

# MARCONI AVIONICS NEWS

House Journal of Marconi Avionics Limited

MOTTO FOR THE MONTH.  
 "Even wit is a burden when it talks too long"

## COMMERCIAL SUCCESSES

### Unique quick-adjusting tripod earns over £2 million in orders

World-wide appeal of Marconi Avionics Common Mounting System

A unique double-tripod mounting system, capable of carrying heavy loads and which can be set up very rapidly on uneven terrain, has earned orders worth more than £2 million, including an increasing number of exports, for Marconi Avionics Limited. The tripod was developed as a private venture and produced in the Company's Mobile Radar Division, Borehamwood, as part of the British Army's Common Mounting System (CMS). The team from Marconi Avionics Research Laboratory was the first to conceive the idea of an upper tripod, whose feet can slide along the legs of a lower one and then be locked into position. Engineers from the Mobile Radar Division have developed the system for production.

As its name implies, the CMS is a single system which

can carry any of the viewing, angulation and ranging devices in common use by armies on the battlefield. It has become recognized as a standard supporting system by manufacturers of these devices throughout the world. Among the steadily-growing orders for CMS are exports to Australia and New Zealand.

Anyone who has a camera on a tripod for example, will know how stable the arrangement can be and, yet, how difficult it is to adjust the height and angle of the camera, while keeping the tripod stable. The extremely simple Marconi Avionics concept enables a stable platform (the lower tripod) to be established on sloping or rough ground, even among boulders. The height and angle of the load is then adjusted by means of the upper tripod. The quick-acting locking mechanisms, enable the whole operation to be done in seconds.

With this unique feature, the tripod can carry loads of up to 70kg on slopes as great as 26°: it can be folded, without dismantling, in a few seconds, and weighs only 4.5kg, an easy load for a man to carry.

### Chinese place £40 million electronics order with British company

Marconi Avionics and senior Peking officials sign contract.

Marconi Avionics Limited, Britain's top export-winner in aircraft electronics, has signed a £40 million contract, with the China National Aero-Technology Import and Export Corporation (CATIC), for the supply of electronics equipment for Chinese defence purposes.

The contract was signed on 30 June at the United Kingdom Ministry of Defence, by Mr. Sun Zhaoqing, Deputy General Manager of CATIC, and Mr. J.E. Pateman, CBE,

Managing Director of Marconi Avionics Limited. It calls for the delivery of electronic equipment and for associated trials and includes the establishment of some licensed manufacture in China.

The new contract will secure work for the British company for at least five years and will create several hundred new skilled jobs in Britain, in mid-Kent, Basildon and Hertfordshire. It covers engineering, production, on-site trials and product support.

Marconi Avionics which supplies a wide range of electronic equipment for aviation, industry and defence, has already established the production of fuel flow measurement equipment under licence in China. The Company's avionics, for example, are supplied for 150 different types of aircraft, which are flown world-wide by operators of many nations, including China.



### Cementing Friendships

Arising from the announcement of the successful business discussions, resulting in orders from the Chinese Government, our mind goes back some 15 months or so, when we were hosts to a number of Chinese personnel, who had come for instruction and practical experience in dealing with Marconi Avionics units, as used in such aircraft as BAC 1-11.

A few of the Chinese were allocated to ISD, where they endeared themselves by their attitudes and application of skills. Realizing that at the end of the working day when they were taken to their accommodation they might be feeling somewhat 'at sea', one of our employees, with whom they were working, invited some to visit his home and family.

John Buckingham and his wife, who are well known in the scouting world, invited them as guests for an evening. They were able to relax in a typical English family household and the mask of serious individualism was dropped as they enjoyed the friendliness of a family.



Mrs. Buckingham and her two children with the visitors.

## Medway week photographic exhibition

The club contributed over 30 colour and black and white prints to the annual exhibition which was open to the public during the festival week of 7-12 July.

The photographs represented the results of many of the activities of the club throughout the year from the experimental 'table-top' evenings, modelling, portraiture and illustrations for the Christmas carol service.

As the new year's programme gets underway it is intended to produce an even bigger display next year, with new photographs from the extensive programme of activities and competitions planned.

Come and see for yourself at the cheese and wine evening on 10 September in the conference rooms, Tower 1.

Some interested visitors looking at the exhibition. (B)



[www.rochesteravionicarchives.co.uk](http://www.rochesteravionicarchives.co.uk)

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CDD, GYRO, ISD, PSD,  
RAS.

Volunteers should offer their services through Divisional Administration Officers or direct to Editor.



Mr. Alan Court the Editor of our sister magazine Hillend New (MSDS at Hillend, Dumfries, Scotland) has an interest in things to do with the sea; and recently he published the following item, in that it may be of interest to other 'seafarers'. In acknowledging the source, we pass the item on for any who care to consider the points raised (We suspect the reading was inspired by a necessity to have recourse to claim compensation).

### Perils of the Sea

"Be it known, that..." so commences the small print on the marine insurance policy. A beguiling start to what is generally pretty dull reading and enough to persuade me to read on. I had vaguely expected cover against damage sustained by the erratic manoeuvres of a passing vessel helmed by an inebriated son of the salt, or other such normal hazard. However, it appears that these may be the least of my problems, since on closer inspection, there are far greater perils to beset the unwary.

"Touching the Adventures and Perils which the Company are contended to bear..." so continues the small print in a form of prose likely to delude those paying the premium into believing they are dealing with a munificent establishment. Then, as the perils are touched upon, the imagination takes hold; attack by a four masted, square rigged 'Man o' War' with all port cannons blazing; a flash of cutlass as the 'Pirates, Rovers and Thieves' are repelled from the quarter deck; the desperation resulting from 'Detainments of all Kings, Princes and People'.

Will it ever be safe to sail on the waters of Inchcolm?  
And yet there is more - the mysterious consequences of 'Barratry of the Master and Mariners'. After a quick consultation of my ever ready dictionary, I fired the crew on the spot.

Then comes the exclusion clause, and one catches a breath to find that there is no cover for contact with a mine or torpedo. "Royal Navy please note. And so the company reiterates that it is 'contented with this Assurance...' but goes on to spoil it all by quoting the premium to be paid.

However quaint to the last, it concludes that "In Witness whereof it hath hereunto set his hand..." and I almost forgave them.

**Not only marine policies need to be carefully considered but motor car, personal accident and life policies too - get reading!**

### Holiday time

As a reminder of days spent at the seaside, we print here an ode to Westgate-on-Sea, by John Betjeman.

*Hark, I hear the bells of Westgate,  
I will tell you what they sigh,  
Where those minarets and steeples  
Prick the open Thanet sky.*

*Happy bells of eighteen-ninety,  
Bursting from your freestone tower!  
Recalling laurel, shrubs and privet,  
Red geraniums in flower.*

*Feet that scamper on the asphalt  
Through the Borough Council grass,  
Till they hide inside the shelter  
Bright with ironwork and glass.*

*Striving chains of ordered children  
Purple by the sea-breeze made,  
Striving on to prunes and suet  
Past the shops on the Parade.*

*Some with wire around their glasses,  
Some with wire across their teeth,  
Writhing frames for running noses  
And the drooping lip beneath.*

*Church of England bells of Westgate!  
On this balcony I stand,  
While the woodwork wriggles round me,  
Clock towers rise on every hand.*

*For me in my timber arbour,  
You have one more message yet,  
'Plimsoils, plimsoils in the summer,  
Or golashees in the wet!'*

## TO BREAK BOREDOM

Formation of Magic Squares -  
it all adds up to mystery

The formation of magic squares is an amusement dating back at least 2000 years to ancient India. The 'magic' lies in the fact that whichever way you add up the numbers in the squares, be it horizontally, vertically or diagonally, you always arrive at the same answer. In the simple square below for example, the answer is always 15.

8	1	6
3	5	7
4	9	2

In theory, there is no limit to the number of squares that can be used in constructing a magic square, but in practice it represented a major breakthrough when, in 1959, three American mathematicians created one which contained 100 squares.

Magic squares were introduced into Europe in the 15th century and in those superstitious times, they were often engraved on silver plates to guard against the plague.

Here is a 16 number square, created by the German artist Albrecht Durer (1471-1528) and included in his drawing Melancholy. Not only does it add up to 34 in every direction, but the numbers of the four squares in the corners total 34. An added refinement occurs in the two middle squares of the bottom line, giving the year of a great plague - 1514.

16	3	2	13
5	10	11	8
9	6	7	12
4	15	14	1

Constructing your own magic squares can be a stimulating and entertaining way of filling an odd half-hour or so. It is best to begin with 16 number squares, and there are a few rules to remember if your square is to work out properly.

First, wherever they appear in the square, all the numbers used must be in a sequence of 1 to 16, for example; 8 to 23, 9 to 24, 10 to 25 and so on. If you plan to construct an 'even' square, one with an even number of smaller squares, start with the lowest number of the sequence in the bottom right-hand corner. If you are constructing an 'odd' square, put the lowest number in the middle of the top line.

Here are a few squares with a few numbers left out. Answers, and a formula to help you construct magic squares will appear next issue.

A				B			
23	10	9		45	31	42	
	17	18	15	34	39	40	
16	13	19		38	35	41	
11	22	21	8	44	43	30	

C			
20	7		17
	14	15	12
13		11	16
8	19	18	

## Marriages

Colin Matthews, a Buyer in Powerplant Systems Division, married Deirdre Peters, an employee of Loyds of Chatham, at St. Michael's Church, Chatham, on 28 June 1990.  
Colin is a worker within the Young Enterprise Organization and often gives lectures to the students. He is an enthusiastic sportsman and both he and Deirdre are active members of Gillingham Operatic Society.



Vivienne Marchant

Vivienne Marchant, ADD Production, married Barry Riley at St. Justus Church, Rochester, on 10 May. Viv was suitably attired as shown in the photograph by her friends and colleagues before she left the Works.



The happy couple after the ceremony.

Susan Lee, a member of the FCD scheduling team, was married to Paul Everitt, a Storeman in CMS, on 24 May at St. Justus Church, Rochester.

### 21st birthday

We offer our congratulations to Cliff Cheal on attaining his 21st birthday on 3 July. Cliff is an employee in PSD Test.



We conclude our series of recipes for use as picnic fare with the following items. We hope we have been able to help you in bringing new variety into the contents of your picnic basket - thereby increasing the joy of a day out in the country.

#### MINTY CUCUMBER SOUP

This is a refreshing cold soup which requires chilling for several hours.

**Ingredients:** 1 large cucumber  
1 garlic clove  
1 heaped teaspoon finely chopped mint  
1/2 pint soured cream  
1/2 pint single cream  
salt and pepper

**Method:** Peel the cucumber and rub it over the coarse side of a grater into a bowl, mix in the crushed garlic clove and the mint. Stir the soured cream and the single cream into the cucumber, season with salt and pepper and chill.

#### BLOATER PASTE

Bloaters are lightly smoked, salted herrings. They should be eaten on the day of purchase.

**Ingredients:** 4 bloaters  
butter  
lemon juice  
cayenne pepper

**Method:** Place the bloaters in a pan with enough boiling water to cover them. Simmer for 5 minutes then drain and remove skin and bones. Weigh the flesh and measure half that amount of butter. Blend the bloater to a smooth paste in a liquidizer and season to taste with lemon juice. Work in the softened butter until the paste is smooth and uniform; adjust the seasoning with cayenne pepper. Pack the paste in an earthenware pot and chill. The paste will keep for several weeks, but should be covered with clarified butter.

#### CREAM CHEESE AND BACON TART

A change from the more usual French quiche.

**Ingredients:** 6oz shortcrust pastry  
4 rashers streaky bacon  
4 eggs  
1/2b cream cheese  
3 tomatoes  
salt and pepper

**Method:** Line an 8 inch flan tin with shortcrust pastry. Cut the bacon rashers into narrow strips and fry until crisp without any extra fat. Drain the rashers and arrange over the pastry base. Beat together 1 whole egg and 3 egg yolks, season with salt and pepper. Beat in softened cream cheese and pour this mixture over the bacon. Arrange the sliced tomatoes on top and bake at 400°F (gas mark 6) for 20 minutes, then for a further 10 minutes at 350°F (gas mark 4).

# BRITAIN'S EARLY WARNING RADAR TRIUMPH

Formal switch-on of Marconi Avionics complete mission system avionics for AEW Nimrod.

At a ceremony, at the Radlett factory of Marconi Avionics Limited, the most powerful airborne electronics system ever produced in the United Kingdom, for the nation's AEW NIMROD programme, was formally switched on. The ceremony, by Controller Aircraft, Ministry of Defence, Air Chief Marshal Sir Douglas Lowe, marked the completion of the overall design and system integration phase of the project, a task which was entrusted to Marconi Avionics in April 1977.

The entire system, known as the Mission System Avionics (MSA), is the means whereby AEW Nimrod can carry out its vital airborne early warning (AEW) task. It comprises the powerful radar, with the large scanning aerials which fit into the characteristic radomes at the nose and tail of the aircraft, and contains very advanced electronic signal processing. Associated with the radar are six sophisticated control and display consoles, a very comprehensive communications sub-system, both for voice and processed data, the biggest capacity airborne data processing system ever to be developed for use by the RAF in service, and a number of other important sub-systems, such as electronic support measures and IFF Radar.

Marconi Avionics is directly responsible to the Ministry of Defence (PE) for the MSA programme, including design, development, integration, proving and production of the system. British Aerospace is responsible for the AEW Nimrod aircraft and for its interface with the MSA.

Work on the MSA has already provided more than 1000 jobs in the Hertfordshire divisions of Marconi Avionics, plus a further 500 elsewhere within GEC and 1000 with sub-contractors. The Airborne Warning Systems Division which was established to manage and carry out the project, has been responsible for the major task of design, and co-ordination of 155 sub-contractors, and to provide the momentum needed to reach this important stage in the AEW programme on target.

The switch-on event represents a triumph for Britain's continu-

ing airborne early warning programme. This began in 1945, when the Company was first contracted to support an American radar, in the Royal Navy's Skyraider, and later in the Gannet aircraft. When AEW responsibility was transferred to the RAF, later, these radars were fitted in Shackletons. Over the years, the Company has introduced extensive modifications to improve its performance and these systems will continue to fulfil Britain's AEW Defence role until 1982, when AEW Nimrod goes into service. This new system represents a massive improvement to the defence capability of the RAF and will transform the effectiveness of the squadrons operating them.

The development of modern, coherent radars, based on pulse doppler principles, has been a speciality of Marconi Avionics since the late 1950s. Working continuously with the Ministry of Defence, particularly the Royal Signal and Radar Establishment, the Company developed this new radar with the performance needed for the future defence of the United Kingdom. Such radars enable simultaneous measurement of speed as well as range, height and bearing, of a large number of targets. The powerful on-board signal and data processing enables the system automatically to keep track of all of these individual targets, even when they may be moving in different directions and at a wide range of speeds and heights.

The communications system which is integrated into the overall system is the most sophisticated and comprehensive to be installed in a European aeroplane. A great deal of design and evaluation work to define an optimum overall AEW system was carried out by Marconi Avionics. The go-ahead, given to the AEW Nimrod project in 1977, was the culmination of two decades of work and an affirmation of Britain's faith in its airborne systems capability. The achievement, celebrated today, is proof of the wisdom of that decision to go ahead.

## Apprentice activity

Successful completion of training has been achieved by the apprentices listed here-with, together with the divisions and departments to which they have been allocated. We congratulate them and wish them well as they take their place among the ranks of the skilled employees.

Ball L.R., FARL T/A; Bird G.G., ISD T/A; Brunt G.J., ADD T/A; Carter I., ATE T/A; Collins S.J., PSD T/A; Copping W.E., AS&R D/O; Cordier G.J., MASD D/O; Crennell J.L., ADD Test; Fassum P.D., CMS Est; Fox D.J., ADD Eng; Gilman N., ADD D/O; Godden G.S., AS&R Inst. Tech; Gower I.R., ISD D/O; Graham N., AS&R; Hanson K.S., PSD Q.A.; Harvey R.A., PSD Q.A.; Ireland M.R., ISD T/A; Landers J.K., PSD Planner; Mumford D.G., ATE T/A; Peddie S.B., MASD Q.A.; Rose D., MASD T/A; Rowe J.S., AS&R T/A; Rowland N.R., ISD Q.A.; Sayers S.P., ADD Planner; Simon D.M., ADD Test; Spain J.B., ADD Q.A.; Stephens R.H., MASD Tech Pub; Thomas A.E., ATE T/A; Vickers K.J., ADD T/A; Wheeler A.R., PSD Wiring; Whybrow S., ATE T/A; Wolford N., ISD Q.A.; Champion K.E., PSD D/O; Hartley D.A., FCD Insp; Wellard P.E., PSD Test; Wells W.A., AS&R (Wat); Potter S.R., ISD Model Shop.

## APPOINTMENT

We announce the appointment of Mr. K. Washington to the position of Chief Development Engineer in ATED with immediate effect. Mr. Washington will be responsible to the Chief Engineer.

## WORD KNOWLEDGE

'VERSATILITY'—Oxford dictionary.  
...Turning readily from one subject to another, or occupation to another.  
Capable of dealing with many subjects as author; genius, disposition.  
Mind; capable of being moved or turned as on hinge.  
Spindle; moving freely about up or down on a support.  
Antennae; changeable, easy adjustment...'

## Service And Despair Part I

"Let's Shatter Her Ego ---- Pretend Not To Notice Her"



"You're Fired Haggy  
— You Tag Miss Jones"



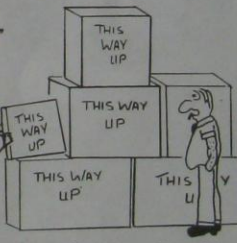
"As His Secretary, You'll  
Have The Run of His Office  
... You Can Run  
I Hope"



"SICER MATH  
... Same Again  
Brian?"



"That's Not a Laugh  
It's A Mating Call"



"You Must Be  
The New Man"



# LONG SERVICE ASSOCIATION

The 25th annual dinner and dance of the Rochester section of GEC Long Service Association was held recently in the works canteen. Over 400 guests enjoyed a good meal and afterwards dancing to the strains of 'In Crowd' completed the evening until midnight.

The toastmaster was Mr. L. Platt and the toasts were as follows:

- To the Company - proposed by E.B. Howes Esq.
- Response - Given by H.R. Bristow Esq.
- To the guests - proposed by V.E. Spencer Esq., President.



Vic Spencer making his speech



The waitresses enjoy a joke.



Ready to do justice to the repast.



Tripping the light fantastic—or is it a waltz?



Dancing—no need to guess the central pair.



*The President's lady receives a bouquet.*



*Bert Snoswell, Chairman, addresses the gathering.*



*Conversation between the courses.*



*Three jolly waiters or barmen.*



*Haven't seen you for a long time!*



*A group of ladies.*

# Rochester

*"Norman William's keeps are frowning grimly  
on thy sons of toil,  
And the thread of Roman legions is imprinted on thy soil."*

## Ancient Rochester

Ancient Rochester, to describe adequately the many historic events associated with its walls, its castle, its cathedral, and its bridge, would require a very considerable volume to itself. When its real history commenced is a matter that can only be conjectured, but it is probable that its strategic position must have rendered it a place of importance as soon as the art of war was known in these parts of the world. Judging from the known character of the Belgæ, Celts, and other tribes, who are comprehensively referred to as 'Ancient Britons,' this must have been at a very early period, for the ancient Britons knew a great deal more about fighting than about writing histories. It appears, therefore, to be a moderate assumption that there were defensive works of some kind here when Julius Caesar visited this island, and that they were in some way remodelled to meet Roman ideas. There is a consensus of opinion that Rochester was the *Durobriva* of Antonius, the name apparently being derived from *dour*, water, and *briva*, a passage. And this suggests another point which has puzzled historians, viz., when was there first a bridge erected here. It is said that there was none even during the Roman occupation, although it



ROCHESTER CATHEDRAL.

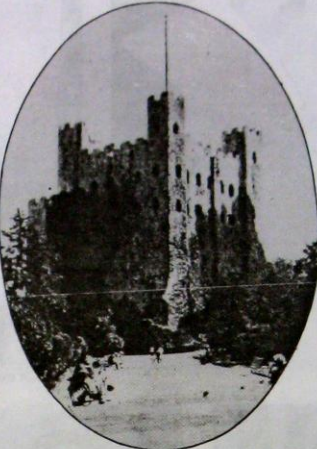
is generally admitted that there was one before the Conquest. It is supposed by some that Rochester had defensive works erected here about the close of the fifth century by Hroff, from whom the town received its ancient Saxon name of *Hroffcestre*, which Leland softens down to *Roscester*. It is needless, however, to discuss here the debated points of remote history, and we may simply say that Eihelbert, after his conversion in 597, built the church of St. Andrews and raised it to an Episcopal See, and that in 765, during Egbert's reign, the city possessed a castle. It evidently needed one, judging from the vigilant eye the Danish invaders kept on the place; for

*"Then weren the Danes so furis and bold  
That every Englishman weren in moche Fere;  
They seken for Plunder of silver and gold,  
And al eis that gode is that they can come nere."*

The Danes attacked Rochester more than once, and often with success; but in 884 they were made to fly at the very name of Alfred—

*"And left al their Booty, and eke al there Dede;  
Then was there moche meriment in Rochestre made,  
That we bin so soone delivered from evil  
Of these furis Danes; Our Harts weren glad  
I nat they feared our good Kyng more than God or the  
Devil."*

Bede refers to Rochester as "the Castle of Kentish men," but it submitted to William the Conqueror apparently without any resistance, and was granted to Odo, Bishop of Bayeux. In 1088 Odo, having proved rebellious, was besieged by William Rufus, who took the castle, although it afterwards reverted to the see of Canterbury, and Thomas a Becket makes it a charge against Henry II that the king took Rochester Castle from the Church. It is probable that on the whole Rochester would have been more peaceable and contented if it had not owned a castle in the early feudal days, for it was a constant bone of contention among disputing factions. In the time of Stephen, Robert, Earl of Gloucester, was imprisoned here, and in 1215 King John and the Barons fought for its possession, as did also Henry III and his Barons. In the latter siege Simon de Montfort did considerable damage, but he was unable to capture the castle, and after the latter was repaired by Edward IV it ceased to have much importance owing to the changed conditions brought about by the introduction of artillery. During all those years the city was by no means wholly occupied with wars and sieges. In 1130 Henry I attended here at the consecration of St. Andrews by Lanfranc, on which occasion the city was the scene of much festivity and of a somewhat serious conflagration. Fires, however, were common enough in old times, and they appear very often to have done as much good as harm. Rochester had three memorable fires, but they do not seem to have in any apprec-



ROCHESTER CASTLE.  
(From Poulton's Artistic Series.)

ible degree affected its modern condition. In 1251 Henry III held a grand tournament here, and many other British and foreign sovereigns visited the city during the Middle Ages. Henry VII was here on three separate occasions, when he patronized the 'Fery Bote' instead of the bridge; and Henry VIII visited Rochester in company with Charles V, Emperor of Germany in 1522, and again in 1540, when he came *incognito* to get a preliminary but disappointing glimpse of Ann of Cleves. Queen Elizabeth also visited Rochester in 1573 and 1582, and James I in 1604 and 1606, while Charles I, Charles II, and James II were here under very varying circumstances, the last-mentioned monarch having come in disguise to escape as a fugitive on board ship in the Medway. A more remarkable visitor was Peter the Great, Emperor of Muscovy, and in 1661 the diary-making Pepsys also paid a visit, while Hogarth in 1732 and Sam Johnson in 1783 paid visits to the ancient city. It is evident, however, that these visits of royal and other personages throw little light on the real life of the place, and that the actual condition of the people must rather be gleaned from their legends and even their superstitions than from pageants or parades. The general life of the citizens went on comparatively calmly in spite of recurring periods of excitement, although the occasional elections and the annual fairs and markets seem to have been tolerably stirring events. For all that, Rochester seems to have been slow in developing, for although it received its first Charter from Henry II and returned two members to Parliament from the 23rd year of Edward I, it is described in 1725 by a distinguished traveller as consisting chiefly of a long and broad street, 'which causes it to be called the longest and at the same time the narrowest street in England, including Strood.' This was not very respectful language to apply to the historic Watling Street, and would be far from applicable to our modern High Street.

## Modern Rochester

*"Thou hast harbours safe and roadsteads wherein  
fleets may safely ride,  
And a river broad which floweth inland far with briny tide."*

Rochester stands in a beautiful valley along the banks of the Medway, about 27 miles from London down the great Roman highway of Watling Street. It is connected with Strood on the opposite side of the river by two fine highway bridges and also by the bridge railway. The City had a population of close upon 30,000 people, and is a parliamentary Borough, returning one member (with Chatham) to the House of Commons. Its municipal affairs were administered by a Mayor, a Recorder, etc., and the lighting, cleaning, sanitation, and water supply are admirably provided for. In addition to the usual public, political, educational, ecclesiastical, and other institutions,

Rochester possesses both in itself and its surroundings, many features of exceptional interest.

### ROCHESTER BRIDGE

*"This Medway still had nurs'd those navies in her road,  
Our armies that had oft to conquest borne abroad."—Drayton.*

One of the most picturesque views of Rochester is that obtained from its historic bridge, about which Mr. Pickwick dabbled while waiting for his breakfast. Whether we survey the surrounding scenery, the castle, the cathedral, the esplanade, or the distant hills, or gaze beneath at

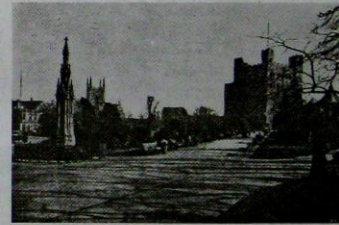
*"The fair Medwaya that with wanton pride  
Forms silver mazes with her crooked tide,"*

the scene is extremely picturesque. The present bridge, which is an iron structure of three arches on granite piers, was completed in 1856. It is not known where the first bridge was constructed, but there was a wooden structure here which was burned by Simon de Montfort, and the bridge which succeeded it was carried away by ice floes in the river about 20 years later. What sort of bridge the wooden one was is an open matter, but it appears that most passengers found it safer to go by ferry, unless they ventured to swim, as the harpist of the legend did, who, when he was blown off into the Medway, went on playing his harp as if nothing happened, and eventually arrived at *terra firma*, though not at the exact spot where he originally aimed at. The tax for the maintenance of the bridge was found a heavy burden, and in 1392 Sir Robert Knolles and Sir John de Cobham, at their private expense, erected a strong stone bridge, which held its place for 460 years, until the completion of the present edifice, in 1856. In the same year, 1856, was constructed THE ESPLANADE, which forms a noble promenade beneath the castle walls. Along the esplanade are the *Bridge Chamber*, an ancient chapel for the use of travellers.

### THE CASTLE AND GROUNDS.

*"Where throngs of knights and barons bold,  
In weeds of peace high triumph hold."*

ROCHESTER CASTLE, or rather its Keep, is an object of deep interest to archaeologists, and is considered one of the most remarkable structures of its kind we possess. It carries us back in memory to the days of the Normans, and to the struggles between kings and barons, and recalls the wonderful achievements of that marvellous architect of old, Gundulph, Bishop of Rochester. The existing Keep of Rochester Castle was designed and commenced by Gundulph, who was also the architect of the Keep of the Tower of London, and it was finished in the reign of Henry I. The ruin still retains some



THE CASTLE GARDENS.  
(From Poulton's Artistic Series.)

exquisite architectural beauties, and from the summit, which is 93 feet from the base, some unrivalled views are obtained. The noble arched gateway, which formed the principal entrance, the staircase wall, the columns and arches of the chapel on the second floor, are specially deserving of attention, but the student of archaeology will find abundance of interest in almost every detail of the structure. The tenure of estates by 'Castle Guard' has been associated with Rochester Castle for generations. On St. Andrew's Day the flag still flies from the house of the Receiver of Castle Rents, and the ancient custom was that holders of estates under the above tenure were obliged to appear, or, in default, might have their rents doubled each return of the tide. The castle and gardens were purchased in 1883 from the Earl of Jersey by the Corporation, who have turned the grounds into public recreation gardens. They cover nearly four acres, and are beautifully laid out. Close by the Castle is *Boley Hill*, where the people of Rochester had a chartered right to hold a Court of 'pie-poudre.'

*To be continued.*

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# 25 YEARS' SERVICE

**Bob Shaw** joined Elliott Bros. (London) Ltd., Guided Weapons Division, at Borehamwood in 1956 after completing an instrument apprenticeship, followed by National Service with the REMC in Germany.

From 1958-1961 he was attached to the Royal Aircraft Establishment, Farnborough, where he worked on missile simulation and flight trials with the final year studying inertial gyroscopes and accelerometers for Gyro Division.

Returning to Marconi Avionics, Rochester, in 1961 as Senior Development Engineer he joined the air data equipment engineering team for the Lightning and VC10 aircraft. 1962 saw Mr. Shaw working with Military Aircraft Division on the Drone aircraft and TS92 auto-pilot systems.

In 1963 he was transferred to assist in establishing Gyro Division at Rochester. Since 1969 Mr. Shaw has been the Quality Assurance Manager of Inertial Navigation Division.

His hobbies are predominantly off-shore sailing, gardening and dancing.



Bob Shaw.

**Len Callaway**, Section Leader in CMS Tool Drawing Office, has joined the ranks of long serving employees after completing his 25 years' service.

He began his industrial career in 1933 as an apprentice with Short Bros., after leaving Luton Central School. During the war he became a Training Officer of the Man Power Board in Scotland. On returning to the Medway Towns he joined Rainham Plastics before rejoining Short Bros. at the Flying School. In 1955 Len joined Elliotts in MAC Tool Drawing Office, he then spent some time in the Tool Room before joining CMS.

Len is well known as a musician and entertainer, he also enjoys DIY and gardening. He is married with two children—his son is in the entertainment business. Mrs. Callaway also works for the Company in the mailing Dept.

Mr. P. J. Burrows, Production Manager of CMS presented Len with a watch to mark the occasion.



Len Callaway. (A)

A belated recognition of the completion of 25 years' service is given to **Alan Wilson**, Assistant Chief of Test in IN Division. He completed his service of 25 years in 1979 and was presented with a clock by Mr. D. Clews, Divisional Manager of IN.

Alan served an Electrical Engineering Apprenticeship before joining the RAF as a National Serviceman.

Like many others, he began his association with the Company in Aviation Division, where he was a Tester he then proceeded into MAC until 1970 when he joined IN Division. He was promoted Assistant Chief of Test in 1978.

He is married with two children and enjoys the usual married mans necessitous chores of gardening, DIY and woodwork.



Mr. A. Wilson.

**John 'Jock' McLeish**, who joined the Company in 1954, completed his 25 years' service in 1979 and was presented with a clock to mark the event.

Jock has always been a machinist, originally he served in Guided Weapons and Servo Divisions. This was followed by a period in Dartford with Gear Shop, but he later returned to Rochester and joined CMS and has remained there ever since. He is also a Shop Steward.



Jock McLeish.

# RETIREMENTS



Jack Harle. (A)

A man for all seasons, **Jack Harle**, former Deputy Security Officer under Mr. Emmett, has finally anchored himself away from the Airport Works. He joined the Royal Navy in 1934 and served until 1961—serving chiefly in the West Indies and the Mediterranean. After his retirement from the Navy he joined the Works Engineering Service Division as a Technical Clerk at Elliotts. In 1967 he took over the duties of Administration Officer in ADD and in 1972 he was appointed Deputy Security Officer.

Len was an active participant in all forms of sporting activity in his younger days but now he relaxes by being an avid spectator. In accord with his watching he was presented with a portable TV set from all his colleagues and friends.

Mr. Alexander, in making the presentation conveyed the good wishes of all within the Company for a happy and long retirement, to which Jack suitably replied.



Alf Allen receiving his retirement gift from Mr. J. Spinks, Divisional Manager, CAC. (B)

**Alf Allen**, a sheet metal expert of CAC Model Shop, has locked up his toolbox to take a well deserved rest from daily routine.

He started work in 1929 as an apprentice at Shorts Seaplane Works and remained there until 1942 when he joined the Royal Engineers (he saw service throughout Europe). After the war he rejoined Shorts for a year before joining Beadle of Dartford. In 1953 he rejoined Short Bros. at the Flying School, refurbishing Sturgeon and Beaufighter aircraft. This was followed by a period with Wellwinch Engineering before finally joining Elliotts in MAC Model Shop, where he has remained sharing in the development of units ranging from EMAC to A310.

In his spare time Alf has been a member of the St. John's Ambulance Brigade for 45 years, and for the last 20 years he has been the Divisional Secretary. In recognition of his work he was made a Serving Brother of the Order in 1970. Alf's other hobbies include gardening, photography and playing bowls.

He is a well respected member of the Company and his retirement will leave a gap hard to fill.

## 'OUTWITTED'

He drew a circle that shut me out—  
Heretic, rebel, a thing to flout,  
But love and I had the wit to win,  
We drew a circle that took him in!

Edwin Markham

## DECISION TIME ..... No 9 PERSONNEL DEPARTMENT.



# Sports and social club round up

## FIVE-A-SIDE FOOTBALL— MONDAY EVENING LEAGUE

Table to date	P	W	D	L	F	A	Pts
MASD Prod. Office	7	7	0	0	29	15	14
ADD	7	5	0	2	29	15	10
ATE	7	5	0	2	28	22	10
MASD Test Dept.	7	5	0	2	19	16	10
FCD	7	4	1	2	39	15	9
Apprentices	7	3	0	4	24	25	6
CMS	7	3	0	4	15	23	6
Accounts	7	1	0	6	19	35	2
CAC	7	1	0	6	13	34	2
FCD Stores	7	0	1	6	18	30	1

Latest results			
MASD Prod. Office	5 v	CAC	1
FCD Stores	3 v	MASD Test	4
ATE	0 v	FCD	9
Apprentices	2 v	ADD	6
CMS	2 v	Accounts	3

The organizers wish to record a special word of thanks to David Reeves, ISD, for his excellent work in refereeing all matches to date.

## INDOOR GAMES

The results of the final play-off, for the indoor games competition are as follows:

LEAGUES	Winners	Runners-up
Competition	CMS	ADD Corsair
Darts	Accounts	Fisher
Euchre	Fisher	Accounts
PAIRS		
Darts	R. Hanson (Model Shop 'A')	A. Waghorn (CMS)
Euchre	R. Tilbury	K. Wood
J. Duffell (IN)	T. Palmer (Accounts)	
B. Walker	K. Watkins	
Crib	B. Ellender (AS & R)	A. Dacey (FARL)
R. Taylor	M. Smith	
Combination Championship	Fisher	ADD Corsair

## 65 CLUB

The July meeting of the 65 Club, held as usual in the clubhouse, Featherby Road, was well attended. Arrangements for the outing to Eastbourne were finalized. The members were entertained by Rev. Arthur Heathcote, Vicar of Aylesford and formerly Industrial Chaplain. The audience were both enraptured and amused as the speaker revealed further episodes of the 'Heathcote saga'.

# One man's opinion of amateur golf

by Ken Trafford.

How often have you heard the cry 'fore' and wondered what it meant, well, it is usually the last thing you hear prior to being struck by a golf ball. It is a game that consists of propelling a white plastic and rubber sphere around miles of beautiful countryside in the fewest number of strokes with a vast array of sticks with iron or wooden heads called clubs. These are carried in a long open ended, odd shaped suitcase with a collection of kangaroo pouches containing such things as balls, tees, waterproofs, a crumpled up sweater and a tin of boiled sweets—all stuck together making them impossible to hand around.

The game is played on a course, which is an area of grassland unevenly divided into 18 holes, sprinkled with trees and sand hollows called bunkers and are put there to trap the unwary into thinking the game is easy. Each hole consists of a green (that is the flat area with the hole in it, a tee, (the place you start from) and a mown strip of land that joins them together called the fairway. Each side of the fairway is an expanse of tall grass called the rough and that is the place where the game is usually played from.

The types of game one can play are many, such as stroke play, match play, stapleford etc. Stroke play is where every shot played is counted and recorded on a score card, so as to ascertain how good a player is and some players now find the electronic calculator a very useful tool to assist them in keeping their score, as fingers are not always sufficient for some holes and certainly not for 18 hole totals.

Match play is where one is only concerned in playing fewer strokes, than your opponent for each hole, therefore, the one who wins the greatest number of holes is the winner. This game enables certain tactics to come into play, such as loud coughing as your opponent is about to drive, or whistling while he is taking a vital putt.

A Stapleford round is where points are awarded for each hole instead of counting strokes and was devised some 50 years ago by an American named, funnily enough, Mr. Stapleford.

I think he thought it up because of two reasons:

- He couldn't stand the ungentlemanly ways of match play.
  - Electronic calculators had not been invented.
- The addiction to golf can be compared to heroin takers, namely once you start, it is almost impossible to give it up. It is best taken up by single men, as the country is already full of golf widows trying to tell the children, what their father looks like and when he does come home not to mention the word golf until after you have found out—whether he has won or not.
- It is a very difficult game and the reasons for playing badly are legion amongst golfers and consist of excuses like it is too hot, or too cold, the fairways are too long or too short, the greens are too fast or too slow and it is too windy, but never the bad stance, poor swing or wrong grip, but that is golfer for you.

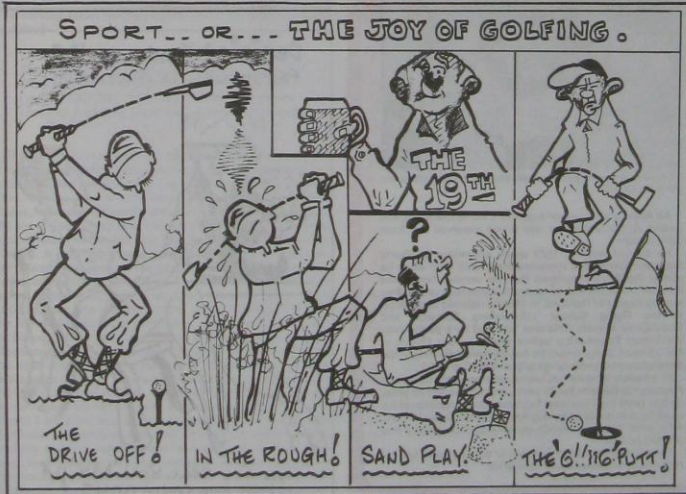
Being a game that is played all the year around, the golfers must be prepared to play in all sorts of weather conditions, such as standing in pouring rain getting soaking wet, because you have forgotten your waterproofs and umbrella or waiting to tee off on an ice cold January morning with the course frozen solid—like yourself, and wondering why you are there and not at home in a warm bed, but thoughts drift into your mind of warm balmy June evenings, when the course is bathed in sunshine and everywhere you look is beautifully green and then you know why you play this funny game.

Out of all the many things that have been written about golf, nothing can match that feeling of well being after hitting a ball down the middle of the first fairway in yet another 18 holes of joy and misery, elation and frustration, swearing and club throwing and finally arriving at the best hole of all—the 19th, where all troubles and tribulations are finally drowned in good cheer. Hopefully at your opponents expense.

If the points I have made about this peculiar game have made you feel you would like to take it up ..... forget it!

Anyone for tennis?

Illustration by Tom Crooks.



(anecdotes of a varied life, at home and abroad, within the church and industry.)

At the business meeting, preceding the supper, it was reported that Mr. A. Brown, Fisher Controls, had resigned as President of the Club. In his stead Mr. Jess Griffiths, one time in AEI, Fuse Div., and FCD, and now Editor of MAU News was unanimously elected to fill the vacancy. Three pairs of new members were also welcomed.

## ATHLETICS SECTION

The competition activities of the section have been curtailed during the past few weeks due to match cancellations. The strength of the section continues to increase and with form consistency remaining high the club has every chance of promotion in the league.

## PROGRAMME

Aug	20	London Fire Brigade meeting (including LBH relays)	Crystal Palace
	23	Dartford Gala, Southern boys, youths and junior 3000m championships	Dartford
	25	Erith Show	Erith
	30	Southern League, September shield	Hendon
Sept	5/6	AAA Centenary Championships	Crystal Palace
	7	Kent Womens League	Folkestone
	13/14	Kent senior and junior decathlon, youths octathlon, boys pentathlon	Rochester
	14	Southern under 20 inter-area Bracknell relays	Crystal Palace
	20	GRE. cup final	Bracknell
	20/21	Southern junior decathlon and youth octathlon	Birmingham
	21	GRE. Plate final	Hendon
		LBH road relay (4 x 3 1/2)	Birmingham
Oct	5	Ferdinand Rose Trophy	Kenton
			Crystal Palace

## CROSSWORD No. 27



### ACROSS

- Inflation maybe blamed, but traders smile (8, 7)
- Where the kitchen staff look to (8)
- Moses showed the way to make it two (3, 3)
- The highland cattle is monarch of (4)
- I'm an individual, belongs to me (10)
- American state (5)
- Arty type, in Chelsea maybe (8)
- A summer job, Constable made it famous (8)
- Eyes which probe the unknown, by impulse (5)
- Female horses follows after dark (10)
- List of innage, or an oak (4)
- Formed of reeds, some comb it (6)
- Success, sometimes completed a hole (4, 4)
- He acts like a magpie (9)
- Just a single unit, before checkmate (5)

### DOWN

- The household skivvy of yesterday (6)
- The day that was is past (8)
- The terrible (4)
- Houses of ladies, so called (5)
- Biblical city, a queen gets a girl (8)
- In the Ruhr, there is sense (anag) (5)
- One year old, for sale (8)
- Boarding a buggy for progress (3, 2)
- A pain to hurt the mind as well (3)
- A sticking needle is, without ambition (2, 1, 9)
- To say it, as it sounds, without a ring (8)
- Rotting, or neglect causes it (5)
- A thin covering, to fool first sight (8)
- Veneration without going back (8) hole (4, 4)
- The holy one, at Glastonbury? (5)
- Modern way of asking to cut out, coupon? (4)

For amusement only.

### SOLUTION TO CROSSWORD No. 26

#### ACROSS

- Sure thing, 6 Board, 9 Fair, 10 Knock down, 11 Regule, 12 Nonplus, 14 Evangelist, 15 Bean, 18 Kids, 19 Persuasive, 23 Rockers, 25 Leisure, 27 Subaltern, 28 Ideas, 29 Clean, 30 Heel, 31 Aity.

#### DOWN

- Safe breaker, 2 Rear guard, 3 Turnings, 4 Inwell, 5 Grounds, 6 Baking, 7 Aboli, 8 Dan, 13 Series, 16 Epicureal, 17 Pacific, 20 Equest, 21 Silence, 22 Berlin, 24 Cabi, 26 Esau, 27 Sag.

Photographs taken by the Staff Photographers will be selected and judged in the following way: (A) Alan Keats, (B) Linda Jones, (C) Laura Cooper.

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