scar on nearly everybody in the stable, including the trainers. Nobody was sorry when he was sold to a Japanese buyer and Orbell walked him up the ramp for the last time—or so they thought. The lad had hardly time to celebrate All Green's departure on the train before he was bundled into a taxi and sped off to Southampton. It seems they had unloaded All Green from the train, but they were quite unable to get him onto the boat. They were not novices: they had tried everything, from cajoling to bullying, but All Green would have none of them. Several people had already been hurt before they decided to fetch the horse's own handler, the one person who had his confidence. On arrival at Southampton, Mickey Orbell walked straight up to the horse and took its head. Telling everybody else to move away, he gave the horse a tit-bit and a few quiet words, then led him straight up the ramp, over the water, as though he was walking into his own box at the home stables.

Horse transportation presented many difficulties in the early 20s. Len Cundell's horse box driver, a man called Tom Barlow, was the first man in Berkshire to drive a motorised horse-box. One can imagine that the horses could not have thought much of the noisy, smelly, solid-tyred contraption.

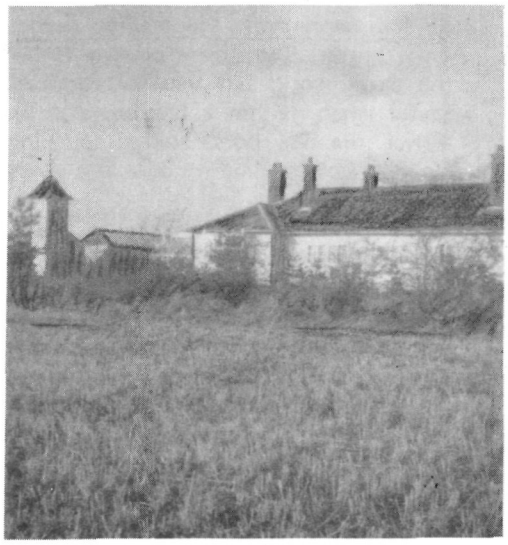
The principal form of horse transport, of course, was the railway, and Jack Waugh recalls that he would often arrive at Didcot station with a racehorse in the early hours of the morning, throw his kit over the horse's back and ride the animal home.

One cannot talk of the Bungalow Stables at Chilton without mentioning at least one of the famous horses they produced. Noble Star came to Len Cundell as a two-year-old early in 1929. Being the height of the depression, the stables needed more horses. They were pleased to see the extra work, but they were not so joyful when, within a few hours of his arrival, the new horse started coughing. He was isolated immediately and every precaution taken, but it was too late: Equine Flu swept through the stables like the plague. Every horse had to be taken out of training and rested; a bitter blow for the already oppressed trainer and his staff.

Eventually they broke the back of the epidemic, and one by one the horses were put back to work, including, of course, the much-maligned Noble Star. He was entered for the Peveril of the Peak Nursery Handicap on the old Derby track, and, as though to apologise for his bad start, he won the race by several lengths. By this time it was the end of the flat season and Noble Star's owner instructed the trainer to sell him on. But Len Cundell had seen great potential in Noble Star and he swore that the horse would not leave Chilton. With his brother, the late Frank Cundell, as joint owner, he bid 1000 guineas over the highest offer and the horse stayed in his box.

In 1930 Noble Star was brought out early and was in good, hard condition when he lined up against such horses as the mighty Hyperion in the Derby. A leading jockey was on top who had received strict instructions how to ride him. He was to hold the horse back until the last furlong or so and then let him come through the field. The Chilton stable backed their horse heavily. They knew that although he was barely 15·2hh he had the courage of a tiger and tremendous staying power. He liked to follow the other horses and, when they were beginning to flag, he was just getting his second wind. Men say it was the jockey who cost Noble Star the Derby. What happened nobody really knows. The jockey knew his job, he had ridden the horse at work. Len Cundell gave him his instructions, everything had been thought of, but as the tapes went up the fellow lost his head and took Noble Star straight into the lead, blowing him up, and finishing a very tired seventh.

It was a bitter disappointment for the Bungalow Stables, but nobody blamed the horse. Then Len Cundell introduced that famous jockey of the 30s, Freddie Fox, to Noble Star, and so started the perfect partnership. In 1931 they came out to win the Ascot Stakes, beating among others the legendary Brown Jack. Noble Star then romped home 10 lengths ahead of his nearest rival to win the Goodwood Stakes and, still not satisfied,



The Bungalow Stables

Len Cundell with Noble Star

went on to win the Cesarewitch and the Jockey Club Cup at Newmarket, all in the same year. This foursome constituted a record that has never been broken to this day. In 1932 Len Cundell retired Noble Star to the Overtown Stud at Wroughton. The little horse with the great big heart had come in disgrace but left in a legend.

Noble Star stood for over 20 years at stud, passing on those valuable blood lines to his offspring, many of whom were great winners. None was so famous as the mighty Crudwell who, in a racing career spanning 11 years, won no fewer than 50 races, on the flat, over hurdles and steeplechasing. This amazing record also has never been beaten to this day, and when Crudwell retired he was honoured by being chosen as the celebrity at the Horse of the Year Show in London.

The newspapers were always phoning up and asking for inside information, which led to an amusing incident when Noble Star won the Cesarewitch. One morning, just before the big race, the trainers came in for breakfast after riding out with the string and giving Noble Star his last try out. Mrs. Cundell asked how the horse had run, and Len, winking across the table at Jack Waugh, replied "Oh very well, but he gave a couple of little coughs". In fact, the horse had done no more than clear his throat. Nothing more was said and later in the morning the phone rang and a leading Daily asked after the horse's condition. "Oh he's very well" replied Mrs. Cundell innocently, "But he was coughing a little this morning". Overnight the odds went out from 100–8 to 20–1 as the gullible punters hedged their bets, fearing the horse would not be running, but when he passed the post lengths ahead of the field the Chilton stables and those in the know made a killing. Two days later an anonymous post card arrived—"I'll make you b. well cough".

When Noble Star was entered for the Jockey Club Cup at Newmarket, the two favourites in the betting belonged to the Aga Khan. The great man saw Len Cundell in the paddock and jokingly asked him if he had backed the favourite. Len told him his money was where he thought it would do most good—on his own horse. His quiet confidence seemed to upset the Aga Khan, who was quite sure his horses were invincible and scoffingly offered the trainer a side bet—something stupid, such as 100 guineas to a good cigar. Of course Len accepted, but when his horse was pronounced winner he couldn't find the Aga Khan. Later his winnings were brought to him by the disgruntled head lad of the losing stable.

Len Cundell married in 1927, and his children, Mathew and Jane, were born at the Bungalow Stables. Strange to relate Mrs. Cundell was not really interested in horses. The only time in her married life she ever rode was when her children were growing up and had their first ponies. She enjoyed the excitement of horse racing, and often accompanied her husband to the bigger meetings when they had horses running.

Her life as a successful trainer's wife consisted of running the house and entertaining a constant stream of guests: visiting jockeys, owners and trainers, their friends and colleagues from the world of the turf. Obviously she had household staff to help with the work, but the responsibility was hers alone and, without the gadgetry of the modern household, her life was not always the idyllic dream we may suppose.

So this was the happy and rewarding life shared by the Cundell family and their staff, when the civil servant appeared and told them they would have to leave their home as the land was wanted for an airfield. Len Cundell fought hard to keep his property, and the little man with the briefcase tried to be fair. He offered to build another bungalow, exactly like the one at Chilton, if they could find the land, but Len was not concerned with the buildings so much as with his precious gallops.

To a racehorse trainer these strips of turf where his horses train are his most valued possession. They are not just long pastures which can be ploughed and seeded at a few months' notice. They must be positioned on chalk downs for drainage, and normal grasses will not flourish on such poor soil. The herbage is indigenous, and has taken anything over 100 years to mature.

After searching the country Len Cundell finally bought the Blewburton Hall Estate at Aston Tirrold—eleven hundred acres of good land and buildings, with the gallops on the downs above the village. The Cundell family moved out of the Bungalow Stables in 1934.

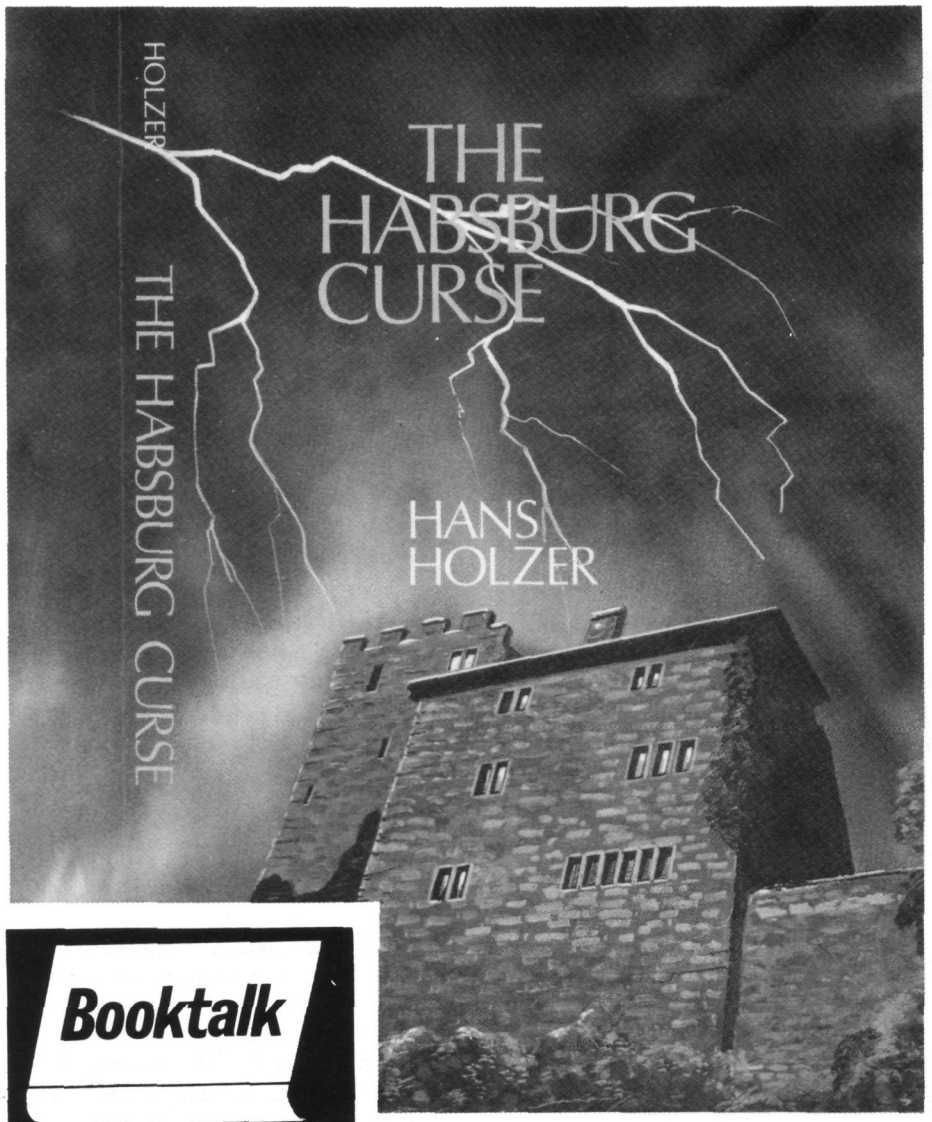
Mr. J.C. Waugh took out a licence and built his own stables in Chilton village. He retired in 1964 after producing 870 winners.

Frank Cundell, another nephew of Len's, had just started as an apprentice at the Bungalow Stables when they moved to Aston Tirrold. He later took over his uncle's stables and is still training there. This year he celebrated his 1000th winner, a fantastic achievement in any man's lifetime.

Ken Cundell, now training at Compton, was another protégé of Len Cundell, and was secretary to the Chilton stables. His son Peter has taken out a licence this year to train his father's steeplechasers and is already leading in the winners. Between them the Cundells have upwards of 100 horses in training at any one time.

Mrs. Leonard Cundell is now living in a pleasant cottage with her son Mathew. She is surrounded by trophies, rose-bowls and cups, but she has given dozens away. Now in her 81st year she still drives her car and enjoys doing her own housework —a truly remarkable lady who can remember her husband's triumphs as though it were only yesterday.

Mr. Leonard Cundell died at Aston Tirrold, at the peak of his career, when he was 59 years old. He was a man respected by everybody. What a legacy he left to the British turf, and so much of it started here on site—near the plaque to the airborne forces—in the establishment he called The Bungalow Stables.



Booktalk

The Habsburg Curse by Hans Holzer (Bailey Bros. & Swinfen Ltd., Folkestone. £2·50)

The story of the Habsburgs, an Austrian family who held positions of power and influence for a period of 1,000 years is told as a string of incidents covering that period. The incidents depict misfortune and disaster and these are alleged to be due to curses placed on this family by those who had suffered particularly at its hands. I do not find this too convincing. The histories of many families in power during this period, when the expectation of life was quite short, show equally troubled times and concern families who had, presumably, no curses placed upon them.

Mr. Holzer's use of mediums to sense past events connected with the Habsburgs at the places reported is quite interesting. His other descriptions of recent communications with former Habsburgs via mediums sound convincing. There are countless examples of this type of happening in the literature and I am quite happy to accept a good fraction of them as authentic without understanding the mechanism. What really puzzles me is the purpose.

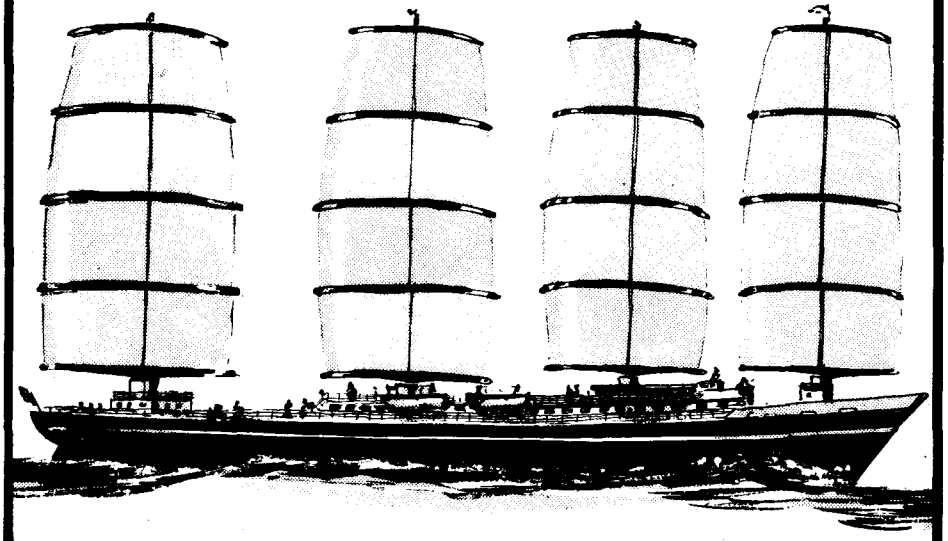
The Truth about E.S.P. by Hans Holzer (Bailey Bros. & Swinfen Ltd., Folkestone. £2·50)

This is a short book which tries to deal with a very big subject in a popular way. If its aim is to convince you that there is a lot of activity and communication associated with human minds which is extra to our normal sensory perception, then I think it succeeds. The tremendous weight of well-authenticated incidents cannot fail to convince, but is also very confusing. As an ordinary reader I would like to know how frequently these various events happen, how many mediums there are, what types of E.S.P. happen to virtually everyone, what patterns of behaviour are apparent from studying many cases, . . . and many other questions. But this is only a short book.

J.P.

THE DYNASHIP

A new hope for sailing ships



BY BILL BEAVIS

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It is only natural that with the recent energy crisis and the reminder it brought that we shall one day run out of fossil fuels, man should turn his mind once again to the sailing ship. After all it had stood him in good stead for something like 10,000 years. But in Germany, at the Schiffbau Institut of the University of Hamburg they have had the foresight to develop a sailing cargo ship already and if everything goes to plan she might even be sailing next year.

She is known as the Dynaship, the word comes from aerodynamics and she is the brainchild of Wilhelm Prölss, an aircraft designer and civil engineer. The most striking feature of her design are her very tall (200 ft) completely unstayed masts. This is for maximum aerofoil effect so that the wind has nothing but the sails to strike against and is not diffused or broken up by rigging and stays. In fact anything on the ship which might loosely be described as "windage" has been entirely abolished. Even the sails, which are made of dacron and set into trackways top and bottom on the yards, have no gaps between them. They have the appearance of square sails but instead of being furled to the yard above in the conventional way they are wound out or wound in (furled or set) like drawing room curtains, automatically by an officer pushing a button on the bridge. It takes only 20 seconds to set or furl a sail and from his position he can control every sail on the ship. There is no need for any of the crew to go aloft and even in the event of machinery failure the sails can be controlled by a manual system at the foot of the mast. The sails are wound around a drum which is set inside the mast so that once they are furled they disappear from sight.

The yards are made in stainless steel and are aerodynamically formed like ribs in an aircraft's wing. They are fixed permanently to the mast so instead of having to be individually trimmed, the entire mast is made to revolve to the direction of the wind. And moreover, because there are no shrouds to foul, the mast can be trimmed fore and aft when beating into the wind. In practice however the masts are automatically trimmed with each one striking a successively sharper angle to the wind.

The ship will certainly represent the ultimate in sailing ship design. In wind strengths to force 4 to 5 she will be 60 per cent faster than the traditional 4-masted barque and almost three times as fast as a 7-meter yacht with a beam wind. Another consideration, in its commercial application, is that whereas in winds above force 4 the speed of a motor ship drops, the speed of a sailing ship increases.

But obviously speed of a sailing ship is entirely dependent upon wind and the assumption that it will continue to blow; for even the most sophisticated sailing ship can be becalmed. In this eventuality the Dynaship will be able to use her auxiliary motor. This will drive a propeller mounted on the rudder through a hydraulic transmission at a speed of about 8 knots. The motor will also power the rigging machinery, drive the ballast pumps, air conditioning etc. It will be no larger than an equivalent sized motor ship's auxiliary and in the sailing ship it will be mounted on deck. The Institut claim that this will give her sufficient power to assist her in clawing off a lee shore or to traverse those notorious areas known as the "Doldrums" in a little over two days.

Nowadays a modern sailing ship will also have the advantage of being able to utilise modern weather forecast techniques to help her find a favourable wind. She can avail herself of the pictorial transmission of weather maps or even, as it has been mooted, be automatically weather-routed by computer. In any event it will mean sailing greater distances – to navigate the boundaries of high pressure zones or to seek out a favourable wind – but this will be vindicated by the overall passage time saved.

It has already been shown that when a Dynaship is built, probably as 17,000 ton bulk carrier, she will compete very favourably with an equivalent sized motor ship. She would be able to offer considerably more cargo space due to the absence of below-deck machinery; her insurance premiums will be much cheaper because of a less associated fire risk; her manning scale will be smaller; her repair and replacement costs will be cheaper due to the fact that there will be no vibration which causes wear; her depreciation will be less because she will not so quickly become obsolete and finally of course she will burn next to nothing in fuel.

As for her speeds and her ability to deliver goods in a reasonable time there are even more surprises. The Institut estimate that on a run like the North Atlantic, where conditions have been well documented, she should be able to maintain average speeds of between 12 and 16 knots and even touch twenty knots at times. This compares very favourably with the 10 to 15 knot average speeds of the bulk carriers we have today. On a route such as the North Atlantic the winds are reliable for 85 per cent of the time, the Institut say.

The first Dynaship is at present being built for a West German shipowner. But little about the project such as its precise launching date etc., is known. However another Dynaship is being considered for possible use as a cruise ship. A Bavarian attorney Rudoph Zirn is behind this and already the very sophisticated masts have been ordered from the Stahlform Yard in Berlin. As a cruise liner the Dynaship should have a great appeal; able to sail to the remote areas of the world where the other ships rarely go because harbour installations and bunker facilities do not exist. Another advantage too will be the lack of vibration and noise, not to mention the novelty of being again under sail.

SCIENCE...

With the Energy Technology Support Unit set up in 1974, there is at Harwell a heightened interest in harnessing new sources of energy. The use of wind to generate power and the use of heat from the earth's core will be under consideration, but what of less conventional means? All ideas are being examined. "Harlequin" has received a copy of a paper by a scientist, F.G. Hawksworth, giving the power potential for a hitherto unexamined source, the ubiquitous dwarf mistletoe, whose seed has a dispersal velocity of about 60m.p.h.

In his paper the scientist takes for consideration the power-poor Southwest of America where ponderosa pine dwarf mistletoe occurs on $2{\cdot}5 \times 10^6$ acres. With 6×10^{11} seeds produced annually, the force of the seeds based on their weight ($2{\cdot}7 \times 10^{-2}$ grammes) and velocity (2540cm/s) he calculates as 8×10^{-11} horsepower. Multiply this by the number of seeds produced, and convert to conventional terms, and we have 67,000 kilowatts!

This is the potential of only one area, which can be multiplied further by the acres of mistletoe-infested pine, larch and hemlock waiting to be exploited.

The Harwell Support Group may be expected to come up with queries about the problem of harnessing the energy from the individual fruit during the 2×10^{-4} seconds when seed ejection occurs.

We believe that this scientist may be more successful in initiating a crash research programme in the States when he sums up the national advantages: (1) it would enable us to beat the Russians at another game because their mistletoe-power resources are puny by comparison; (2) by directing the seed power to more useful purposes than debilitating our forests, our trees' sense of well-being should be enhanced; and (3) it would negate the need for additional Colorado River dams, and thus help "Save Grand Canyon".

But who is this "F.G. Hawksworth"? We should like to discover more about him.

•••

CAN BE FUNNY— OFFICIAL

SUBJECT: Upon that baffling phenomenon, the scientist, and whether he is human.

METHOD: To engage, amuse, enchant, impress and charm the cultivated layman.

APPARATUS: A lavish and handsome volume entitled A Random Walk In Science, edited by professors R. Weber, E. Mendoza

THESIS: Scientists are, after all, human, and sometimes even playful and funny.

PROOFS: Various — from the writings and musings of scientists past and present, famous and obscure.

Does not the scientist who composed the following report display incipient humanity and inclination to humour?

"Little Willie, full of glee.
Put radium in Grandma's tea,
Now he thinks it's quite a lark
To see her shining in the dark."

Is not the story of how Aberdeen was found to lean over when the tide came in a permissible sample of generosity?

R. V. Jones was the scientist who discovered that there was a rhythmic change in the tilt of the Earth's surface, of the order of a few parts in ten million, due to the extra weight of water at high tide suppressing the sea bed.

"Our teacher said that Aberdeen slants when the tide comes in," wrote a schoolgirl to the scientist. "Our class does not believe this — but if it is true, we would like some information about why this happens." Mr Jones wrote back with diagrams and explanations about how the Granite City is shaken to its foundations.

Perhaps you will agree that the publication of the following scientific predictions reveals, at least among the Institute of Physics, a healthy disrespect for the infallibility of science.

■ "That is the biggest fool thing we have ever done," wrote Admiral William Leahy to President Truman in 1945, about the Atom Bomb. "The bomb will never go off, and I speak as an expert in explosives."

■ "As far as sinking a ship with a bomb is concerned," wrote U.S. Rear Admiral Carl Woodward in 1939, "you just can't do it."

And it was only 60 years ago that Lee de Forest was put on trial for "making misleading statements and misguiding the public" by saying that it would be possible to transmit the human voice across the Atlantic "before many years."

Can the scientist be entirely without that spark of humanity who "proves," absolutely deadpan, that Heaven is hotter than Hell, using data from the Bible, or produces a stress analysis of the strapless evening gown?

Even that epitomy of scientific aridity — metrication — can yield a smile or two, packaged by the man responsible for leading us into that wilderness, Norman Stone, Chief Information Officer of the Metrication Board.

A fathom, he informs us, originally meant the distance a Viking encompassed in a hug; the hagge of British Railways is the same as the distance between the wheels of a Roman Chariot, and did you know that "two fardels equal one nooke"?

And how's this for a science-at-bay saga: P. G. Tait, Professor of Natural Philosophy at Edinburgh University, calculated the maximum range of a golf ball — only to have his son take him out on the golf course and drive one much further. The reason was that, paradoxically, rough balls have less air resistance than smooth ones.

The final humiliation came when he found that the Romans had discovered this principle a millenium or so earlier, carefully puckering the surface of their sling shots to make them travel further.

"HARLEQUIN", G159, Bldg. 77,
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A MERRY CHRISTMAS

TO ALL

Outside, the December day may be dank and dismal, but inside the school the old theme is re-enacted, carols are stridently sung, verses are forgotten and remembered again and all is expectation!

Over the past weeks they have cut out their stars and bells, hung their gaudy ribbons, decorated paper hats, painted the manger, smelt the mince-pies and listened to stories of Christmas once again.

In primary schools throughout the land they know that the climax is near when classrooms are garlanded, the tree is dressed and corridors become tunnels of tinselled delight.

Chilton School, on the border of AERE, Harwell, relives the Christmas joy each year. These photographs, taken by "Harlequin", were shown in colour on BBC "Nationwide" last year as examples of school decoration at Christmas time: in one, the upper infants re-enact the nativity, and in the other the 5-year-olds try hard to believe that the portly figure really is Santa Claus, and not their headmaster.

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