

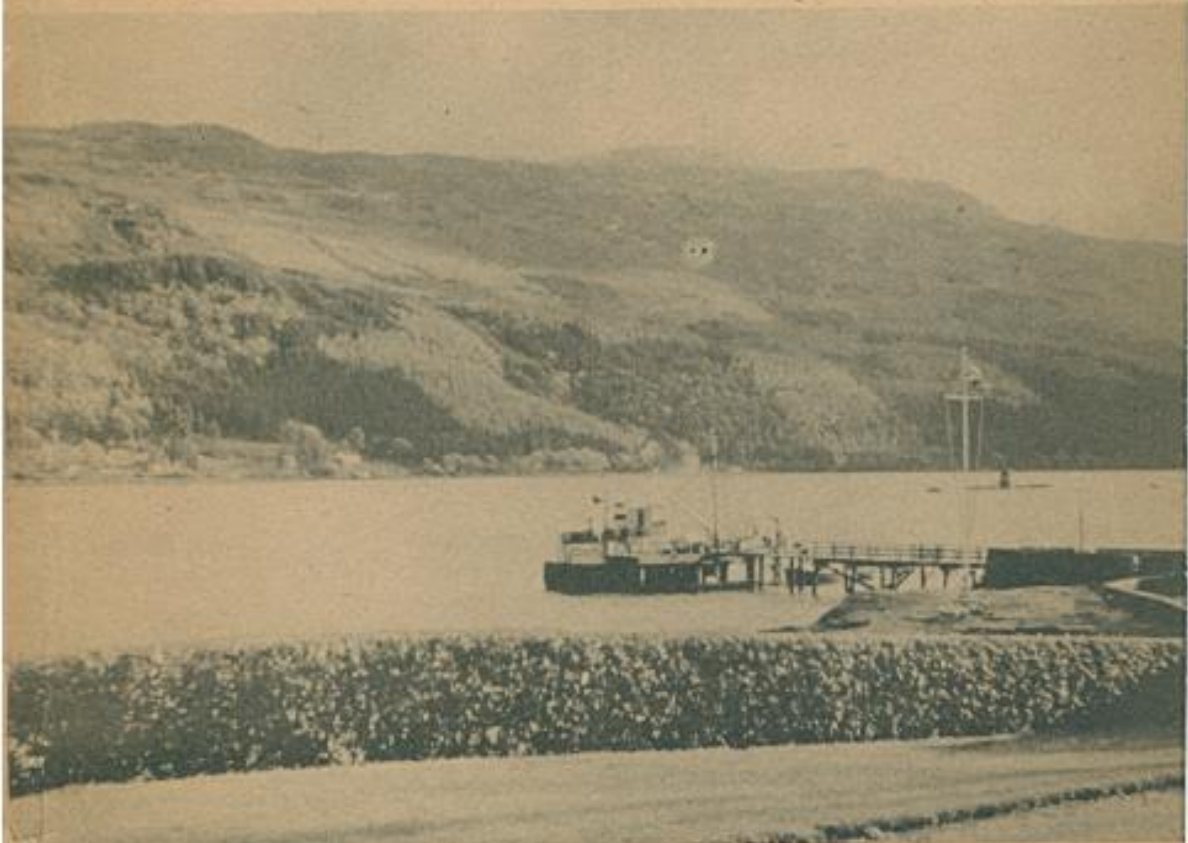
ARL

NEWS



AUGUST 1967

No. 5



· FOR ARL STAFF ONLY ·

SOCIETIES, CLUBS AND ASSOCIATIONS

Your C.S.C.A.

Hon. Branch Sec. Tedd.
Norman W. Ferguson,
Stores Office,
Ex. 24.

C.S.B.F. (Benevolent Fund)

Mr. C. J. Borrill,
Sec. Kingston Local Committee
of Civil Service Benevolent
Fund,
G Group, U/L Ex. 7.

C.S.S.G. (Sanatorium Soc.)

Treasurer,
Mr. E. R. Holly,
Stores Office,
Ex. 23.

N.P.L. Music Society

Mr. K. Ellis,
A.P.U., U/L Room 444, Ex. 45.

H.S.A.

Sec. Sister Hammett,
Room 28, Ex. 300,

C.S. Sailing Assn.

Admiralty Link,
H.C.W. Mayer, Room 40, Ex. 224.

N.P.L. Sports Club

A.R.L. Rep.,
G. P. Barlow, Ex. 33.

A.R.L. Stanton Cup Convenor

Mr. H. Hood, Ex. 9.

The Rose Society

Sec. Mr. Lenihan, U/L G Group

S.T.C.S.

R.N.S.S. (London) Branch
Sec. W. Parrington, D.O. Ex. 116.

United Kingdom Civil Service
Benefit Society

Local Sec.,
Mr. J. Gleeson, Stores Office,
Ex. 24.

Upper Lodge Club

Sec. Mr. M. Murray,
Group G, Ex. 83.

Motoring Association

Mr. Bedmayne,
Workshop, Ex. 225.
Mr. C. J. Borrill, U/L Ex. 67.

I.P.C.S.

Sec. D.W. Norman,
Group G, U/L, Ex. 84.

Would the Secretaries and representatives of any other groups or associations who would like to be included in future editions please notify Mrs. P. Ward, Admin., Ex. 124.

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A.R.L. News is published every two months. The last date for receipt of contributions for the October edition is Monday, 18th September.

Editorial

This issue of A.R.L. News comes a little late in the month of August due to absence on leave of various members of the staff, some of whom may not have any direct connection with the production of A.R.L. News but their essential work has to be done by others who are. When the leave period is over we hope that readers will get down to writing that interesting article for A.R.L. News that they have formulated in their minds and for which they only need the opportunity to sit down and write. We look forward therefore to a steady flow of contributions to enable the magazine to continue. If you think the articles could be more interesting or instructive, what about "having a go".

J. R. Gibb

A LAMENT FOR OFFICE FURNITURE

THE REGULATIONS SAY
(AND I READ THEM EVERY DAY)
THAT THE SCIENTIFIC STAFF HAVE CERTAIN RIGHTS?
BUT I FIND IT HARD TO SEE
IF THEY APPLY TO ME
WHY I NEVER SEEM TO GET THE THINGS I MIGHT.

SO I'M WAITING PATIENTLY
(WHILE I SIP MY CUP OF TEA)
FOR THE OFFICE FURNITURE FOR WHICH I PINE,
AND I'M DREAMING WHILE I'M SAT
OF THE AXMINSTER I LACK
AND NIGERIAN WALNUT HAT STANDS ALL IN LINE.

BUT MY FINAL WISH IS SENT
(WHICH I HOPE ADMIN. WON'T VET)
ON A SHINING FRAMELESS MIRROR OF MY OWN,
AND I'M SURE AT LAST WITH THAT
AND A REALLY BRAND NEW MAT
THAT I'LL FINALLY HAVE AN 'IMAGE' SECOND TO NONE.

THE STAINES BARD

The Four Stages of Marriage - Friendship - Courtship - Partnership -
Battleship

The motive-power for government machinery is supplied by the
taxpayer harnessed to a treadmill.

A good man is like tea - His real strength appears when he
gets in hot water.

In every sort of enterprise, the best thing for keeping the
wheels moving is an occasional good turn.

W H O G O E S W H E R E ?

ARRIVALS

<u>NAME</u>	<u>GRADE</u>	<u>GROUP</u>
Miss A. Johnson	Executive Officer	Accounts
Mr. J. Bray	Clerical Officer	Accounts
Mrs. B.W. Stephens	Temp. Clerical Assistant	Accounts
Miss P. Jordan	Temp Clerical Officer	Accounts
Mr. C. C. Crouch	Ty. Draughtsman	D.O.
Mr. J. Picton	Ty. Draughtsman	D.O.
Miss J.H. Mayes	C.O.	Admin.
Mrs. D. M. Hartwell	Cleaner	Admin.
Mr. C. M. Hubbard	Senr. Sci. Asst.	O
Miss C. A. Miller	Ty. Sci. Asst.	M
Mr. D. J. Parkes	Ty. S.S.O.	L
Mrs. N. M. Cameron	Sci. Asst.	A.H-B.R.E.
Mr. J. M. McLardy	Ty. Sci. Asst.	Loch Goil
Mr. K.J. Matson	Apprentice	E(W)
Mr. F. H. Reece	Skilled Labourer	E(W)

CONGRATULATIONS TO

Mr. C. E. Bulson	Draughtsman NOW Actg. Ldg. Draughtsman
Mr. L. D. Headen	Actg. Ldg. Draughtsman NOW Ldg. Draughtsman
Mr. W. F. Norgett	Actg. Senr. Draughtsman (Temp) NOW Actg. Senr. Draughtsman
Mr. J. A. Parker	Actg. Senr. Draughtsman NOW Senr. Draughtsman
Mr. J. F. Slasor	College based S/C Student NOW Ty. Draughtsman
Miss B. D. Pratt	Ty. Sci. Asst. NOW A.E.O. D. (P.U.) on probation
Mr. D. Johnson	Ty. S.O. NOW S.O. G. on probation

<u>NAME</u>	<u>GRADE</u>	<u>GROUP</u>
Mr. G. E. Thomas	S.S.O. NOW acting P.S.O.	G
Mr. B. Boothman	A.E.O. NOW acting E.O.	M
Mr. J. L. Earnshaw	College based S/C Student NOW Ty. A.E.O.	M.
Mrs. R. E. Lawson	A.E.O. NOW acting E.O.	M
Mrs. J. M. Lewis	A.E.O. NOW acting E.O.	M
Mr. T. G. Overfield	Ty. Machine Asst. NOW Ty. Machine Operator	M
Mr. G. B. Holt	C.O. (P.U.) NOW C.O.	Admin

Special Congratulations on Marriage

Mr. D. W. Longmaid	D.O.
Mr. G. Hill	E(W)

DEPARTURES

<u>NAME</u>	<u>GRADE</u>	<u>GROUP</u>	<u>TO</u>
Mr. P. Fisher	Executive Officer	Accounts	PDA(N) Computer team
Miss V. K. Watts	A.E.O. S.E.R.L. S/C student	C	S.E.R.L.
Miss J.A. Dobson	Ty. A.E.O.	G	Resigned
Mr. D.L. Ryall	P.S.O.	G	DGS Bath as actg. S.P.S.O.
Mr. V.J.R. Smith	Ty. Sci. Asst.	G	Resigned
Dr. R. Hall	P.S.O.	M	D.O.A. as actg. S.P.S.O.
Mr. P. Ridgway	Ty. Sc. Asst.	L	Resigned
Mr. C. Jenkins	Ty. Sci. Asst.	A.P.U.	Resigned
Mr. J.M. Buckle	Actg. S.E.O.	R.R.A.	D.G.S. Bath
Mr. A.J. Pank	Lab. Mech.	E(W)	Resigned



Back Row: A.C. Peters, M. Cox, B. Reader, P.M. Chambers, V.J. Smith, J.A. Draper, W.R. Lane, A. Reeves, E.I. Lenihan, W. Adams, E.D. Wyatt.

Middle Row: Miss I. Burnell, Miss S.I. Hewson, Mrs. E. Sapsworth, L.T. Messum, J.S. Carlton, D.A.E. Leaver, L.J. Aylott, A.S. Pitcher, C.R. Fuller, D.J. Burkett, R.W. Spicer, F. Roberts, J. Ahern, C.J. Borrill, Miss J.M. Brooks, Miss I. Garrard, F.C. Bricker.

Front Row: P. Boyle, J. Moss, M.T. Murray, Mrs. S. Horner, A. Hobson, J.L. Leaper, A.B. Mitchell, F.S. Burt, H. Ritter, D.V. Hilborne, G.E. Thomas, Miss J.A. Dobson, D. Johnson, D.W. Norman, G.E. Mills, N. Hodson.

Other members of G Group who were away on duty, leave, sick etc. are:

J.D. George, C.W. Price, E.N. Howard, C.R. Napier, S.F. Lush

G-GROUP

Godness me, how time flies - Group G's origins go back to the middle of 1948 and owes its existence to a somewhat tardy realisation that in the future a major part of naval activity would be concerned with undersea warfare. Hence, it was considered to be a good idea if some fundamental research studies were made into various aspects of hydrodynamics particularly of underwater bodies, which would eventually lead to considerable improvements in the characteristics of future ships and weapons of the Royal Navy. Mr. W. R. Cook (now Sir William Cook) then the Director of Physical Research made the case for setting up an appropriate research team with the associated facilities at A.R.L. and succeeded in persuading the Board of Admiralty that it would be money well spent.

Any systematic programme of hydrodynamic research on the scale envisaged requires large expensive specialised experimental equipment. Towards the end of 1948 I carried out a very extensive tour of the United States visiting all their appropriate hydrodynamic research establishments and obtaining much useful and detailed information on the design and performance of their various research facilities. Early in 1949 I transferred to Teddington from my previous post as an Assistant Director at Headquarters to set up the new Fluid Dynamics Group at A.R.L. which was then christened as Group G.

The first few years of the group's activities were very much concerned with the detailed concept, design and development necessary for the proposed fluid dynamic research facilities. These activities culminated in the summer of 1954 with the completion of the present hydrodynamic laboratories.

The facilities, which have often been described in detail comprise in the main, a 12" and 30" diameter water tunnel, a large rotating beam channel and a small scale water entry laboratory. Once our facilities had been completed and working we were able to concentrate our resources and get on with our real purpose, namely, detailed hydrodynamic research studies.

In general, the group is concerned with two main objectives, firstly, improved hydrodynamic performance, and secondly, a reduction or elimination of hydrodynamically generated noise sources.

On the whole our hydrodynamic activities have been concerned with four main fields:

- (i) Propulsion investigations to improve conventional systems and to devise new means of propelling ships and torpedoes both quieter and faster
- (ii) Drag reduction studies using various methods of boundary layer control to reduce friction
- (iii) Studies of stability and control problems of various underwater bodies particularly torpedoes, and
- (iv) Water entry studies of various future air dropped and air launched weapons.

A major part of our activity in the last field is carried out at the Admiralty Hydro-Ballistic Research Establishment at Glen Fruin and Coulport, Helensburgh which became an outstation of Group G in January 1951. A.H-B.R.E. will itself be the subject of a future article in this series. In fact, the small water entry tank at A.R.L. is the last one in a series of tanks that we have had for this purpose at Teddington and in which much of the work was carried out by the late Mr. J. A. Craig.

Our propulsor studies cover a wide field ranging from simple and contra-rotating propellers, ducted units including some run on bubbly gas water mixtures somewhat analogous to ram jets in aircraft propulsion. It is of interest that these two phase gas water mixtures have some very strange physical characteristics. For example, the speed of shock waves in homogeneous gas water mixture is well under 100 ft. per sec. over quite a range of mixture strengths.

Drag reduction studies have always been a major concern of the group and have included the production at great expense of very carefully shaped bodies made to an extremely high degree of accuracy so as to keep the boundary layer laminar as far as possible, then later to bodies coated by a compliant skin. This latter activity was supposed to have been inspired by the porpoise and was once again supposed to maintain laminar flow but in fact this has not proved to be very successful. Our most recent drag reduction studies involve the injection of small quantities of long chain polymers into the boundary layer with most dramatic results. In consequence certain members of the group are having to learn a little bit about chemistry as well as fluid dynamics.

The stability and control studies have mostly been carried out in the rotating beam channel and also a certain amount on a small analogue computer. We are very concerned at producing not only effective control systems but also ones which do not produce hydrodynamic noise in the process.

As part of a large Torpedo Research Programme being carried out jointly with A.U.W.E. the group is also responsible for studies in Torpedo Machinery Noise Reduction. This has been tackled from two different directions, namely, the use of palliatives such as flexible mounts etc. and secondly, studies aimed to reduce the level of the noise at source.

In one way and another the activities of the group range over a wide variety of topics which are of interest to mathematicians, physicists, engineers and recently also to chemists.

F. S. BURT

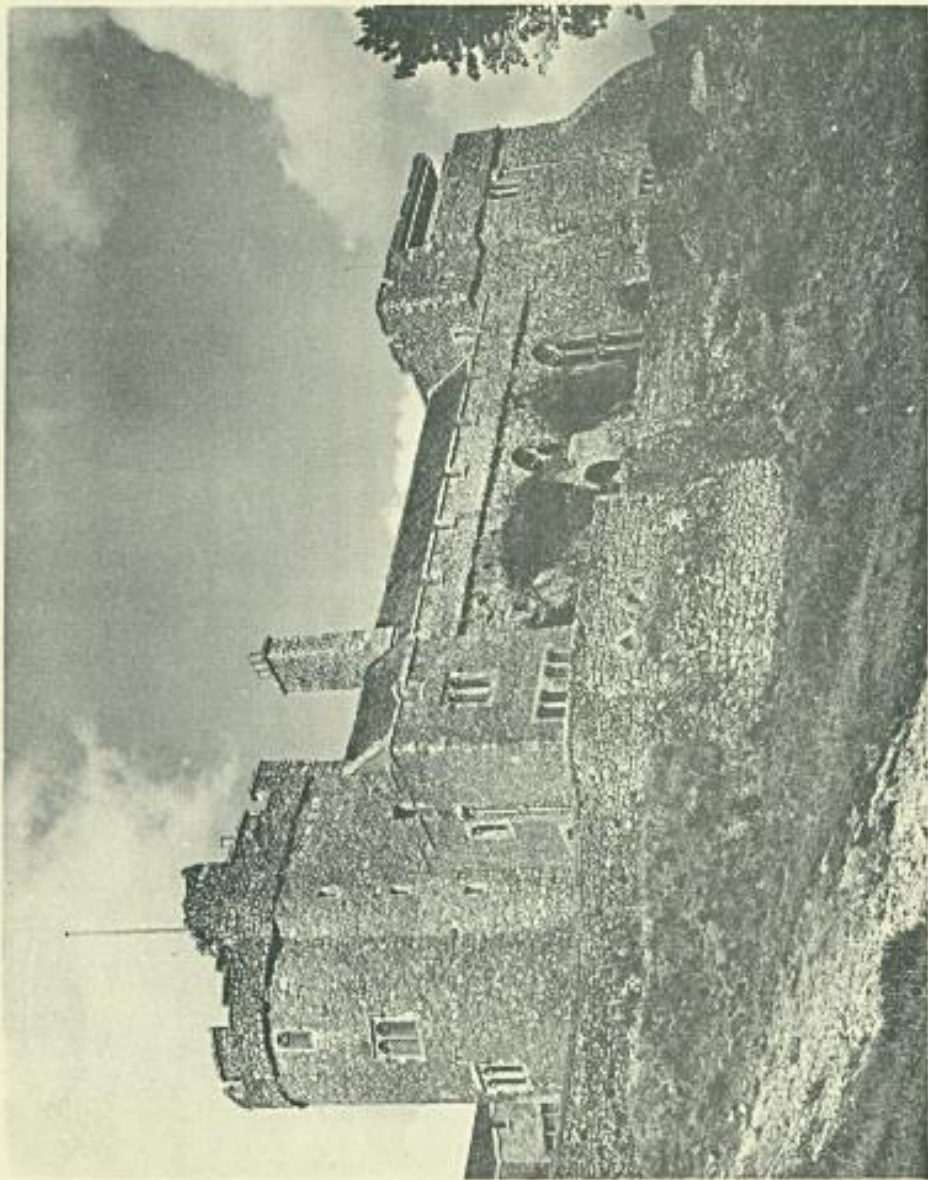
LIVING IN A CASTLE

It is considered quite reasonable to live in a house, flat, bungalow, maisonette or even chalet but for some reason to live in a castle implies some degree of mental derangement. For us to take on a castle because we were entranced with the view it gave across the Romney Marshes may seem to border on madness - until you have seen the view.

Answering the unasked questions. We do have Ghosts - no less than eight - although one set of seven Saxon Priests comes in a package deal. The remaining ghost is rather older, as he is a Roman Centurion - no doubt left over in the withdrawal from the Saxon Short Fort below us. We don't have dungeons! We believe that this is not because the Archdeacons of Canterbury, who owned the site from the Norman Conquest until recently, were any more enlightened than their peers - either secular or temporal - but simply because the Castle is built on solid Kentish ragstone. No doubt other suitable but more easily constructed facilities were available on ground level, which have since ceased to exist. We feel the lack of dungeons very much, not only, because the hordes of visitors who come to us each Summer exhibit a morbid and lively interest in dungeons, but also because they could be put to good contemporary use. In peaceful terms, they would be excellent for growing mushrooms. There have been moments, also, when we have had vivid mental pictures of tiresome relations treading on a false step and falling screaming onto sharp spikes some tens of feet below.

One of the few regrets in the siting of the castle is that the local topography does not lend itself to the application of a functionally viable drawbridge. We are not really anti-social but there are moments when a warning from a lookout at the top of the tower would suggest that the raising of a drawbridge could well save one from the attentions of a boring visitor.

We have no armament whatsoever for either offensive or defensive purposes, although if any reader has a cannon or two



they do not immediately require, we should be delighted to receive them as a gift - delivered. We have also been giving some thought to the purchase of more recent W.D. equipment, in the form of a Bofors gun and a 3" Mortar. The former, to deal with Aeroplanes, which contrary to all official orders insist on using our round tower as a sighting mark on their way into Lympne Airport and consequently pass over us at what seems to be zero altitude. The latter weapon would be useful to discourage the growth of a successful chicken farm, which though it is over half a mile from us, rather obtrudes on our view.

The only doubtful feature of the layout of our gardens is the paved driveway which has a slope which, in snowy weather, permits entrance to wheeled vehicles under somewhat imperfect control but precludes exit. All was well so long as we had a coke fired heating plant with a useful by-product of ashes. Now we have changed over to oil fuel I feel that the next time we have a very white winter, I will have no alternative but to go on a long period of enforced compassionate leave.

H. H. Margary

THE FIRST FORTY YEARS
ARE THE WORST (Continued)

Although I was then working under Stanley Ward in the Electrical Standards Section the War years still found me liable to be loaned to other groups from time to time. One such occasion was during the difficult days when the German magnetic mines were first used. The first efforts at A.R.L. to deal with this menace involved the manufacture of enormous electromagnets with cores built up of bundles of steel bars about 1½ inches in diameter and about ten feet long. These were intended to be towed over a suspected area in a barge

but the system was doomed to failure or was too successful depending on the way one looked at it, since the very first mine swept by this method blew the lot up including the barge. Fortunately it was at the end of a long tow and the towing vessel was unharmed.

There was also the defence of the establishment to consider during the war years with a fire guard service operating every night. I was in charge of one such party and on busy nights a constant watch was kept. On several occasions when I was on the roof clad in steel helmet and all the trimmings the Superintendent, Col. Kerrison would come up in his shirt sleeves and his head unprotected to study the accuracy or otherwise of the A.A. Gunnery, completely oblivious of the odd bits of scrap metal falling on the roof around us.

At the end of the war I spent the first three months of 1946 in Germany looking for Scientific and Gunnery equipment. After that, life settled down to a somewhat quieter pattern after that of the past five years until about the beginning of 1948 when I was given sole charge of the Electrical Standards Section on the transfer of Stanley Ward to other duties.

In 1951 the wheel of fortune turned full circle when I rejoined L. O. Cook in preparation for taking over his Engineering Metrology Section at his retirement. Since that time there has been a steady growth in what is now Group E (Standards), with increased and improved facilities for measurement and materials testing.

This forty year period coincides also with the growth of electronic instrumentation. In 1927 there were virtually no electronic instruments available to the scientific worker since almost the entire electronics industry was engaged in the field of radio receiving equipment. Even that ubiquitous tool of modern technology, the Cathode Ray Oscilloscope, was still to come and some experimental processes, which can be performed in a matter of minutes today, sometimes involved several days of

measurement using more fundamental types of equipment.

There have been many more landmarks on the way than I have been able to refer to and during these years I have known many extremely kind and helpful people, quite a number fortunately still with us. Especially I remember with gratitude the help and guidance of Dr. A. B. Wood with whom I worked closely for about four years, and Dr. F. D. Smith, N. Shuttleworth, I. M. Ford and so many others for whom and with whom it has been a pleasure to work. There are still a few more years before my turn comes to retire and if the title of this note, a quotation of a remark made to me recently, is true, then the remaining years will be happy indeed for no one could have enjoyed more the first forty.

T. E. Bridger

LETTER TO THE EDITOR

Dear Sir,

I would like to say how much I appreciated Mr. Foster's article on Upper Lodge. It certainly went much further back in history than I was aware. However, I would like to point out that my concern for Upper Lodge was mainly how it fitted into the history of Hampton Hill as a community. This does not cover a period of more than 200 years with the greatest activity being around the 1860s when the railway and the water works at Hampton were built. One interesting item which may not be generally known is that there is strong evidence in the shape of a cannon half buried in the ground that the ordnance survey of the British Isles originated from this point at Hampton Hill.

E. Thorpe

BEHIND THE SCENES

Mrs. Florence Alexander



It is indeed a pleasure and privilege to bring to your attention this quiet and unassuming lady, who first entered the portals of A.R.L. on 4th May, 1931.

In compensation for her labours, Florence received the large sum of 8/6d. per week, and after serving a satisfactory probation period was privileged to assist with the Establishment's laundry as an augmentation to wages. Overtime was once a week, when floors were scrubbed in true naval style - on your knees, scrubbing brush, bar of soap and a large bucket of hot water.

Prevalent in her memory is the happy family atmosphere that existed at A.R.L. in the early days - the courtesy and understanding given to her by "her gentlemen", i.e. Dr. Wood, Dr. Willis, Mr. Ford, Mr. Luxford to name but a few, and above all her Commander-in-Chief, Mr. Reginald Jones.

With the outbreak of war came an invasion of the Navy (ours of course), and an increase of staff over the years, there has been a tendency to feel like the town dweller, surrounded by so many, yet knowing so few.

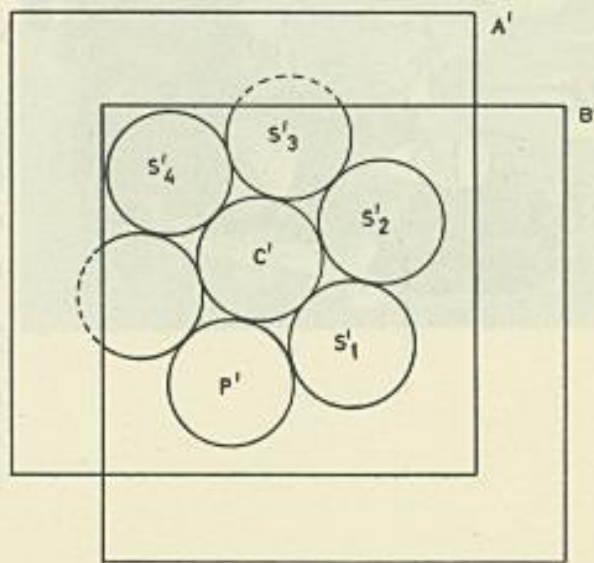
Bacon, in one of his essays, laid it down that friendship saved us from solitude, and strengthened us with a faithful ally, therefore the possibility in the future of being remembered by Florence as one of her gentlemen would indeed be a distinction.

With a drop of the eyelids she admitted to being 71 years of age, but with youth on her side still looked forward to many more happy years at A.R.L.

THE PROBLEM OF THE SPHERES
A SOLUTION

The problem given on page 11 of the June A.R.L. News can be solved by inverting about the point of contact of the spheres A and B. These transform into two parallel planes, A' and B', say. Sphere C inverts into a sphere C' touching A' and B'. Also plane P and spheres S_1, \dots, S_4 invert into a set of five successively touching spheres touching A', B' and C' and so of equal size. The plane other than P which touches A, B and C inverts into a sixth sphere touching A', B', C' and the sphere which is the inverse of P. Clearly this sixth sphere touches the inverse of S_4 and so a plane touches A, B, C and S_4 .

This method shows further that three touching spheres even of different sizes can be interlaced by a ring of six spheres touching in sequence and all touching the three (Soddy's hexlet).



A.R.L. BOWLS TEAM - Champions of the 1967 Stanton Trophy Bowls Competition



D. G. Field D. J. Soutar J. A. Parker A. C. Rayment C. G. Williams
(Reserve)

T. Jameson A. Filsell T. Feltham P. Redmayne
(Captain)

Also played in the competition - L. Goodway

BOWLS - THE STANTON TROPHY

A.R.L. won the Stanton Trophy Bowls Section Competition. The final was played on 4th July between A.R.L. and M.P.D. & W. The previous rounds were played against Aero and Maths. Total scores were A.R.L. 129 shots - against 88 shots

A.R.L. Rinks

A. Rayment 1	T. Jameson 1
J. Parker 2	C. Williams 2
D. Soutar 3	P. Redmayne 3
T. Feltham Skip	A. Filsell Skip

Reserves

L. Goodway	D. Field
------------	----------

If any member of A.R.L. staff would care to join the N.P.L. Sports Club Bowls Section they would be most welcome. In closing it is a known fact more people play Bowls than Cricket.

So don't be shy.

A. Filsell

STANTON TROPHY CRICKET COMPETITION

MORGAN CRICKET CUP

1st Round

In this first round tie A.R.L. beat AERO (N.P.L) by 6 runs in a very close finish. A.R.L., who batted first, made 86 after the quota of sixteen overs. Gordon Rowe hit a fine 26, including 6 fours. After 3 overs had been bowled the score stood at 31.

AERO in reply ran out of overs and they were six runs short at the close. M. Whitley made a fine 23.

Bowling honours for A.R.L. went to Gordon Rowe who in 8 overs took five wickets for 32. Martin Webb, the other A.R.L. bowler, took 2 wickets and he bowled very well.

Harold Hood

2nd Round

After an excellent match A.R.L. won by 8 runs. This win puts them into semi-final. Batting first A.R.L. were out for 93, Borland (Maths) taking 5 - 35. Tony Pank was A.R.L. top scorer with 25. For Maths Bird 41, and Clenshaw 28 not out. These two put on 57 for 2nd wkt. Maths finished 85 - 4 after 16 eight ball overs.

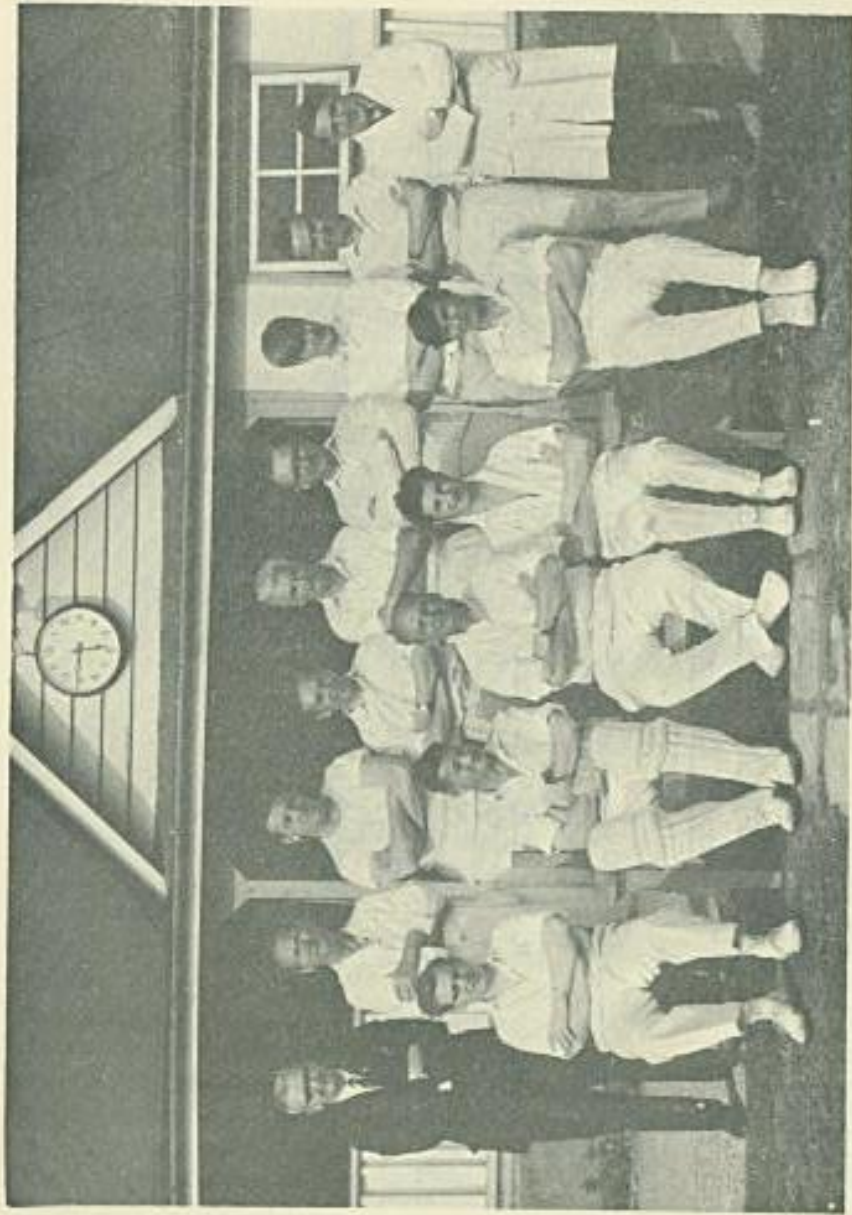
Harold Hood

1967 CRICKET

The completed series of matches in which A.R.L. took part in the N.P.L. STATION TROPHY KNOCK-OUT COMPETITION were the most exciting of any series that can be remembered by those taking part.

In the 1st round, A.R.L. beat AERO by 6 runs and in the 2nd round, beat MATHS by 8 runs. A.R.L. won the semi-final against AUTONOMICS more convincingly by 31 runs but lost the final to Chemical Standards by 9 runs.

Those present at the final will long remember Bob Penfold's magnificent performance. He not only saved several fours by giving all he possessed in chasing balls on the boundary, but he gave a batting display seldom equalled. He literally got hold of the bowling by the scruff of its neck and thrashed it all round the field. His score of 53 made up of 9 fours, together with David Morgan's effort produced a partnership of



ADMIRALTY RESEARCH LABORATORY CRICKET XI

1967 Losing Finalist for the

Morgan Challenge Cup

H.A. Payne (Reserve)	H. Hood (Umpire)	G. Powe	D.T. Morgan
J.A. Parker	R. Penfold	M. Webb	J.S. Caudle
N.B. Wood	J.F. Cumber	A.C. Rayment (Captain)	N.G. Jardine K.J. Easton (Umpire)

Also played in the competition - D.J. Soutar, J. Gangee, A.J. Pank, B. Moses

70 runs and provided a hair-raising finish to the game.

A.R.L. team were fortunate to have had the bowling of Messrs. Rowe, Jardine and Webb but above all the players' enthusiasm, both on and off the field made the team always a force to be reckoned with. Although losing the Cup, A.R.L. will still be regarded by the various N.P.L. divisions as the chief contender for the cup next year.

A. Rayment

A.R.L. OUTINGS

On Saturday, 29th April, 65 members of the Staff and their friends, some of whom are pictured above, spent a very enjoyable day at the Tulip Fields in Spalding. After leaving A.R.L. at 8 o'clock, we stopped for coffee at St. Neots, then continued on to Spalding where we had a picnic lunch. A visit was made to the beautiful "Springfields", the 60 acre showgarden, which were a riot of colour with every conceivable spring flowering bulb blooming there. This was followed by a 30 mile drive all round the tulip fields in Spalding and the surrounding villages. On the way home we stopped at St. Neots again, this time for dinner. We were very lucky in as much as we had the best Saturday of the season as regards weather.

Friday, 2nd June saw a party of 82 leaving A.R.L. to see "The Sound of Music" at the Dominion Theatre. For many of the party this was their second or even third visit to this great film, and for all of us, whether first, second, or third "timers" an evening that will long be remembered.

On Friday, 14th July a smaller party of 35 went to the Palace Theatre to see John Hanson in "The Desert Song". For some of the older members of the party this brought back happy memories of yesteryear, and for the younger ones, their first visit to a show that can still fill a West End theatre 40 years after its original production there. One wonders if in the



2007 our grandchildren will be watching some of today's "POP" shows? It is hoped to repeat the visit to the "Desert Song" in late September after the holidays are over, for a number of people who would have liked to have seen the show on Friday, but were unable to do so due to holiday dates. Will anyone interested in going please contact Mrs. Chandler, Stores Office. Tickets are 24/- each including coach from A.R.L.

A week-end visit is being arranged to see the lights at Blackpool. Leaving A.R.L. at 8 o'clock in the evening on Friday, 13th October and returning approx. 8 o'clock in the evening on Sunday, 15th October. The cost is £5 per head inclusive of all meals and the tour of the lights on Saturday, 14th October. Numbers have to be given to the coach people the last week in August, anyone interested please contact Mrs. Chandler. The minimum number for the party is 29, the list at the moment stands at 19.

AMY CHANDLER

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O N S A F A R I

THE LIONS OF LONGLEAT

The reserve which is on the A362 halfway between Warminster and Frome is open every day from 10a.m. until half-an-hour before sunset.

The original idea for the Lion Reserve came from Mr. James Chipperfield of the famous Circus Family, who first met Lord Bath at Longleat in November, 1965. To quote Lord Bath, he said "Lions in Longleat" - recovered from the shock and thought about it. One month later the now famous "Lions of Longleat" was under way.

One hundred acres of parkland were fenced off. Roads had to be built, and that was quite a task. These were marked out personally by Lord Bath and Mr. Chipperfield carrying an 18ft. pole and making sure that the Lions could be seen from the road with hardly any space available for them to hide in.

Slowly the reserve began to take shape, drains were dug, shelters for the Lions erected and grass and bramble removed. The beautiful trees however, which were planted by Capability Brown in the eighteenth century were saved, only a few of the smaller ones having to be removed. This work was the responsibility of Lord Bath. Meanwhile Mr. Chipperfield was scouring Europe for Lions, after all to obtain such a large number of them was no easy task. Seven of the Lions appeared in the Film "Born Free", others came from Zoos. When they arrived in England they had to be quarantined, and this was done in Mr. Chipperfield's Zoos at Southampton and Plymouth. Everything was going according to plan - when the bomb fell: A leader appeared in the Times and after that protests from everyone; from M.P.'s and Local Councils to irate people in London and Scotland, but Lord Bath and Mr. Chipperfield stuck to their guns. In their own minds they knew they were right, the safety of the Public being their foremost concern. They were not to be put off and met and talked to various bodies -

and the work went on.

The Press loved it. Story after story appeared in the National Press, and the project was now gaining world wide recognition.

These interviews continued until the great day arrived, SUNDAY, 3rd APRIL, 1966. More than eighty press reporters and foreign correspondents were there together with the major Television companies. The next day the papers gave the project full coverage and all reports were most complimentary.

Prejudice was overruled. The "Lions of Longleat" were here and here to stay!

Admission if by private car is fl - no extras irrespective of how many in car. By coach 5/- per person including children. Organised parties 4/- per person. No pets can be allowed in vehicles inside the Lion Reserve. Pets may be left in Kennels at the Main Gate, free of charge and collected from Kennels at Exit Gate.

When you have passed through the two sets of double gates you are at liberty to remain in the Lion Reserve as long as you wish before dusk. Ample opportunities are available to watch the Lions in natural surroundings. A Game Reserve in Africa can hardly offer as many chances to photograph Lions as here, for the Longleat Lion Reserve is so planned that it is virtually impossible to drive through without seeing any Lions, something which can often happen in Africa.

If you wish to have a conducted tour of the Lion Reserve the Safari Service by Mini-bus from Longleat House is available daily. A White Hunter who has had many years of experience in conducting tourists through African Game Parks, is your guide throughout a tour which you will find most interesting and unusual. Should you have the misfortune to have trouble with your car the patrol vehicles are fully equipped to deal with any

situation. If the White Hunters cannot cure any mechanical trouble on the spot, the Fordson 5000 Tractors are available to tow outside the reserve any vehicle from a three wheeler to the largest coach.

Please remember, if you do breakdown or have any difficulty at all, do not attempt to leave your vehicle - Sound your horn and wait for a patrol vehicle.

The Lions in the Reserve vary in age, from youngsters of 12 months to the old stager "Khan" who is reputed to be 14 years old. Characters to look out for as you drive amongst the Lions are the three half grown male Lions "Mau-Mau", "Shorty" and "Legs" who always stick together and are a most active group; "Abraham", an old male who is always to be seen with the group of about 14 young Lions and Lionesses who seem to have adopted him as leader, and "E Type", a Lion so christened because he has abnormally short legs, and so appears low slung. Whilst to the ordinary member of the public all Lions appear to look the same, they are of course all individuals with their peculiarities and traits. Richard Chipperfield, son of Mr. James Chipperfield and in charge of the "White Hunters" and his staff are constantly watching every animal in the Reserve. Each animal is individually served with his ration of meat daily to ensure that none goes without and detailed health records of each are kept.

Lions thrive in the British Climate, they are not put out by a heavy snowfall - the younger ones seem to enjoy a gambol in the snow. Eleven insulated huts, each with a veranda, are provided for the animals' protection in inclement weather. Even in the coldest weather the Lions do not retire to the huts all the time - often they prefer the shelter of a clump of trees or perhaps only a fallen tree.

Facts and Figures

Two miles of road, wide enough for two lanes of traffic.
One and three quarter miles around the outside fence.
Outside fence twelve feet, with two feet overhang.

Inside fence six feet, with two electric strands, nose height to the Lions.
Staff of twenty-two white hunters and gate security patrol men.
Approximately one and a half tons of meat consumed each week.

You can enjoy a whole day at Longleat - a visit to Longleat House, home of the Marquess of Bath. This was the first house to open to the public. See the Park, Woods and Gardens. Year by year, many thousands visit Longleat to see the famous display of Rhododendrons and Azaleas. The ceilings of the State Rooms, the work of Italian craftsmen are beautifully moulded, painted and gilded. The walls covered with Genoa Velvet in red and gold, and embossed Spanish leather indeed "The Treasure House of the West". You can visit the Pets Corner - baby lions, monkeys, tiger cub, llama, wallabies, rabbits, goats, donkeys etc. etc. and picnic in Longleat Park. Perhaps a date in 1967 can be fixed for a private coach party.

D. Tedrekin, E Group

The Editor,
A.R.L. News.

Dear Sir,

Reply to Meo-Periculo's "Adam has nothing on Eve" (June)

Dear Meo-Periculo, from your article in the last issue it appears you are,

A Calculator	A Electrician	A Cook
" Panderer	" Gardener	" Inventor
" Mechanic	" Creator	" Buyer
" Handy'man		

Now call it a day Meo, and be satisfied
PLEASE!

"Adam"

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The Editor

Dear Sir,

HOG?

Who is this ANON I wonder, who has wasted with verbiage one precious page of the "News"? Does he, or she, realise that there is a great host who never have owned and never will own a car for a dozen reasons? - that those people are what are commonly called Pedestrians? - "people who go on foot" (Dic.) Pedestrianism - "the practice of walking". These people are functioning in a natural way as they were made to.

Anon says "who leap from behind Buses and in between stationary cars". Good heavens! If they didn't do a bit of leaping at times they would get nowhere. It's not always a suicidal effort, quite often it's the reverse - a leap for survival. What's come over Anon - and the rest of his/her kind! As soon as you get that Steering Wheel across your breast you turn into Gladiators, forgetting that long before you entered the arena the pedestrian had prior right to the road, and would still have if the asinine law worked as it should.

Sure I know what you "want done". You'd like to wipe the pedestrian off the road, shoot on sight any asinine body moving on two legs. Put knives on your chariot wheels. Carbonise that "Asinine majority" who "assume they have an answer to all this".

My word Anon. I'll bet your car thinks it's exhaust doesn't smell!

By the way I see you were a pedestrian X No. of years and a driver for 2. Total 12, and that's just what your article suggests.

Finally, what "Mantle" do you assume when you walk to and from your car?

SHANKS

The Editor

Dear Sir,

I thought that you may like to use the following extract from an Institute of Electrical Engineers' lecture on "A Survey of the problem of post-war television" which appeared in the 1944 I.E.E. Journal, in the A.R.L. News. The extract, which is a remark made by a Mr. R. S. Francis in the discussion which followed the meeting is as follows:-

"I think the chief difficulty in a new television service lies in the problem of programme material, as the entertainment value of a television programme will probably be very limited, with the result that the average person would have little use for a television receiver. The enjoyment and appreciation of a television programme depending fundamentally on sight, I do not think that people will have the time to devote to viewing just for the sake of entertainment."

and a further comment by a Mr. J. E. Taylor:-

"I think there is going to be some difficulty with the accommodation of the television receiver in the home; unlike the radio receiver it cannot be placed anywhere in a room, but must be in a convenient spot for viewing. A receiver designed to stand on the mantelpiece will perhaps be one solution."

A.M.

"What is executive ability Father?" asked a serious lad.

"Executive ability my son, is the art of getting the credit for hard work that somebody else does".

