

CHELMSFORD

# NEWS AND VIEWS

Marconi  
Radar Systems

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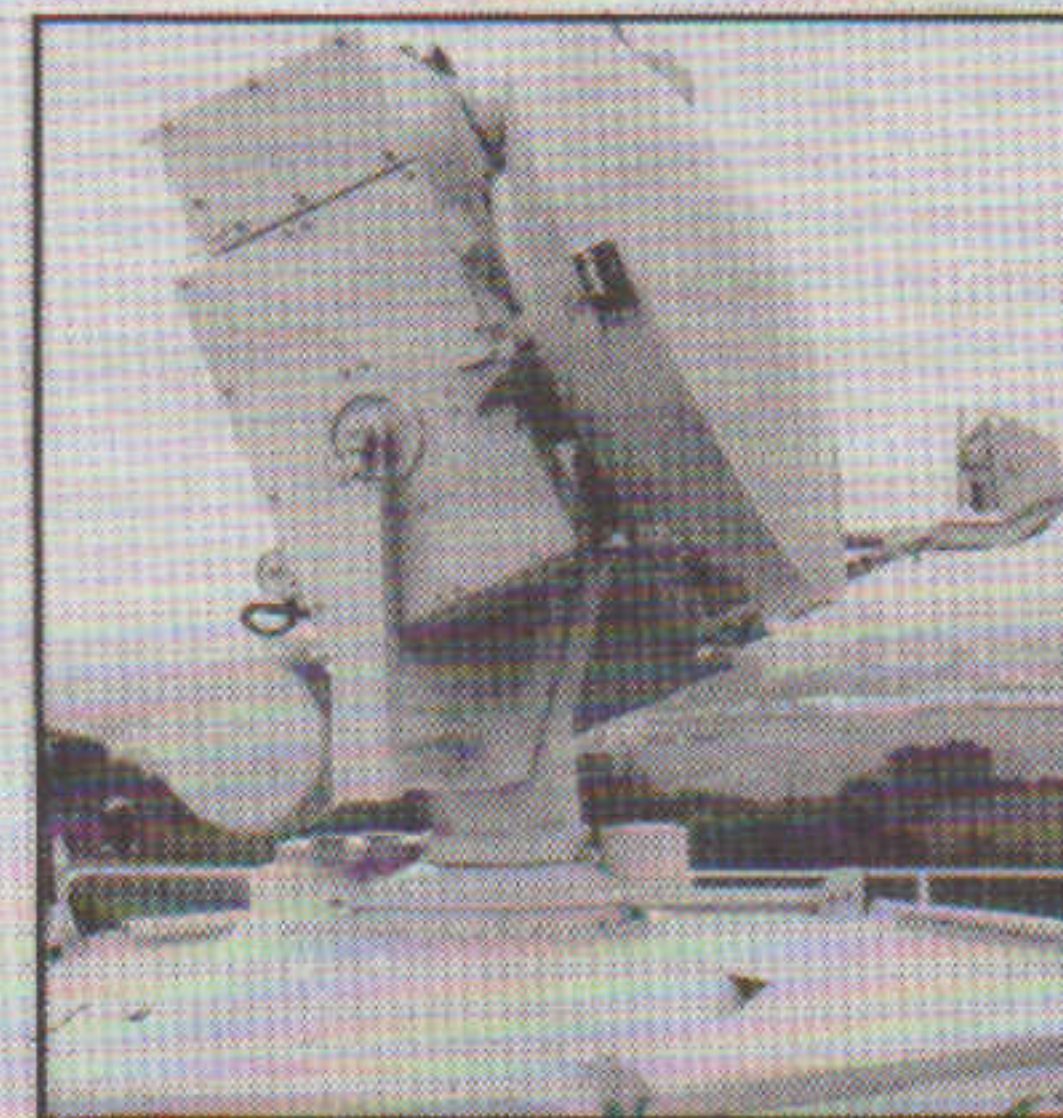
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# SEAWOLF SHOOT INTO THE 90S



The 8055W (AN Type 911) lightweight tracking radar.

**THE OK from the MoD for BAe to press on with the development and production of lightweight *Seawolf* (called GWS 26 MOD2) is good news for Marconi Radar.**

The contract to equip the Royal Navy's Type 42 batch III destroyers and *Invincible* class carriers with the four-barrel *Seawolf* launcher and the latest Marconi 8055W lightweight tracker is not only worth some £10 millions to the company — it also ensures production of the radars well into the 1990s, as well as continuity in design expertise. Follow up orders for conversion and production activities will bring the total Marconi order up to some £25 millions.

The *Invincible* class carriers and Type 42 destroyers are core units of the British fleet and will remain so well into the next century — and the addition of lightweight *Seawolf* will provide a most potent capability to their inner layers of defence and capitalise upon the experience and lessons of both the Falklands' campaign and current operations in the Gulf.

Lightweight *Seawolf* is an evolution of the *Seawolf* six-barrel launcher close area defence anti-missile system which entered service with the Royal Navy in 1978. To date over 350 missiles have been fired.

The new system will use the Marconi 8055W tracking radar, (Royal Navy designation Type 911) two of which will be mounted in each ship. The same tracking radar is also being used for the ver-

tical launch *Seawolf* system being installed in the new Type 23 frigates, and the new fleet auxiliary refurbishment vessels (AORs). This means that all the major Royal Naval capital ships will be equipped with *Seawolf* well into the next century.

### Devastating

The new contract comes just months after the devastating accuracy of the *Seawolf* system was demonstrated yet again by the firings from *HMS Brave* — the first ship to be fitted with Type 911 — which proved that the new radar system is capable of tracking both the target and *Seawolf* missile simultaneously to achieve the successful destruction of the target. Those firing trials, together with other tracking tests, have confirmed that 8055W is more than a match for high-diving and sea-skimming anti-ship missiles — *Seawolf* is the only weapons system to date to successfully engage and destroy an *Exocet* missile.

### All-weather capability

The new tracker system design is derived from the combat proven Type 910 but uses two radar frequency bands — one primarily for long range and high angle targets, the other for close-in and low angle targets. The use of two radars improves the 24 hour/all-weather capability of the system.

In a *Seawolf* engagement on Type 22 ships, target information is passed to Type

911 from the ship's Marconi Type 967M surveillance radar, which is designed specifically to maximise *Seawolf* performance. The Type 911 then searches the predicted location of the threat. Once 'locked-on' to the target both of the Type 911 radars track the target. Computers decide which of the radars is providing the best track information and calculate the optimum time to fire the missile. When the missile is launched the radar tracks both the target and *Seawolf* and continually guides the latter on to intercept the target. Targets ranging from supersonic missiles to 4.5 inch shells have been engaged.

The whole engagement from the time the surveillance radar identifies the threat to the destruction of the target is fully automatic and takes but a few seconds — so fast, indeed, that it is beyond any human's capability to react at the same speed. The need for such an effective rapid reaction system has been dramatically demonstrated by the sad loss of *HMS Sheffield* in the Falklands and, more recently, by the strike on *USS Stark* in the Falklands when 37 men were killed.

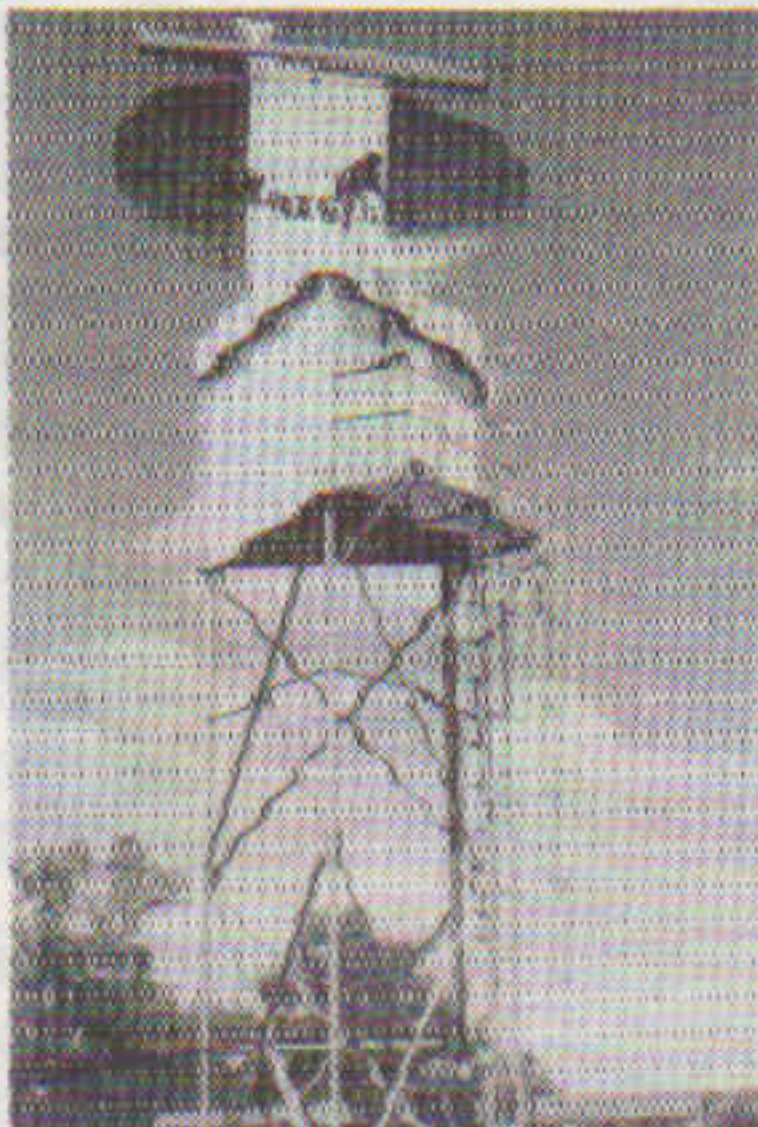
Some 54 8055W trackers have now been ordered by the Royal Navy with the prospect of yet more orders to come—as well as the twenty 910 trackers in service as part of the original GWS 25 MoD O System. The order for the GWS MOD2 lightweight system, which is ideal for refit on existing Warships, can only serve to enhance Marconi Radar's drive into export markets.

## Grand Canyon to Germany

THE Grand Canyon — which would have been the eighth wonder of the world if the Babylonians hadn't thought the world was flat — is now off the flight path of visiting salesmen, publicity types, engineers and other luminaries with the news that the S511 demonstration radar has been sold to the Canadian Department of National Defence.

The equipment is well on the way to being commissioned (due end March) at the DND's West German base of Lahr where it will replace the company's S654 system. In operation there since 1970. Once up and running, the S511 will provide overlapping coverage to the S511 (AN/FPS-509) installed last year at the other Canadian Forces base at Baden-Soellingen nearby. Plans are already being made by DND to upgrade their Lahr S511 to virtually the same configuration as Baden.

The Grand Canyon installation was dismantled during October last by a team led by Robin



The S511 — now being installed at Lahr — at Grand Canyon airport.

Reynolds of ATC Systems and Bob Dorris of Cincinnati Electronics. After being trucked to Cincinnati place and the equipment was airlifted from Cincinnati to Lahr by two Canadian Forces C130 aircraft.

The Grand Canyon S511 was based there in 1985. Since that time it has aroused the interest of many prospective buyers — both military and civilian — and the sales to Canada's DND are a direct result of its siting in North America.

## Sponsored awards for top trainees



Peter Collins, right, director business development, presenting the wall plaques to AVM Roger Paulin, OBE, air officer commanding No 11 Group. On the left is Gr. Cpt. Nick Bentley, CPC.

WHEN Marconi Radar was asked if it would like to sponsor awards to top trainees at the School of Fighter Control, it responded by handing over three specially-designed, laser-engraved wooden wall plaques.

At the school, in the *Linesman* building, RAF West Drayton, there are three training categories.

In one of them, officers are trained to become systems controllers, responsible for ensuring that the available air defence systems are deployed efficiently to meet the threat.

In the second category, officers

are trained to become fighter controllers, responsible for communicating with aircraft crews by radio and directing them towards the intruder.

In the third category, airmen receive training to become air defence operators, responsible for carrying out all the routine tasks in the air defence centre.

At the end of the training period, the name of the best student in each category will be engraved on the appropriate plaque, which will be kept permanently at the school. The winners will receive a personal small replica of the plaque.

# SUPPORT DIVISION

SUPPORT division is the bread and butter area of Marconi Radar.

While naval and airspace divisions seek to bring home the cake with icing and prestigious decoration, the basic diet to maintain a healthy body comes from the support activity.

Of the 500 or so people in support division, approximately 60% work solely in the interests of major company projects, writing handbooks, installing, commissioning and handing over to the customer the complex systems of which *Martello* and the display and data handling system of UKADGE are typical examples.

Once a customer takes delivery and begins to use his newly-acquired equipment, support division assumes the responsibility for his continuing satisfaction. By entering into direct contracts he is assured of a regular supply of essential spares and technical back-up.

The variation in customer capability is such that the services required range from the total running of his systems — using the expertise of field services — through the post design service activity of the technical services department and the provision of factory repairs and downstream spares. The interface with the company is regularly maintained via the customer liaison department which co-ordinates the response to these wide-ranging needs.

The *raison d'être* of support division is to keep the customer happy: a satisfied customer will buy from us again and again.



**RON EMERY**  
Divisional manager



**Richard Chard**  
Assistant divisional manager/  
commercial manager



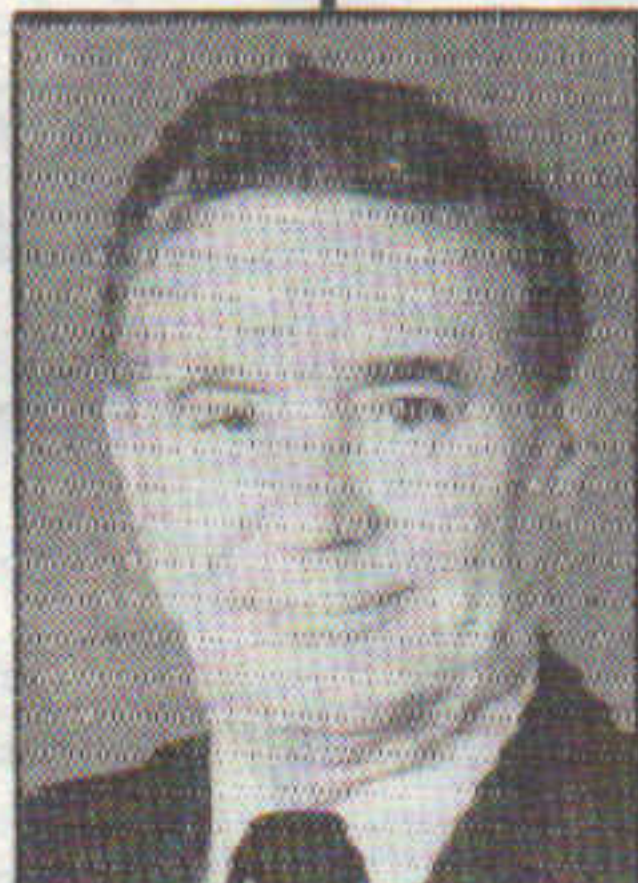
**Lon Tyler**  
Financial manager



**Ken Michael**  
Manager technical services department



**Rod Hough**  
Manager technical information department



**Mike Steeds**  
Manager customer liaison department

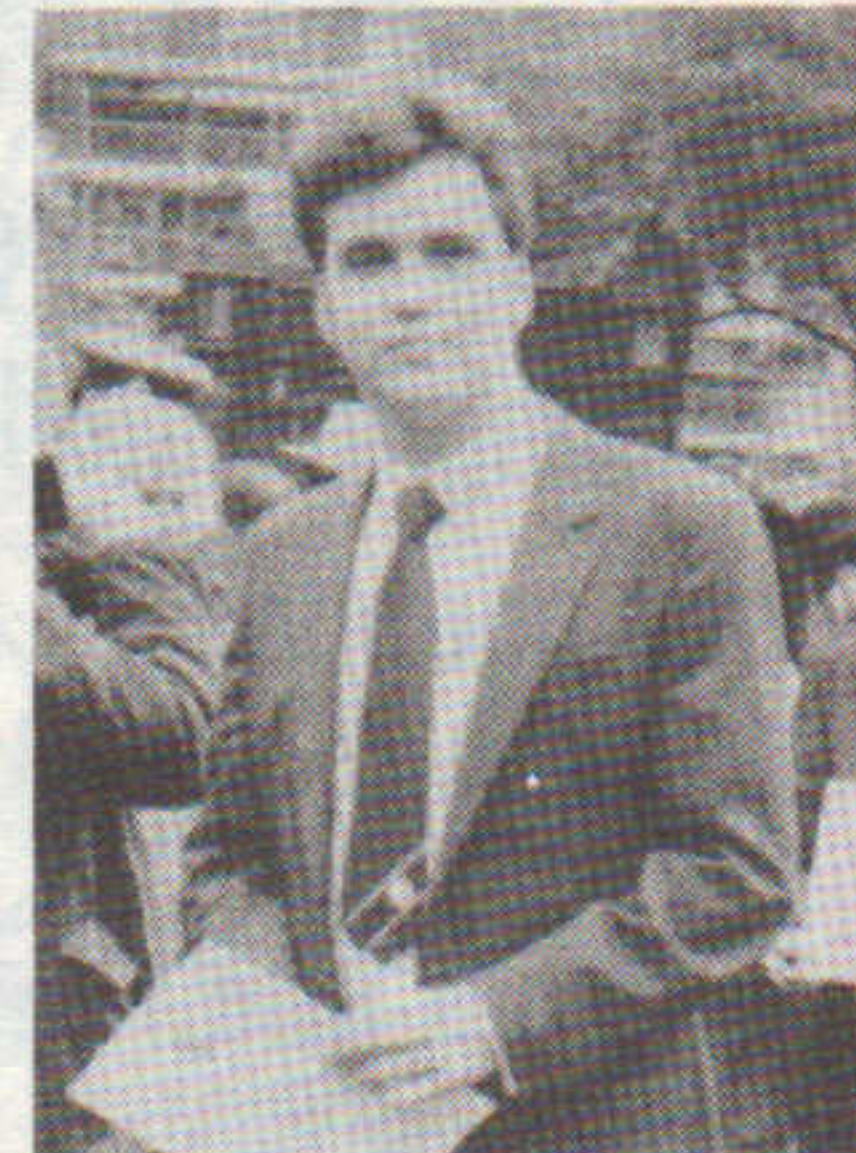


**Fred Wilde**  
Manager field services department



**Paul Lundman**  
Manager spares and repairs department

## David strikes gold!



**DAVID COLLINS**, sponsored student at present doing a degree course in engineering at Portsmouth Polytechnic, is the latest among our colleagues to tread the hallowed corridors of St James' Palace to pick up his Duke of Edinburgh's gold award.

'We were shown into a large room, with double doors at each end. It was all very sumptuous: red and gold decor, an intricately ornate ceiling, a vast fireplace and huge, heavy curtain. Footmen stood at the doors and an orchestra played in an adjoining room.'

'The Duke was very friendly and spoke to several of us, asking how we had become involved in the Scheme and what kind of things we were interested in. We were shown around the armoury and throne room and spent, in all, about two hours in the palace, which is extremely large and has an absolute maze of rooms.'

Like the Duke, we asked David what had set him off in pursuit of gold.

'I did the bronze and silver levels at school and decided that the gold was a real challenge as well as being a worthwhile social activity.'

### Enterprise

'You have to qualify in four different sections. One of them — the Residential Project — meant living away from home for a minimum of five days, during which you had to undertake some form of enterprise with other people. What we did was a 50-mile expedition into North Wales, living under canvas in conditions that weren't always ideal, doing our own cooking and finding our way about with map and compass. It was tough, but we had no major problems.'

'In another section, we had to spend at least 60 hours, spread over 12 months, performing some practical service for the benefit of others. I chose to train younger members of the Award Scheme in aspects of expeditions, using the knowledge I'd gained doing my own bronze and silver levels.'

'For the Skills section, I decided to take driving lessons. I'm glad to say I passed the test first time.'

'Physical Recreation was the fourth section, and I spend six weeks, in hourly sessions, at keep fit and multigym. It was pretty gruelling and finished up with various tests — press-ups, sit-ups and so on, a physical test involving broad jump, a speed test covering 100 metres running back and forth between two points.'

'I've enjoyed the scheme very much, and I hope, when my studies are completed, and if there's time, to go onto the teaching side. I think it would be a really satisfying hobby.'

## Watch out — there's a thief about!

REGRETTABLY, nowhere is the above statement truer than on our Writtle Road and Rivenhall sites, as a number of employees have found to their cost. Nothing, it appears, is sacred, and the pickings have included such things as pocket calculators, fountain pens, pencils, cigarettes, varying sums of money, purses, angled table lamps, electric coffee percolators, electric kettles, items of clothing, pedal cycles, printing machines and, would you believe, Christmas decorations!

The fact that we have light-fingered people around is something that we should all be aware of, and we should take what action we can to prevent them getting away with our property.

First, let me say that theft is a criminal offence, and the ap-

By **JOHN ROBINSON**  
— Security

propriate action will be taken against anyone found to be involved in this anti-social activity. Secondly, we can do much to reduce the crime-wave in our midst.

Many of the items stolen are:

- a) Particularly easy to come by.
- b) Easily concealed.
- c) Difficult to identify as stolen.
- d) Easily disposed of.

But we can make life more difficult for the would-be thief by following these guidelines: NEVER leave handbags and valuables in view unattended. LOCK your desk drawers, where possible, whenever you leave your place of work. NEVER leave valuables in your coat pockets. NEVER leave cash in an

empty office, even if it is in a drawer.

VISIBLY mark your calculators and other items with your name and postcode. DO NOT bring valuables to work unless absolutely necessary.

*Thieves will find it very difficult either to use or dispose of items that are so clearly marked with the owner's identity that anyone looking at them can see immediately to whom they belong.*

And, remember that while the company will do all that is necessary to deal with any act of stealing, in the final analysis you are responsible for your OWN property and should treat this matter very seriously.

Any information, suspicions or acts of theft should be reported immediately to the security supervisor on extension 2773. All matters will be treated in strictest confidence unless circumstances warrant otherwise.



John Robinson, right, with security officer David Stirling.

She broke loose with a splintering crash, dragging most of the post and part of the shed roof with her. Mooing frantically, she pounded across the yard and out into the lane pursued by the bull, Joe, and fifteen shrieking lunatics each knocking over his milk bucket in horrible cacophony as he joined the chase

**V**ANDELPANTZ. It takes courage to travel through this vale of tears with a name like that, when a visit to the deed pollster could have put the matter right. But that was her name. Miss Vandelpantz

She ran the Women Farmers and Gardeners Association, and it was to her that I turned when I was discharged after three gruelling weeks in the Army. This blessed release was conditional on my doing work of national importance, and I seized on the chance to turn a dream into reality.

A deep reverence for the Simple Life was the connective tissue that just about held together the shambling anatomy of my adolescence. Whatever else happened, there was always the promise of escape to dewy, apple-green dawns, the smell of damp loam, a mute, gut-deep rapport with the beasts of the field and, ergo, a place at the right hand of God.

Now, the promise was to be fulfilled through the good offices of Miss Vandelpantz and with total disregard of the fact that I detested getting up in the morning, didn't know loam from gravel, rather disliked animals and, with the exception of an ill-fated experiment in Evangelism, had always been a convinced agnostic.

The farm to which Miss Vandelpantz directed me was in Surrey. It was idyllic. A low, L-shaped cottage, which served as the farmhouse, nestled in a kaleidoscope of Oriental poppies, delphiniums and lupins. At the gate, early summer insects buzzed *pianissimo* under an explosion of May blossom. Across the road, a five-barred gate led into the cobbled farmyard, which was flanked by half-a-dozen decrepit stables, some henhouses and a cowshed from which emerged smells that made me nostalgic for things I'd never known. It was a small farm and its three fields fanned out around the yard, in one corner of which, chained to a treadless tyre, stood an evil-eyed goat.

I was too besotted on that first morning to raise any objection when I was told that, because I lacked experience, I would not be paid and was to regard myself as a student.

Miss Rowe, who owned the farm and was responsible for this transgression of human rights, was Cornish,

iron-hard of muscle and soul, shrewd, more than a trifle deficient in the milk of human kindness but with a butter-soft streak of credulity that manifested itself in her choice of friends. All the members of this exclusive circle were spirits who inhabited the Other Side.

Night after night they clawed their way back across the frontier between life and death to be entertained by Miss Rowe in her bedroom. Night after night her macaw shrieks of laughter ricocheted off the whitewashed walls, punctuating a stream of chatter that, to my spiritually untutored ear, seemed entirely one-sided.

In the adjoining room, I lay in bed rigid with terror. During the day my agnosticism was total. During nights made wakeful by spirit orgies, it did not extend to life after death.

**M**iss Rowe seemed to draw strength from those visitations. Her vigour grew as mine declined. Hollow-eyed, I would get up each morning at 4.30 to make the tea, which she drank in the spring-sagging bed that had witnessed heaven knows what excesses during the night. Then, while she prepared our 5am breakfast, I would stumble across to the farmyard to call in the cows from the field. 'Coo-ooop, coo-ooop, coo-ooop'. Thus had she taught me to woo them from the fresh, dewy grass so that they padded, udders a-shudder, into the yard and on into the shed, ready for milking.

The first morning, I watched them blundering around the shed until each had found her way into a stall. It was an anarchic business. The next morning, tidy-minded and intrepid to a fault, I grabbed the first cow to enter the shed and guided her into the stall at the far end. Her name was Gertrude and she was clearly reluctant but I succeeded in snapping the chain around her neck before she had a chance to pound me to dust.

# MOOS, MUCK

I seized the next cow to come through the door and tried to manhandle her into the stall alongside Gertrude. This one's name, for reasons that defy analysis, was Pussy. She refused to be pushed.

While I struggled, other cows filed in from the yard. Eight of them immediately engaged in the good-natured shove and jostle game of the day before. Two others, eyes sparking, horns tossing and vocal chords at full stretch, stamped towards Gertrude, Pussy and me. The decibel level was paralyzing.

By the time Miss Rowe, torn from the frying-pan by the racket, had reached the shed, Pussy had escaped into the yard where she meanly performed a public nuisance all over the cobbles, I was being relentlessly silhouetted against the wall by one of the demented stampedes, and the horns of the other were festooned with small ribbons of Gertrude's hindquarters.

I don't recall how Miss Rowe restored order. And, mercifully, I was too preoccupied listening to the rustle of crematorium curtains to register the exact terms in which she told me that, in future, I was to respect a cow's sense of territory. It seems that this reaches obsessive proportions should an intruder challenge her right to her pre-ordained stall. The experience did nothing for the St Francis of Assisi image that I'd thought to cultivate.

It was a mixed farm, over which the cows undoubtedly held dominion. In spite of my student status, I was regarded as too inept to be taught the mysteries of milking, I suspected the real reason to be that these twice-daily encounters with her cattle were Miss



Rowe's principal source of sensual pleasure, and she had no intention of relinquishing even a part of them. Not that I cared; tweaking those rubbery appendages, one's head buried deep in a succession of steaming, cow-scented flanks, was not my idea of pure heaven. So, while Miss Rowe crooned into her beasts' bellies and squirted metallic-pinging milk into buckets, I set about the less exalted task of grooming.

It was not unalloyed pleasure. Curry combing was all right. In fact I quite enjoyed burnishing the brown and cream coats so that they shone through the cow-shed gloom. But who, apart from a fully paid-up pervert, could enjoy getting to work on udders, backside and private parts with a slippery cloth, dripping with permanganate of potash?

The cows on the other hand seemed to love it. More often than not they would swivel their great heads round and fix me with a curly-lashed, brown-cyed, grateful stare. They would sigh

## ... YOU CAN



# AND MANIFESTATIONS . . .

softly and flick out long pink tongues in the direction of my face. I had read about a cow's sweet breath but in my experience it would have been difficult with closed eyes to distinguish one end of the beast from the other.

**F**or reasons that became increasingly obvious, I was Miss Rowe's sole helper and she, having acquired slave labour, was determined to use it to create a model farm. Once their cowships, empty-uttered and polished, had departed to restart the milk manufacturing cycle, I'd be right there in the shed, skidding around in wellies, sluicing and brushing the floor till it shone; I'd be in the yard, rubbing up the cobbles till they twinkled like electric light bulbs; I'd be brushing Georgette, the goat, till she lowered her horn-crowned head in warning. I never understood Georgette's *raison d'être*. She was milkless, bad tempered, smelly and unlovely. Perhaps she was Miss Rowe's familiar.

Sidney was another pointless member of the menagerie. When I first saw him I was filled with terror.

'Don't worry,' said Miss Rowe, 'That bull wouldn't hurt a fly. In fact, she went on, 'I think he's a pansy'. She giggled furtively. 'He's never done this lot any good! Her sweeping arm embraced the liquid-eyed herd.

Shortly afterwards, I noticed one of the cows mounting another. It was my first encounter with bovine lesbianism. I hesitated to mention it to Miss Rowe, whom I suspected to be darkly off-beat in certain directions, and whom I was loathe to inflame. However, she too

had noticed.

'Ha, Lightwater Peach wants serving' she said. By this time I was sufficiently of the earth earthy to know that she didn't mean that a tray of cattle cake was being called for.

I pointed out that Lightwater Peach was the passive partner; the one underneath, the one showing no signs of ungratified lust. Miss Rowe assured me that, nevertheless, it was the Peach who was ripe for plucking.

How she had managed to convey her need to her butch girlfriend mystified me but one thing was for sure, Sidney was not the one to satisfy her. I was going to have to take Lightwater Peach to the neighbouring farm, where the bull did what a bull must do.

The Surrey lanes at that time bristled with army vehicles. The sight of a girl taking a cow for a country walk was too much for the soldiers. They waved, they shouted, they bellowed, they whistled, they jumped up and down in their turrets, they hung out of windows; horns blared and engines revved.

It was total mayhem and Lightwater Peach — randy and unbalanced, poor cow — took to her cloven hooves and bolted. Miraculously I clung to the rope halter and knew what it was like to be a spinner on a mackerel line. We out-paced the convoy in no time at all and when we reached the farm, Lightwater Peach was once again decorous, prissy and tight-lipped. I looked as though I'd been raped.

Joe's farm was much larger than Miss Rowe's. Through the doors of the cowshed I could see a small army of labourers busily milking. Joe came up and took the halter.

'You'd best go into the kitchen with

the Missus and have a cupper,' he said.

This was the last thing I intended to do. Miss Rowe was paying good folding money for the services of Joe's bull and had made it clear that I was to witness the ceremony to make sure that the marriage was consummated. I told Joe that I'd rather stay and watch, hoping that he wouldn't take this to be mere idle curiosity, or worse.

'I wouldn't if I was you, Miss,' he said. 'I used to be a warden in an asylum. When war broke out, so many folk went round the twist, there wasn't room for 'em all. I'd retired and bought this farm by then, so the authorities got in touch and asked me to take some of the overflow. They knew I could handle 'em, you see. Mind you, they're not dangerous. Most of 'em's as good as gold. But with you around when the bull serves yon cow,' he shook his head doubtfully, 'I wouldn't like to say that some of 'em mightn't go a bit funny.'

**J**oe's wife's tea was excellent. Our girl's talk, however, was interrupted suddenly by sounds of chaos. Lightwater Peach, confronted by an overtly lusty bull, had clearly developed cold hooves and with a long, quavering bellow, which might have been interpreted as, 'I'm sorry, I've a headache,' she tried to wrench herself free of the rope that tied her to the post of a small shed.

An impassioned determination to protect her chastity gave strength to her efforts and she broke loose with a splintering crash, dragging most of the post and part of the shed roof with her. Mooing frantically, she pounded across the yard and out into the lane, pursued by the bull, Joe and fifteen shrieking lunatics, each knocking over his milk bucket in horrible cacophony as he joined the chase.

I didn't witness the end of the scene. After an appreciable interval, Joe returned with Lightwater Peach, still adorned with post and roof. They were followed by the bull and fifteen smiling men. It seems that she, exercising her female prerogative, had suddenly changed her mind, skidded to a standstill in the middle of the lane and submitted herself placidly to the attentions of the bull. Joe and I decided that it would be a kindness to protect Miss Rowe from the dramatic details, and I was prepared to take his word for it that Lightwater Peach would, in due course, reveal herself to be suitably *eccentric*.

**M**iss Rowe was not an intellectual giant. But she was intuitive. There were times when my tether's end was in sight. Those were the times when every muscle screamed; when my back was a broken hinge; when my eyes swelled in pools of gritty weariness; when my nostrils were lined with layer on layer of terrible smells. Those were the times when I was aware of being shamelessly exploited. And those were the times when Miss Rowe's antennae quivered, and she would flash me a rattlesnake smile.

'I think we deserve a day off,' she'd say. 'Let's play truant! And because I was not an intellectual giant either, my spirits would rise and I'd unpack my suitcase and put the sheets back on the divan.

On one such truancy, she led out two incredibly decayed hacks from the stables. I'd never been asked to perform any tasks in that quarter and had hardly been aware of the twilight existence of these creatures.

'I'll teach you to ride!' I was enchanted. She swung me up into the saddle. My mount dipped so dramatically in the middle that I was able to lean against its hindquarters as though in a high-backed chair.

That afternoon was one of the most exhausting and demoralizing of my life. While we splay-hoofed it slowly across the Surrey heathland, all was simple — so simple that it would have been boring but for a golden, coconut-smelling, insect-buzzing, butterfly-



infested carpet of gorse that captivated the senses. Miss Rowe, on the other hand, sensed, not gorse, but sadism in the air and she wasn't one to pass up that sort of chance.

Abruptly we changed rhythm and started to trot. For two hours the horse and I were subjected to the vilest contraptional suffering. As it went up, I came down. As it came down, I went up, and not until I sighted the farm again through a mist of pain did I suddenly, and inexplicably, find the rhythm. By that time it was too late.

Crotch-sore, weary and with vertebrae in total disarray, I slid out of the saddle. My legs folded under me like a pair of wet bracs. The experience did not convince me that riding is anything but an overrated past-time, best suited to children and perpetual adolescents such as cowboys and show jumpers.

I'd been at the farm about a month when Miss Rowe came into the cowshed one morning looking leached out. In my opinion, anyone's entitled to look that way at 5.30am. But this wasn't Miss Rowe's way. Normally she bloomed at that time of day.

'What's wrong? You look terrible.' She settled herself heavily on her milking stool.

'Ay, I've been on the Other Side all night, helping them with their harvesting. I feel too washed out to do anything on this side! This was a crisis situation. I was neither able nor willing to do the milking. If Miss Rowe packed up, the future, as I saw it, would be dominated by exploding udders. I thought swiftly.

'Look here, I said, 'Your friends probably haven't thought this through. I'm sure they'd understand if you point out that you can't manage a twenty-four hour stint of manual work. Why not offer to do something sedentary? Help them with their books, for instance.'

Miss Rowe brightened and that night put the proposition to them. Their understanding was more limited than I'd expected. They took umbrage to such a degree that they didn't return for four nights. Miss Rowe was desolated, even though she was let off the harvesting hook. I, on the other hand, enjoyed my first four nights of unbroken sleep.

Even those healing hours, though, were not enough to restore my declining strength, and I awoke one morning to find myself covered with red spots. Miss Rowe looked alarmed but when it was established that I'd got scarletina, not scarlet fever as she had feared, she became quite jolly. Until I

told her that I was taking to my bed.

I felt perfectly justified in doing this and in forcing her into the unlikely role of Florence Nightingale. After all, I'd caught the disease either directly from her cows or, more likely, through my swizzlestick activities in her catchpit drains.

These drains were among the least lovely of many unlovely features of the farm. They formed a subterranean network under the cobbled yard and into them flowed every kind of conceivable, and inconceivable, nastiness. Not only were they evil and ugly but they were also vindictive. Every three days or so, they would show every evidence of a blockage and I would be ordered to attack them with yards of whirling rod, releasing indescribable smells along with the solids.

It was clear after six weeks on the farm that my relationship with Miss Rowe had deteriorated beyond restoration. I recovered from scarletina in spite of her efforts to kill me with a diet of egg custard and rice, tapioca and semolina puddings, to all of which my illness had made me violently allergic. But no longer were special treats enough to induce even temporary periods of well-being — not even being allowed to do the milk round in the ancient Austin Seven van. Even so, it needed a spark to set alight the flaming row that led to my departure. It came in the form of a bill.

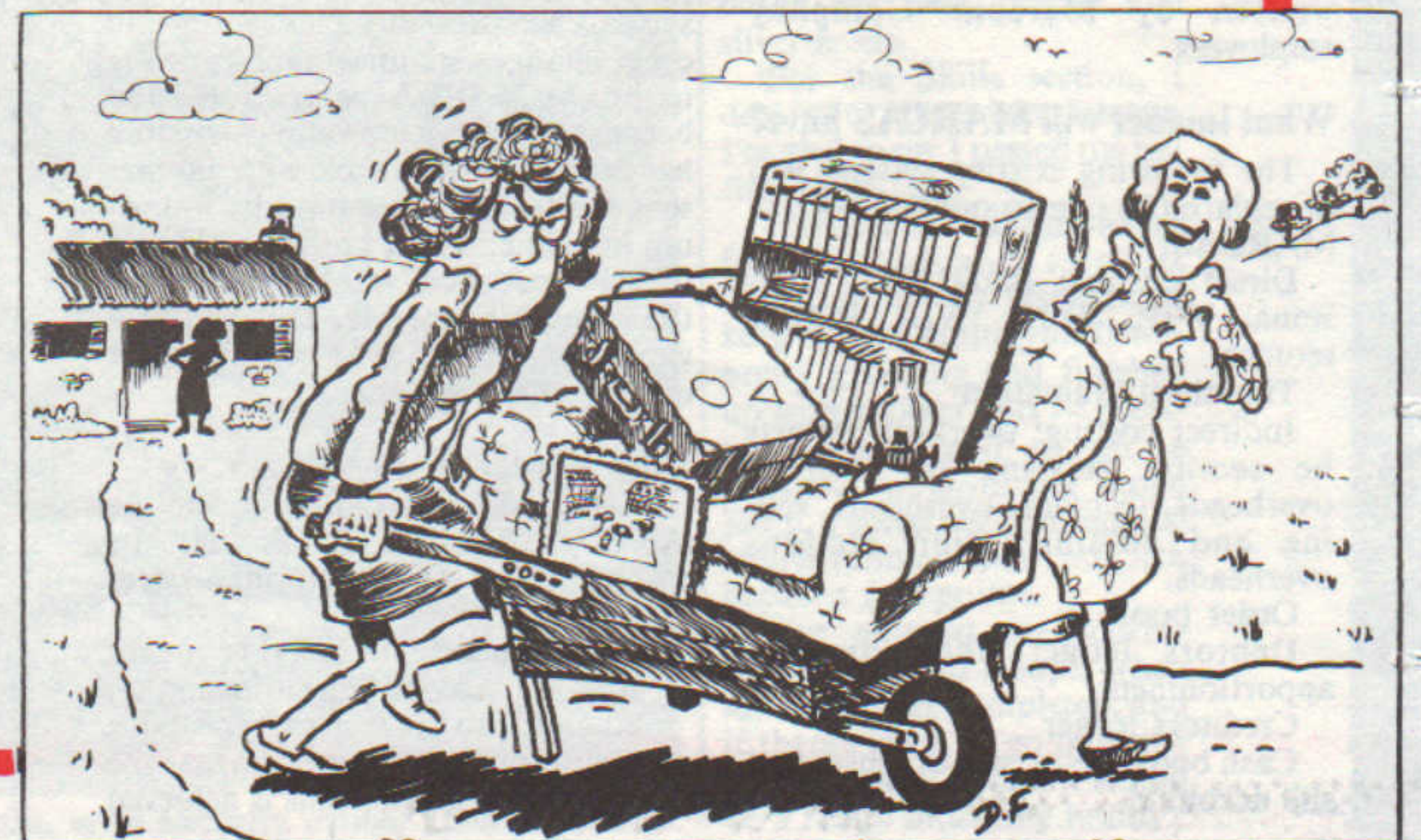
'Time to settle up' said Miss Rowe one morning. 'I like to do this once a month but you were ill so I held it over.' I was aghast. Not only was I expected to work eighteen hours a day for free but I was also, it seemed, to pay for my meals. It was all there on the piece of paper she handed me, including the milk that I felt I'd almost produced myself.

Mrs Buckle, who came daily to do the charring, witnessed the scene that followed. Arms crossed over her pinnacled bosom, one foot tapping a triumphal tattoo, she filled in the pauses as I fought for breath. 'That's right, Miss, let 'er 'ave it. She gets up my back the bugger she do!'

We left together, pushing the barrow which she had rushed home to fetch, and on which we had piled my divan, suitcase, oil lamp, book shelves and the painting of a Square in Paris. I didn't know where I was going but I knew that the God in whom I didn't believe would guide me.

PMR

## KEEP 'EM



# ABCDEFGHIJKLMNOPQRSTUVWXYZ

## W for Wizards for worked wonders

UNDER this letter I shall dwell on the two outstanding men who were leaders of radar at its very beginning: a double W and a single W, without whom its development might never have started in time to influence the war in this country's favour.

I am, of course, referring to Watson Watt and Wilkins, respectively the director and his assistant, at the Radio Research Station at Slough, in 1935. However, I shall not repeat in detail the well known story, told fully elsewhere and previously covered in these pages by Bruce Neale, of how Watson Watt was formally approached by a Government committee for his view of the feasibility of a death ray for defence, nor how Wilkins, having calculated that that was not possible, suggested the alternative of detection of aircraft at a distance.

Sir Robert Watson Watt is often credited with the invention of radar. That was not so, because others had thought of it before him; neither did he claim this, freely acknowledging the earlier work of others. But the popular appellation, 'the father of radar', is by no means inappropriate because it was largely his personal drive, energy, enthusiasm and persistence that brought it about.

### Rudimentary

Like Marconi, who appears in countless encyclopedias as the 'inventor' of wireless communication, he took a set of tentative, partly-formed ideas and forged them into a working reality in a remarkably short period of time. Remarkable is the operative word: from the rudimentary experiment conducted for him by Wilkins at Daventry in 1935 the South East part of the early warning defence chain was developed to a fully operational state even before the war broke out in September 1939.

Afterwards, his book *Three Steps to Victory* presented a fascinating account of what had been achieved. Unfortunately, it seems to me, many who read it comment to the effect that they find perhaps too

### COLIN LATHAM continues his series on the alphabet of radar

much emphasis on the achievements of WW himself. If this is a valid criticism it is a pity and he has done himself an injustice: his very forcefulness and ability to present plans and ideas in compelling terms (one might even say high-flown language) were surely some of the very characteristics needed to get such an enormous pioneering job done on time.

To illustrate his delightful style I quote from his address to — of all people! — a German audience after the war:

'... because it may well appear that I am claiming special credit — as indeed I am — for those who initiated and guided the work, I want to give one of the most important of these reasons. It is that I believe that our success in radar depended fundamentally on the informed academic freedom which was accorded in peacetime radio research to my colleagues and myself, and to the scientific and technical researcher and developer. If I appear immodest in my summary, it is because I believe the most valuable lesson from radar history is that of the intellectual and organisational environment from, and in which, it grew.'

He goes on to mention the scientists who explored the relevant physics prior to 1920 adding, 'Its application awaited the recognition of a pressing need and the execution of a simple arithmetical determination. Both these initiating conditions were satisfied within, and only within, the few months in which 1934 merged into 1935.'

Those who read his words and study his achievements sometimes conclude that such a purposeful and successful figure must necessarily have been detached and unapproachable. Yet we read of his 'benign influence' and his reputation 'of being a very relaxed and pleasant ad-



Sir Robert Watson Watt

ministrators, who kept closely in touch with the technical work... much loved by the staff... That indeed, accords with the impression gained by Bruce Neale who, as an RDF mechanic in the RAF during the early part of the war, met the great man briefly and unexpectedly.

Bruce, in devising some *ad hoc* modification, was fighting a piece of sheet metal with a pair of shears when a Scottish voice beside him advised, 'Ah would'na do it that way, Laddie!' It was WW himself, passing on his own experience of the dangers of nipping one's tummy between the ends of the handles! Perhaps that incident serves to illustrate how his academic side was complemented by a strong practical outlook, the same that led to his dictum about providing the third best solution because the second best would take too long and the best would never come.

### Responsibility

In leading the development of wartime radar, WW was supported by an ever-growing team of scientists, many of whose names are well known today for their later work in related fields such as astronomy and particle physics. But the one who was in it with him at the very start, Arnold Wilkins, and the next to join them, a bright young Welsh PhD from King's College (whose W in his name had unfortunately, for me, slipped from first to third letter), 'Taffy' Bowen, between them



Arnold Wilkins

carried the responsibility for the two main branches of radar — ground and airborne.

It was Wilkins who suggested the now famous Bawdsey as the research site, who did early work on IFF, who devised many of the features of CH radars and carried the responsibility for setting up the early warning chain of stations, a vast job by any standards. Regarded highly by all who worked with him, he was a first class engineer with a quite manner and warm sense of humour whose ideas, and the credit that went with them, were sometimes taken up readily by others.

While Wilkins took on the ground radar work, Dr Bowen became the leader of the seemingly impossible task of developing airborne radar. Once again I shall mention his excellent new book 'Radar Days' published this year, quoted above, and well reviewed by Sir Bernard Lovell (another wartime radar man of note) in the *New Scientist* of 5 November, 1987.

After the war WW, AW and EG Bowen were the principal recipients of the sum awarded for work on radar by the Royal Commission for Awards to Inventors but thereafter their paths diverged.

Several years after Arnold Wilkins had retired it was a joy for our company to welcome him, as our guest of honour, to present prizes at the 1985 Annual Apprentice Award Ceremony. Sadly, that was to be his last public appearance, but his family still affirm that the occasion, with its public recognition of his work to new



Dr E G 'Taffy' Bowen

generations of engineers, was an unexpected highlight much appreciated by him before his death in August of that same year.

For WW I wish I could conclude with a happy sequel to his wartime work. Instead, here are some extracts from Lord Bowen of Chesterfield's Foreword to 'Radar Days': 'The story of the last days of WW is so tragic that I must recount it if only briefly... he was divorced by his wife and left Britain for a new career in Canada... had difficulty in adjusting to civilian life. During the war he had been imaginative and creative and almost ruthless in getting his own way. These qualities made him great and radar possible... they appeared to have deserted him and he never settled to a peacetime career. After several changes of fortune he finally died in an old people's home in Scotland, unknown and apparently forgotten.'

### Retrospect

Forgotten then and there perhaps, but surely not in fact, and in retrospect? The term, 'father of radar' must apply for all time.

Happily I can report that Dr 'Taffy' Bowen CBE FRS is fit and well in Australia. Both Bruce and I get letters from him and he has been kind enough to encourage me in my own attempts to write about radar. Do read his book and learn the real facts about the early days of radar from one of the three front runners!

## LETTER

I found the article under the heading 'Christian Fellowship' published in the *Christmas News and Views*, somewhat disturbing, and feel I would like to comment on it.

The writer should accept the fact that there are many people who lead perfectly good lives and practise all the beliefs of Christianity that the writer does without the need for massed worship or group activities.

No, this Christmas for them and me will not be rendered Christ-less, despite the writer's obvious delight in analysing people under percentages and ratios, and his knowledge of new carols.

I suggest the writer should come down off his sanctimonious perch, ease off the 'holier than thou' attitude, and realise that goodness really does exist outside the bounds of religious fervour.

D King,  
Room 350, 'E' Block.

## Chelmsford comedy

TELEVISION'S first Romano British sit-com, *Chelmsford 123* to be shown on Channel 4, appears — archaeologically speaking at least — to have hit the nail upon the head.

All togas and tesserae, the new comedy series "about a Roman general's adventures in the armpit of the empire", is due to start on 9 March.

It will revolve around everyday life in Chelmsford in AD123 which, by sheer coincidence, is the date of a vast Roman edifice currently being unearthed by a team of archaeologists in the Essex town.

The building appears to have been a Roman government hotel. Measuring 70 yards by 30 yards, and arranged around a large courtyard, the hotel — known in Latin as a *mansio* — may have been built as part of the emperor Hadrian's reorganisation of Britain.

Archaeologists have just discovered three baths, a furnace for heating water and two other rooms, while previous excavations have unearthed another four rooms.

According to Dr Graham Webster, a leading historian specialising in the Roman period, Chelmsford, known as *Caesaromagus* in Roman times, may have been Julius Caesar's campaign base in his invasion of Britain in 54 BC.

• Reproduced from *The Independent* 3/2/88.

## Theatre Group

THE third incarnation of a drama section at MASC is now going strong.

In the last two-and-a-half years we have presented four full-length plays, an evening of three one-act plays, and a melodrama complete with songs and a conjurer.

The group meets every Thursday evening at MASC, to rehearse, read plays, and of course discuss other groups' productions. We have just started rehearsing for *Lady Precious Stream*, our spring production, which we are presenting on 25 to 27 April.

It's not all a question of learning lines and being blinded by the lights: *Lady Precious Stream* is a Chinese play, and requires some interesting properties to be made — a string of fifty silver coins, an executioner's sword, a table that becomes a rock, and snow. These will all be created by a team of backstage workers.

There's plenty to be done, if you'd like to give it a try, just turn up on a Thursday evening, or else give Ted Aldous a ring on 2455.

# MARCAS

Following on from our first article on MARCAS (*News and Views* — December) more meat is added to the bones.

### MARCAS OVERVIEW

MARCAS stands for MARconi Computerised Accounting System. It was developed by GEC-Computer Services (GECSS) based upon a specification written by Marconi Company employees.

### What impact will MARCAS have?

The following existing systems will be replaced by one accounting system, MARCAS:

Direct costing: R&D WIP, Divisional WIP, Works WIP, Project returns,

Timesheet evaluation

Indirect costing: overhead reports by section relating to: factory overheads, technical overheads, selling and administration sections overheads.

Order book

Debtors ledger and advances apportionment

Creditors ledger

Cash book, petty cash expenses and site accounts

### Nominal ledger

Currently, some of the above reports and records are computerised and some are manually maintained. All input documentation to the above systems will probably change. Certain other changes are unavoidable, owing to the way MARCAS is structured and because our present coding structure has become incompatible with our present needs. For some months following implementation both the old and the new cost codes will be accepted by the accounting system. This will provide users with a period of time to get used to the new codes.

### Why change to MARCAS?

MARCAS more closely meets the needs of Marconi Radar and its employees for an accounting system that is:

1. Database orientated: this means that all accounting information entered into the system is available for output in whatever format the end-user requires. This is achieved

through standard report layouts devised by GEC Computer Services at Baddow or reports originated by Marconi Radar for local requirements.

2. An integrated system: which means that wherever a transaction is generated, the information is input once and MARCAS automatically makes all the accounting entries.
3. Able to provide period- and year-end reports for the production of balance sheet and profit-and-loss accounts for management purposes.
4. Able to provide an on-line enquiry facility for project/contract accounts. This gives project managers and staff access to the up-to-date status of contract costs, thus ensuring more effective and timely control of contract progress and costs.
5. Capable of generating financial data faster and of better quality.
6. Capable of vetting data at source. Vetting of data entered into MAR-

CAS will be on input. This will mean that once data has been validated there is no chance of its being rejected at any subsequent stage.

7. Designed to integrate with our existing purchasing and stock systems.

### How many systems?

Currently Gateshead site operates its own accounting system, and provides information to Writtle Road at summary level, in order that the accounts of the company as a whole can be prepared. The decision has been taken to operate one accounting system when we implement MARCAS, enabling the company's results to be generated automatically, and enabling management to obtain a completed picture of both project and overhead activity and cost.

• Further information on MARCAS can be obtained by contacting Sal Shakir on extension 2631.

Angling

TOM BISHOP reports that with most local rivers in full flood the winter matches are having to be cancelled. Even when the levels go down again, the banks will be particularly treacherous, especially for the inexperienced angler.

The Christmas Fare match which was held on 20 December was fished on the rivers Can and Wid. Prizes were awarded to the first eleven places, the first three being: 1 J Shearling (18lb 2½oz), 2 B Mullinger (7lb 6½oz), 3 S Joy (5lb 6oz).

Snooker

THE section currently has five teams in the Chelmsford and Pretyma League. Three of these are in the first Division,

which is currently led by the Conservative Club 'B' team with 55 points from 13 matches played. Marconi 'B' team is in fourth place with 42 points from nine played, followed by Marconi 'A' team in fifth place with 41 points from 10 played. The Marconi 'C' team is second from last with 19 points from nine played. The division has 14 teams competing.

Both the 'A' and 'B' teams have strength in depth and are almost certain to be vying for honours at the season's end. The team they have to beat is the Chelmsford Snooker Centre 'A', winners of the League and Cup double for the past three years.

Paul Holt reports that in addition to the Pretyma League teams, there is a thriving Inter-Departmental League with three snooker divisions and one billiards division. Competition is fierce this season

with no clear favourites emerging. Paul says players are always required for teams, so if you fancy joining, don't be afraid to make enquiries. Paul is on extension 2632 WRW.

Men's Hockey

FIXTURES have been arranged throughout most of the year. During the winter the club plays in Division 3 South of the Norwich Union East Anglian League, as well as playing a number of non-league matches. During the summer months evening matches are played at Chelmer Park.

Angus Johnson says that new players are always welcome to the squad so please contact him if you would like a game. Angus is on extension 2791 WRW.

Netball

THE Marconi ladies netball team, delightfully named the 'Misfits', are enjoying their first season in the Chelmsford and District Netball League. After a slow start, Jackie Spring reports they have made rapid progress, having won all their recent matches.

Needless to say, a lot of hard work has been put in by the ladies' trainer, Nicola Barker as well as Wendy O'Neil and Lisa Walford on the secretarial side, and treasurer Kim Evans.

The current chairperson, Jackie Spring of naval division, along with Kim Evans, are looking into the possibility of sponsorship for the team by The Marconi Company.

The ladies have also expressed a wish to join the Summer League. This, of course, means more players are required.

There is also the strong possibility of a second team starting up. So what about it ladies? What a way to keep fit and enjoy a good sport. Just contact either Jackie Spring extension 2638 or Wendy O'Neil extension 2929 now.

Marathon

MIKE LANCASTER, naval division systems engineer, has been offered a place in Europe's largest, most widely publicised and most keenly contested long-distance running race — the Mars London Marathon, which takes place on 17 April.

He will take his place alongside top international athletes, show-biz personalities and thousands of less exalted men and women, all keen to raise money for charity. Mike hopes to make a pile for



Mike Lancaster

MENCAP and the Sports Aid Foundation.

It's his first attempt racing over this distance. He's well into his training routine and, come the day, we'll be rooting for him along every step of the 26.2-mile, lung-splitting, calf-bursting way.

Are there any other members of the company running in this event? We'd be glad to hear from them, if so.

Whatever happened to the Christmas competitions?

BACK here in our editorial ivory tower — where the office intercom mutters 'Rosebud' on every other Wednesday of the month with an 'R' in it — we are definitely bemused. A couple of months back, sleeves rolled up, eye-shades in place, windows and blinds tight shut to keep the cigarette smoke in, we finally cracked it.

'Got it' Pam said. 'A bumper quiz with a good prize — a pony say.'

'A pony? Look, I know the cops have promised breathalyser-barron streets in Chelmsford this Christmas, but where the hell is the big 'M' going to get a pony? Anyway, *reindeer* are a more appropriate means of transport this time of year.'

'Not a real pony, you idiot. Twenty-five quid — a pony is slang for twenty-five quid!'

'Oh yeah, all right'. I warmed to the idea. 'If we add a crossword, one or two other competitions...'

'And a few jokes...'

'And a few jokes, we've got a good centre spread! A couple of hours later, Colin from the publishers was noting down headings for the quiz: bit of trivia, films, current affairs.'

'Better have some sport — it is the *Olympics* this year — and if there isn't at least one question about "Casablanca"... I ventured. I heard the groans as I ducked to avoid the balls of paper hurtling like guided weapons across the

*Brian Dynevor, using all the words that had to be included in the short story competition (they are italicised) asks why there was such a poor response to the competitions.*

office.

With the addition of a word-game or two, the odd fiver as inducements, we put the paper to bed, well self-satisfied with how clever we'd been in keeping the punters happy. Except...

Came the day of the deadline for all competition entries... deflation like a burst balloon.

'Ere Pam — we've suffered a *boycott*. We've had far fewer entries than you'd expect — even with £50 in cash prizes!'

She contemplated her *navel* — and I, mine.

'Well, I suppose we ought to ask for *data*' (she actually said 'information' — but I can't get an unforced 'data' in) 'as to why so few entries. We normally have at least 80 entries for the crossword alone.'

'Perhaps, cocooned in the family; glass in hand, content with W C Fields' comment "A woman drove me to drink and I never even had the courtesy to thank her" — which is always the stage before discovering the truth of Joe E Lewis's "A man is never drunk if he can lay on the floor without holding on" — by then who cares that both the TV set and the picture is *self-oscillating*? — winning the

twenty-five quid was not of prime importance.'

'At least there were 18 entries for "spot the difference" — even if some found eleven changes and not ten' she smiled tentatively.

'Ok — let's try and find out why there were fewer entries; when we had more competitions than ever, each with a cash prize!'

So, hence this literary folly. To those who have spotted that *cobra* and *model* have not graced the above lines, I'd point out that snake-hipped women are more in keeping with Raymond Chandler's novels — all of which are in print and should be read voraciously. And anyway, I've just managed to drag them in, haven't I?

Meanwhile, anyone got any suggestions as to why so few competition entries were sent in? We really would like to know — a note to the PR department will ensure we get it right next Christmas.

Short story by SUE ROGERS

I HAD such a strange dream last night. Now don't get all excited, it wasn't that sort of dream, i.e. some male *model* clad in black leather and rubber, with fishnet stockings and stilletos, and pythons and a *cobra* weaving in and out of his *navel* — amongs other things.

No, it was something much more peculiar. I don't know what your dreams are like, but in mine the most extraordinary and unusual *data* and events are juxtaposed in the most tenuous fashion which at the time have a natural and logical flow to them.

I was at peace in my bed in *Chelmsford* at one moment and then sailing through a green sky, above blue fields and meadows in a hot air *balloon* with *Geoff Boycott* of all people, clutching silver roses and drinking puce champagne.

Can one be given the *breathalyser* for being drunk and disorderly in charge of a *balloon*? Below me the landscape had changed and became one of snow and ice, herds of camels, lizards and *raindoor* meandered across frozen wastes, and the heavens were full, with flocks of penguins, lethal *weapons* in dinner jackets, *self-*

*oscillating* from wing tip to wing tip like synchronised swimmers in the *Olympics*.

It was only then that I noticed the sun and moon, hurtling across the firmament, day following night in moments as rapidly as the blinks of eyes, which were the stars. And then sadly, I woke up and could remember no more. I still wonder what I got up to with *Geoff Boycott* — in his fishnets and stilletos.

\*You will recall that authors had to incorporate certain words in the story, all of which are shown here in italics.



WINNERS ALL



Sheila Machin



Mary Ellis

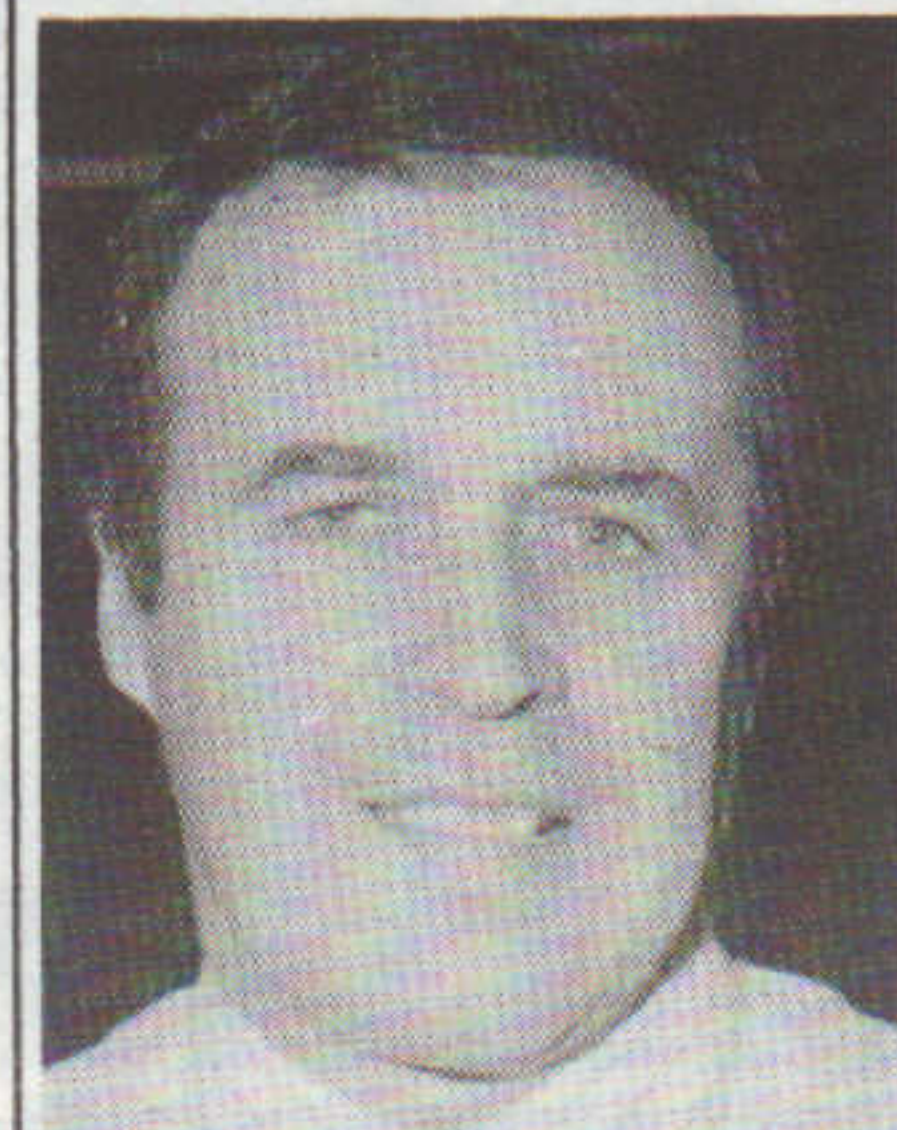
STELLA MACHIN, operations ACD, picks up the prime prize of £25, having supplied 179 correct answers in the Bumper Quiz. (The answers are held in the PR department as publishing them would occupy too much space.)

Mary Ellis, CIS, comes up with a double first! She was the only one to have correctly completed the crossword, and she supplied 38 words in the word puzzle — more than anyone else, even ruling out the three doubtfuls! So, Mary receives a well-earned £10: *certes, cert, crept, crest, erst, ester, erect, pet, pest, pester, peter, pert, prest, preset, respect, resect, reset, ret, rete, rest, rest, set, step, steer, steep, scepter, sceptre, specter, spectre, secret, sect, sept, stere, strep, tee, tree, terce, terse*. A fiver goes to Ray Brame, production engineer, whose Spot the Difference entry was first out of the hat.

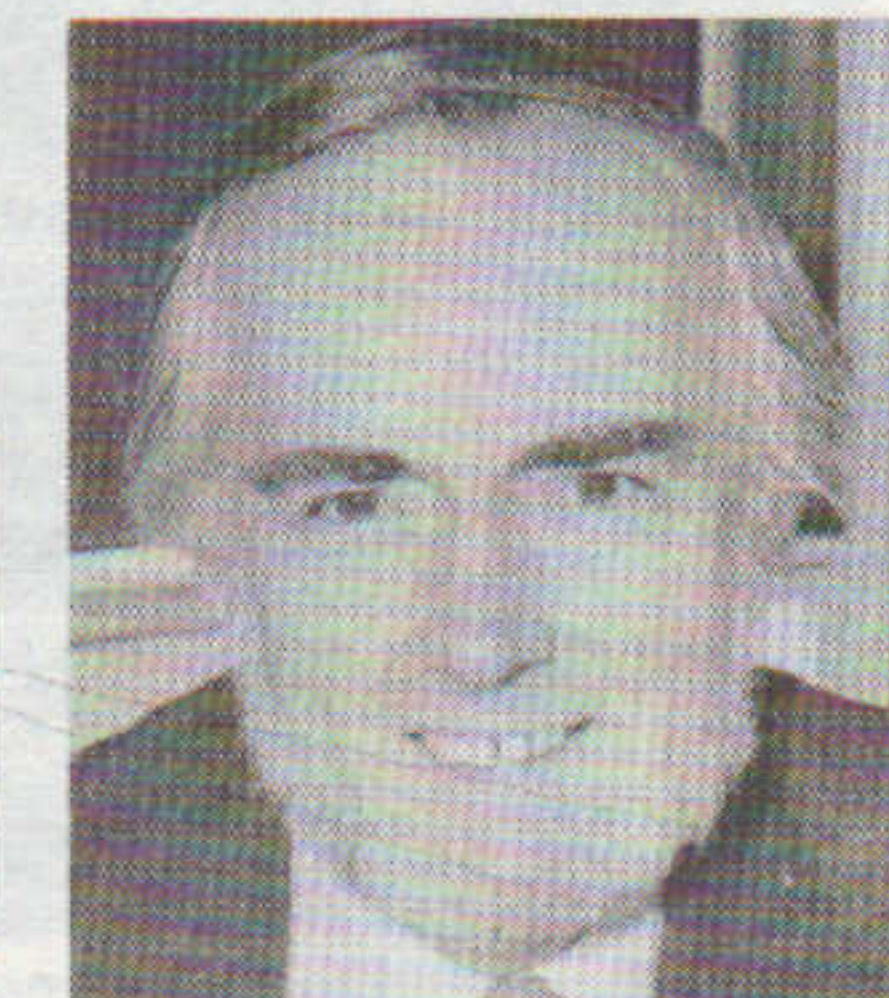
Peter Sparkes, naval software, wins the pen for sending in what we thought was the feeblest cracker joke. 'We had our cat insured but he wanted his own claws in the contract'... ouch!

Sue Rogers, systems accountant, is clearly literate as well as numerate. She wins £10 for the best short story, which had to incorporate certain given words — see this page.

Answers to the crossword were — Across: 2 Who; 7 Tournaments; 9 Short; 11 Diktat; 12 Hatter; 14 Tea; 15 Rag; 17 Speech; 18 Serra; 19 Instep; 21 Indiscernible; 23 Pickle; 24 Angels; 25 Glutinous; 26 Suct; 27 Star; 28 Present; 32 New Year; 33 Unity. Down: 1 The seasons greetings; 3 Christmas issue; 4 Over the rainbow; 5 Gone to the dogs; 6 Strategic base; 8 Mince pies; 10 Beefsteak; 13 Sparkle; 16 Delight; 20 Kiss; 22 Blur; 28 Pine; 29 Edwin; 30 Event; 31 Tart.



Ray Brame



Peter Sparkes

TRY THIS MONTH'S WORD POSER

HAVE a go at winning £15 by solving our latest word poser.

All you have to do is match up each letter of the alphabet to a number on the grid to complete the puzzle.

We've already given you three letters, so fill them in on the grid and take it from there.

Send in your entries (to arrive by first post on 10 March 1988) to the Editor, News and Views, PR Department, Marconi Radar Systems Ltd, Writtle Road, Chelmsford.

1	2	3	4	5	6	7	8	9	10	11	12	13
N							D					
14	15	16	17	18	19	20	21	22	23	24	25	26
					O							

NAME .....

PHONE .....

DEPARTMENT .....

7	17	3	0	17		17		16		21	12	2	19	26
	14		8		8	10	11	17	22		16		4	
8	14	12	4	17		8		1	22	24	17	9	23	
	12		24		17	16	24	26	18		10		20	
17	2	4	17	26		12		12	8	22	24	12	9	
	10		20		17	1	7	16	8		17		7	
10		10		2		17		1	20		21		8	
8	13	17	1	3	17				11	12	25	8	4	7
6		26		16		26		24		26		2		19
	20		24		10	17	4	4	16		20		23	
5	3	17	17	1		10		12	4	17	22	12	1	
	4		4		22	26	12	9	23		8		1	
14	11	19	3	26		3		23	9	4	3	7	17	
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17	7	2	17	7		17		7	16	17	26	17	4	

# A time to celebrate

## Join in the Chelmsford centenary festivities

ON SEPTEMBER 19 1888 there was dancing in the streets of Chelmsford, shops and houses were festooned with decorations, Union Jacks fluttered and danced in the breeze, 1500 school kids chewed happily on the 'corporation cakes' that had been handed out, and at 7pm, newly-installed electric lights were switched on and bathed the High Street in blue light.

The reason for the knees-up? Chelmsford on that day received its Borough Charter, which was brought from London by special train and was accompanied by a procession along the main streets of the town.

### Varied events

The *Essex County Chronicle* wrote: 'There can be no doubt that the Charter confers a distinct honour on the town, stamping it as a place of enterprise and progress.' (Even before Guglielmo Marconi arrived there and set up his company!)

That was 100 years ago. So, throughout 1988, Chelmsford is putting on a programme of varied events to celebrate the Borough Centenary. While events will be held throughout the year, the main festivity will take place from Sunday 28 August to Sunday 18 September.

Starting in March, the provisional calendar lists, among



An engraving from *The Pictorial World*, Sept 27 1883, showing the procession carrying the Charter along the High Street.

other things, lectures, open days, exhibitions, sport, races, an ice gala, a water festival, a fun day and a ball. The highlights are performance of *Don Juan* by the Royal Exchange Theatre Company; Prunella Stack presents an evening with Queen Victoria and the great two-day Spectacular in Hylands Park over the August Bank Holiday. This

will feature a vintage car rally, a civil war (!), a veritable feast of musical events, a fair, balloon rally, music and drama workshops, market stalls and firework displays.

Now, how does all this affect you? You could, of course, simply attend the events. But this is Chelmsford's celebration for Chelmsfordians, and it is the

Borough Council's hope that everyone should be positively involved in some way. It offers to liaise with and provide publicity for groups, clubs, societies and individuals who feel like organising their own events to tie in with the celebrations.

So, the field's wide open. If you wish to contribute a special event, contact Sue

Ireland, Chelmsford 490490 Extension 3361. On the same number, extension 2169, is Linda Wood whom you should contact if you would like to help with the organisation of the Borough Council's events.

In addition, or as an alternative, you might like to respond to the Mayor's Centenary Tree Appeal. The

target is to plant 10,000 trees to replace those that were felled or damaged in the borough during the October hurricane. £10 will buy a small replacement tree to be planted in the general area of your choice within the Borough. £150 will buy a large, semi-mature tree to be planted in a special Centenary Avenue. Donations will be recorded in the Special Tree Appeal register and you will be told personally of the species and location of your tree.

Forms relating to this appeal are available from the Leisure Services Department at the Civic Centre in Duke Street, which is also where Sue Ireland and Linda Wood are to be found.

## STORES

### First phase of modernisation scheme is nearing completion

IN OCTOBER 1986 *News and Views* put the spotlight on Stores — that complex larder from which the company draws everything from pencils to the myriad parts and components needed to manufacture its products.

We mentioned then that a new method of storage and issuing was to be introduced, and can now report that the first phase of the modernisation scheme is nearing completion.

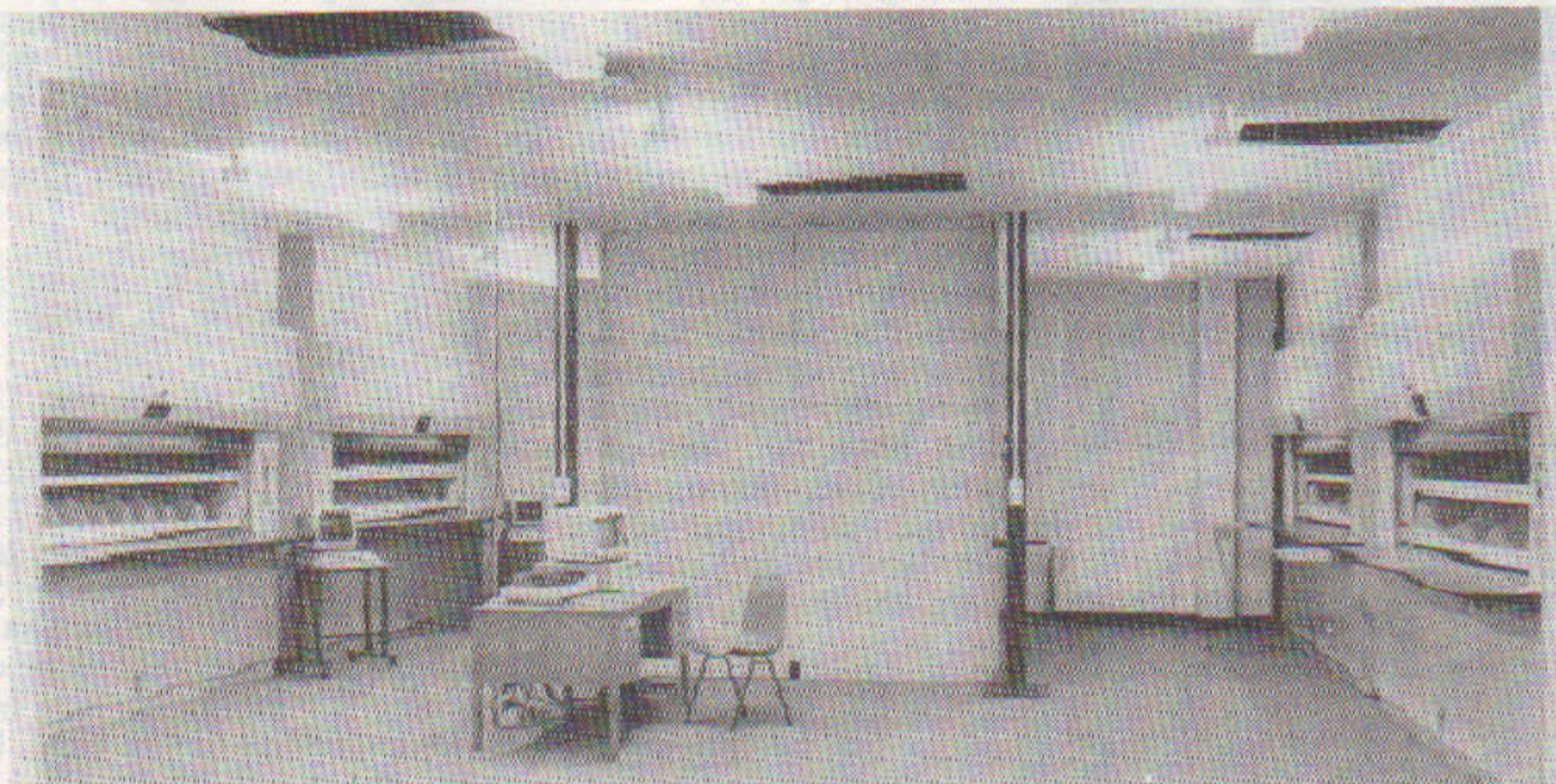
The old mezzanine floor at the end of 'E' building has been greatly enlarged and given cosmetic treatment that

promotes it to an altogether different league. This clean, spacious, carpeted marshalling area is to be the automated part of the stores, and six computer-driven carousels will speed up and simplify the picking of parts for assembly, and the issuing of common stock items.

#### False ceiling

The carousels are six to seven metres high, disappearing up through the false ceiling. Each consists of between 70 and 90 shelves, containing some 2000 to 2500 compartments, which hold the items. The shelves revolve vertically, and responding to commands from the computers, will stop automatically when those containing the required items draw level with the storemen's working surface.

By the end of this month, all the common stock stores will have been transferred to the carousels and Phase 2 of the scheme will have been started. This involves demolishing the rest of the Stores and extending the mezzanine floor even further, so that new shelving can be installed to accommodate the WIP stores currently housed in some 5000-6000 square feet of 'A' building.



Those shelves of parts lists schedules in the background will shortly disappear, never to be seen again. The information they contain will be stored in future in the computer memory.



The rows of boxes that have been part of the Stores landscape for decades will depart un mourned as their contents are transferred to the new carousels.

CHELMSFORD

**NEWS AND VIEWS**

Marconi

#### Next issue:

Copy date for inclusion of material in issue number 27 of *News and Views* will be 24 March and the newspaper will be distributed on 15 April 1988

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