

**BUSH**

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**TELEGRAPH**

# BUSH TELEGRAPH

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## Wood Lane's Club

*Editor* Peter Revell *Editorial Board*  
Dave Castle  
Denis Groombridge  
Richard Hammond

**Cover:** Creation by Anon.

## EDITORIAL vol. 19 no 6

The matter came to prominence at the last Social Club AGM. Did a register of Wood Lane members exist? Well, it was in need of up-dating, so it is being up-dated now.

The question that has been asked since that time is

"Why do so few people at Wood Lane belong to the Social Club?"

The exact number of members will soon be known, but whatever that number is, it should be considerably greater.

If you read your Bush Telegraph you will have noticed the question

"Are you a member of the Social Club?"

printed in some of the recent editions.

Our Social Club exists for the benefit of all members here at Wood Lane, and yet the Club is run by a small team of people for a small number of members, but our facilities in many different activities are quite extensively used by non-members as well.

The Bush Telegraph Editorial Board considers this situation to be unjust. We would like to see more members at Wood Lane contributing to the running of the Social Club - contributing in every sense of the word.

The Editorial Board has asked the Executive Council, at its September meeting, to discuss this problem. The Editorial Board has suggested that circulation of this magazine be restricted to Social Club members, and that only members will be eligible for prizes awarded by the Bush Telegraph.

Are you a member?

Contact A. Dennis on 322

# Letters to the Editor

Dear Ed,

How significant is it that the entrants and winners of May's mathematical crossword competition are all chemists. Could it possibly be that the standard reference book used by chemists gives the incorrect melting point for element No.78.

Yours,  
Frustrated Metallurgist  
(Roger Jones)

Dear Roger,

With reference to your letter, printed above, there appears to be considerable controversy over the melting point of platinum. The value quoted varies over a few degrees in the books I have consulted. However, you need not be a "frustrated metallurgist" any longer, as below you will see a list of reference books on quoted temperatures for the melting point of platinum. As you will observe, 1 out of 3 Chemical Reference Works gives the temperature as correct for the crossword, whereas 2 out of 2 Metallurgical Reference works do the same.

- |  |                   |
|--|-------------------|
| 1. Metals Reference Book, 1949 (p.460)       | 1773°C            |
| 2. Metals & Alloys Dictionary                | 3223°F = 1772.8°C |
| 3. Handbook of Chemistry & Physics (1958/59) | 1773.5°C          |
| 4. Partington (1958)                         | 1769°C            |
| 5. Cotton & Wilkinson (1967)                 | 1769°C            |

Ed.

Re: THE LINK July 1973

Miss Margaret Kingston wishes to thank all those who have offered their good wishes on her retirement, but regrets(?) that the announcement was rather premature. Management willing, she hopes to soldier on for several more years.

## THANK YOU

Jackie & Peter James would like to thank all the people at Wood Lane who contributed towards their wedding present of a food mixer and a cheque.

# Answer to June quiz

The response to the June Competition was slightly below average, probably due to the Editor's incompetence in not printing instructions for completing the boxes. However, be that as it may (and it was, in June), five complete and correct entries were received, these were:

K. Garrod  
R. Hall  
B.G.R. Smith  
F. Walker  
P. Walton

Our thanks to you five for entering. The draw was held in the Chemistry Department at 12.45 p.m. on Wednesday, 25th July. The winner's name, drawn by C.J. White, was: F. Walker. Congratulations to you, your £1 prize is on its way.

A nice, simple Mathematical Crossword follows on the next page. Good luck.

1 ICELAND  
HOOVER  
ALPS  
DENMARK  
DESCRESCENDO  
RUTH  
AMAZON  
INTERMEZZO  
NINETEEN  
IRAQ  
NILE  
12 GAMMA

INDIRA GANDHI

## STOP PRESS

1973 Rose Catalogues are now available.

Contact F. Walker on 279.

RECENTLY HEARD ON BBC RADIO NEWS:

"The hunt for a Cobra in Windsor Great Park has been called off. The snake turned out to be a grass snake with a Magnolia leaf around its neck".

Inferiority complex?

# (EASIER) *Mathematical Crossword*

This month's competition is an easier version of the Mathematical Crossword that foxed so many people when we printed it in the May Edition. There are no catches, nothing hidden. Simply complete the box, cut on the dotted line to return to the Editor by Monday, 20th August. The usual £1 prize will be awarded to the sender of the first correct entry drawn from our famous hat.

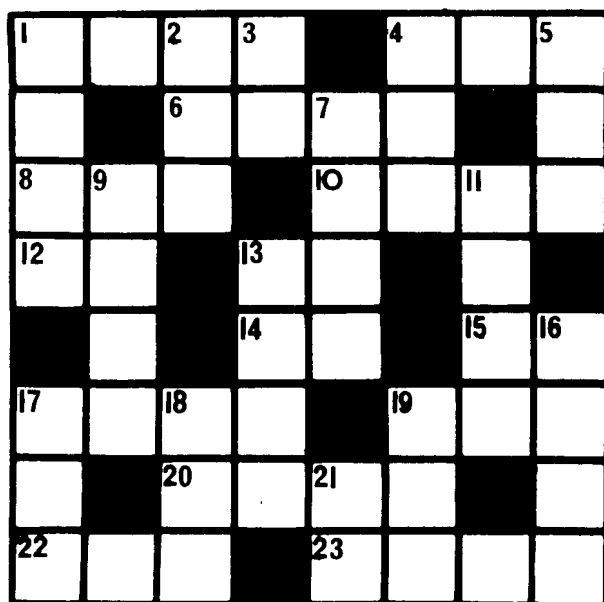
cut along here

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*Send to the Editor by 20th August*

*Name*

*Dept;*

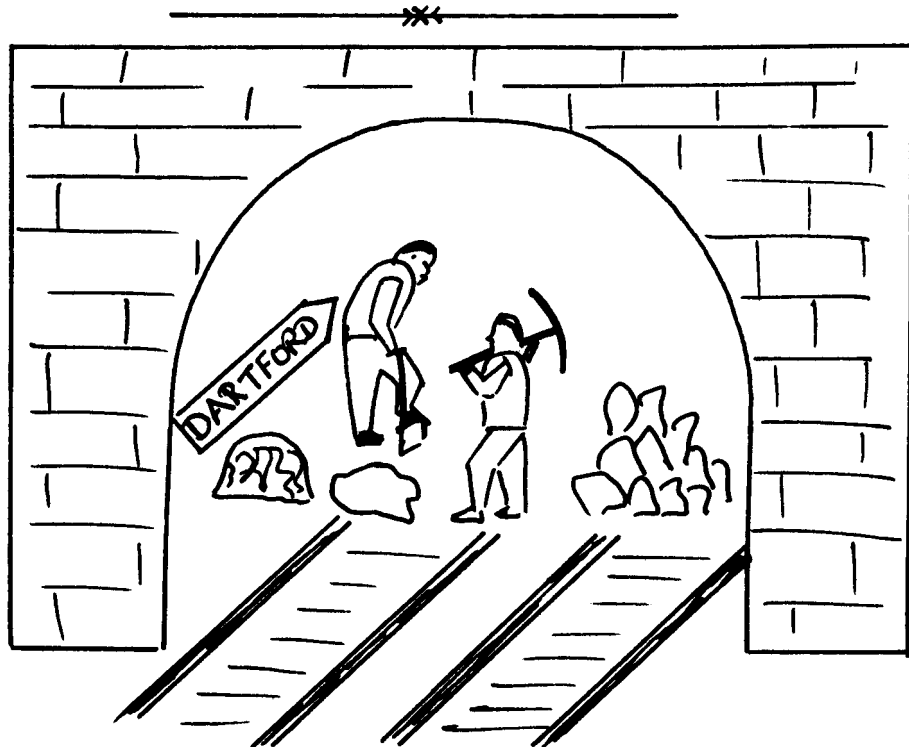


Across

- 1 Square yards in a square pole
- 4 Catch a bus to East Acton
- 6 The first war starts
- 8 Sum of prime numbers under 50 plus 10
- 10 Metres in a nautical mile
- 12 The last of the teens
- 13 Bakers dozen plus two
- 14 Number of Shakespeare comedies
- 15 Unlucky for some
- 17 Number of grains in 100 grammes, less 4
- 19 See to it
- 20  $(3C.4X) + 5M - C + (XIV)$
- 22 Grains in Six Scruples
- 23 Furlongs in 184 miles

Down

- 1 December days, and again
- 2  $410^{\circ}\text{F}$  in centigrade
- 3 Days in the first two months when its not a leap year
- 4 A lot of lines at the end of this line
- 5 The mirror image of  $(15)^2$
- 7 Henry II took charge
- 9 Franklin D. Roosevelt died
- 11 A metric 213
- 13 Number of feet in 397 yards
- 16 Twice six minutes past four in the afternoon
- 17 Prime number after 181
- 18 Temperature of a circle
- 19 Square inches in a square foot
- 21 The Beaufort Scale number for a wind speed 64-72 MPH



"Let's not go up to the surface here; but continue to Sangette"

Thank you, Chris. White

# *Drinks all round*

Starting relatively close to Shepherds Bush our first pub this month is the GRANGE, Warwick Road, Ealing, W.5 which is owned by the St. George's Taverns group and sells Watneys ales. The Grange is pleasantly situated on the south-western edge of Ealing Common and although it does not have a car park there are many side-roads conveniently placed nearby. Originally built in 1872 and taking its name from a nearby mansion the Grange underwent a large scale redevelopment 3 years ago when it was completely redesigned internally to become a "novelty" pub. The interior has been likened to that of a spreading tree with a central girder as a trunk and the bars spaced around it at all levels. At the top most level one finds a restaurant which is open to 10.00 p.m. Tuesdays to Saturdays, the menu is of "Bisto" and grill dishes but due to the absence of the prices on the menu I cannot give an average figure (except that £1.75 is found quoted in a publicity handout). A pub worth visiting for the novelty except, as usual, very crowded at the weekends and due to the unusual design smoke tends to accumulate around the drinking area, the clientele is of the younger generation.

Claimed to be London's most famous pub is the OLD BULL and BUSH, North End Way, Hampstead, N.W.3. which was immortalised by the old musical hall song originally sung by Florrie Forde. Built in 1645 it stands opposite Hampstead Heath and earned its name from yew trees that were planted near it and its origins as a farm house - difficult to believe these days. William Hogarth the artist used it as his country house and also the Bull and Bush has associations with various actors and artists including David Garrick, Sir Joshua Reynolds, Thomas Gainsborough, Charles Dickens and Du Maurier. Later the gardens were used for concerts and this is when the famous song was composed. As usual the bars are beamed, quite small and packed with people, but there is an outside terrace for rather more pleasant drinking during the summer months. The beer is Ind Coope and snacks are available at the bar.

Finally our "out of town" pub this month is the Bells of Ouzeley found at Old Windsor (A328/308) opposite the Thames near Runnymede. It apparently takes its name from the story that monks hid the bells of Ouzeley Abbey in the river during the Reformation. An L shaped bar is found in pleasant surroundings with a good selection of snacks as yet untried, serves grill type food and the car park is very ample. The beer is Courage.

## ***Thank you***

We wish to thank everybody who kindly contributed towards our wedding presents.

Stuart & Tess Castle

# TABLE TENNIS

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As many people at Wood Lane are aware, Walter Mascarenhas is an extremely good Table Tennis Player. It is doubtful, though, if as many people know of his recent achievements in Germany.

As a member of the Hammersmith Team, Walter played Table Tennis at the European Link Sports Festival held at Neukolln, Germany in June. Five countries were represented at the festival, England, France (Billancourt), Germany (Neukolln, Berlin), Holland (Zaandam) and Belgium (Anderlecht), which is held each year in one of the member countries. Entrants from all five countries were guests of the host country, and competed at football, cycling, volleyball, chess, tennis, badminton and athletics.

The Team event in Table Tennis was won by Hammersmith. Walter himself won the Men's Singles Title Championship. The Team Trophy is on display at Hammersmith Town Hall, and Walter has his own Commemorative Plaque.

As well as competing in European Championships, Walter has won a string of other titles locally. These include the Acton & District Close of Season Championships - Men's Singles, Doubles & Mixed Doubles Titles, and being a finalist in the Middlesex County Men's Doubles Championship.

Starting to play competitively for the first time in the 7th Division, whilst playing for BICC, Walter now plays in the 1st Division, and has a 100% record in 1st Division League Matches.

As well as winning Championships, Walter still finds time for some coaching, and recently a Girl's team coached by him won the under 15's National Schools Team Event.

## Tennis

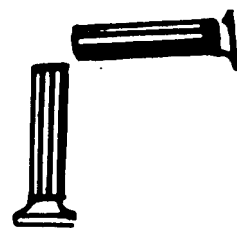
Tennis is being played every Tuesday and Thursday evenings at Wormholt Park by a few Social Club members. Anybody wishing to play after work on these evenings should contact the Tennis section secretary.

Tony Tarr on 295



# The Page 8½ Column

*a monthly miscellany*

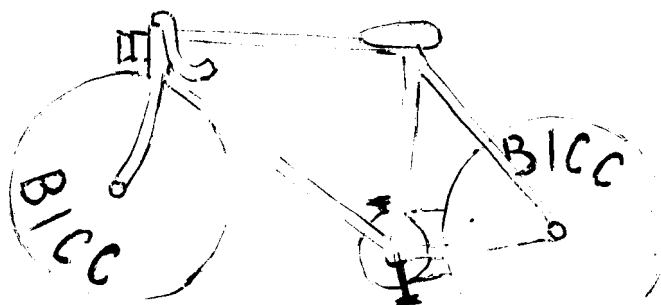


Our thanks to Dennis Cooper for sending the following:

## DEATH RATE DROPS

As the pay strike by Israel's salaried doctors entered its third week, officials reported that the country's death rate had dropped by nearly a third. In Haifa, undertakers said funerals were down by half.

The Sunday Times - 1st July, 1973



BICYCLE



BICCENTENARIAN



BICCINI

# MOTOR SECTION

Members who buy their Duckhams oil from the Club may be interested in an extract from a letter sent by Alexander Duckham & Co. Ltd.

"it is no longer a viable proposition to continue blending and packaging Q20-50. This latter grade is, therefore, being withdrawn from schedule, and in future only New Formula Q will be available to those industrial customers currently taking Q20-50".

The price of Formula Q, is of course, much higher than the old Q20-50, and will probably cost you 92p a gallon, a 12% increase, so buy now while old stocks last.

An application to use the Company car park for manoeuvreability trials has been turned down, and we will therefore have to fall back on the usual road trial - any volunteers to run the next one?

As usual GCT is the man

## **Wanted - Old engine oil**

It's always a problem what to do with your old engine oil, now it can be put to a good use by helping to heat a piano museum. So just take your old oil along to either Peter Revell or Graham Taylor in the Rutherford Building and save yourself a problem.

## **S<sub>mall</sub> A<sub>ds</sub>**

### For Sale

1964 A40, vgc, long MOT, good tyres, new exhaust, £110 ono. Also, A40 engine spares, gearbox and battery.

Contact D. Green Ex.322

### WANTED

More small ads for the Bush Telegraph also many more articles, features and items from Social Club secretaries.

# History of Wood Lane

## CHAPTER FOUR - THE SEEDS OF RESEARCH ARE SOWN

Early days at O.T.D. and Erith - 33 and 66 kV  
Problems - Screening - Static Tensioning -  
Oval Conductors - Difficulties and Diversions  
at Ormond Yard

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It is difficult to realize in this scientific age that in those days (the 1920's) industry generally was most definitely not "research-minded". The vast sums spent nowadays on research and all it implies would not have been condoned by the shareholders, who were inclined to the short-term view. Anything remotely savouring of the abstract, no matter what its practical potentialities, was anathema.

It is the more remarkable then that the seeds of research in the Company should germinate in this stony soil. That they did and came to fruition is largely due to the far-sightedness of Mr. Urmston and the backing he received at top level in the person of Mr. P.V. Hunter.

The majority of university graduates were Arts men, whose main outlet was the field of commerce. The few science graduates were mainly absorbed in the universities and in the teaching profession, and industry had little to offer them. However, Mr. Urmston appointed three scientists to the staff at Ormond Yard, namely Mr. F.S. Smith and Mr. K.S. Brazier (directly from London University) and Dr. L. G. Brazier (from the R.A.E. Farnborough). These three were among the first, if not the very first, graduates to be employed by Callender's and the year 1924 thus assumes some historical importance for the Company.

Initial work carried out by these three graduates was mainly centred on telecommunication instruments for measuring the properties of telephone cables in the field. For example, part of Mr. Smith's work involved the preparation of the jointing schedules for the "balancing" of telephone cables, referred to in the previous chapter.

The Technical Director at Erith Works at that time was Mr. J.F. Watson, or "Long John" Watson as he was better known, and in 1923-4 he started building up the technical department at the factory. He took into his employment Mr. S.W. Melsom, who, in the course of his work at the E.R.A., had recently published, in conjunction with Mr. H.C. Booth, a now-famous paper on the current-carrying ratings of power cables (15). Thus began the development, parallel to that of O.T.D. at Ormond Yard, of a Research Department at Erith, which continued under Mr. Melsom's guidance for several years - in fact until the episode of the 66 kV failures, which will be discussed in more detail later. However, a close link never existed between the Research Department and the factory and O.T.D. at Ormond Yard, for the former was responsible direct to Sir Tom Callender, whilst the latter answered to the Contracts Manager, Mr. Green.

By 1925 serious trouble was being experienced with 33 kV belted cables which had been laid by the Company only a year or two previously. The problems associated with these failures were directly the concern of Mr. Hunter in his capacity as Chief Engineer. Work towards their solution, at his instigation, formed the first major research programme on power cables to be undertaken by the O.T.D. and so represents yet another milestone in the development of the Research Organization.

The failures of the 33 kV cables (9) should not have come as a surprise for during the development period preceding the first World War disturbing evidence had come to light of disruptive phenomena exhibited in cables for operation above the 25 kV range, which had not previously been encountered, or had been disregarded as of minor importance.

Unfortunately, so urgent was the demand for higher voltages following the war that substantial orders for three-core cables designed to operate at 33 kV and at the hitherto accepted "safe" maximum stress of 26 kV/cm, were confidently accepted and carried out. Moreover, the arbitrary limit of 33 kV was viewed in some quarters as unnecessarily cautious, and a number of companies put in hand the manufacture of experimental three-core 66 kV cables of the belted type. These were put into service in 1923-24, but after a few months proved to be far from reliable. In fact, it had now become evident that the warnings of inherent instability of this type of cable were only too well founded. A series of breakdowns drew attention to the need for a more conservative approach until the source of the trouble had been located and the danger eliminated. The cause of the deterioration, though it was eventually determined by a series of investigations extending over a number of years, was not at first apparent. The early theory as to be the cause of these failures, and which was for a time widely accepted, was that breakdown was due to a component of the voltage which, as a result of the distorted field associated with three-phase transmission acted intermittently in a direction tangential to the paper insulation layers. However, as time passed, it seemed likely that this was a secondary and not a primary effect, more particularly since breakdown almost invariably occurred between phases and not as a fault to earth, and was characterised by severe burning of the central filler.

These two facts, taken in conjunction with the curious relative immunity of lightly loaded cables of small sectional area, suggested that the problem was one of high current loading rather than excessive voltage; in other words, the sources of the trouble lay not so much in tangential stresses as in the mechanical effects of thermal expansion.

Confirmatory tests showed that in the case of three-core cable with small conductors, expansion of the copper, due to the load, was readily taken up by a minute radial expansion of the strand; whereas in the case of cables with conductors of relatively large section, these acted substantially as though they were solid bars and expansion due to heavy loading could only find relief through a widening of the coring-up helix, with the result that a partially vacuous space developed in the crutch between the three cores. Discharges initiated at this point caused rapid deterioration due to burning; and inadequate heat dissipation led to thermal instability, charring of the weaker portions of the insulation and early breakdown between phases.

It was abundantly clear that the predisposing cause was the lack of homogeneity in the dielectric. The core insulation and belt and the fillers all varied in construction, tension and dielectric strength; and of these, the relatively loose fillers, situated as they were within the electric field, constituted the gravest danger.

The remedy was found in core screening on the basis of the Hochstadter patent of 1914, as mentioned previously. Two types of cable were produced for 33 kV use; the H type with individual cores screened with a metallised paper or metal tape, and the H.S.L. type with each insulated core separately lead sheathed. The advantage obtained by this modification in structure was that the metal covering round each core was bonded to the lead sheath producing an earth potential, so that the stress lines instead of being intermittently tangential now became purely radial, and the general breakdown strength of the cable as a whole was greatly enhanced.

Moreover, Hochstadter, though his attention had primarily been directed towards the question of stress distribution, had accidentally found the solution of the second and perhaps even more important problem, that of separation of the cores on load; for, since the outer surfaces of all three cores were now at earth potential the space between them - hitherto a danger area - was now free from stress and therefore innocuous.

The screening of individual cores, as mentioned, was the solution to the problem so far as new production was concerned. But what of the cables already in service? Replacement as a whole would have an expensive undertaking, and attention was turned to finding a method of reducing the thermal expansion or of masking it ineffective. Work began at Ormond Yard on a system of tensioning of the cable (16). Experimental demonstrated the great force which could be exerted due to heating of the cores under load, amounting to as much as 170 kg per core for a 3-core cable, for a temperature rise of 25°C. Theoretical considerations gave a figure of 600 kg. per core, however, and it was clear that a large part of the force was in fact being relieved in the cable construction. The magnitude of the remaining force was clearly such that its possible effect on the cable could not be ignored.

Further experiment showed that deformation of the cable under load gave rise to a large increase in power factor. Application of a temporary tension of suitable magnitude resulted in a large reduction.

In early work tension was applied by means of springs, but this method was not satisfactory as the springs tended to be released by the expansion of the conductor as the cable heated under load. This movement was inevitable in any arrangement using springs, and this led to the proposal by Dr. Brazier to use a constant stretch, or constant strain system, of tensioning. The method involved, known as "static tensioning", consisted of applying a force to the ends of the cable sufficient to extend it, within its elastic limit, by an amount equal to the extension which would normally occur in the free state over the given temperature rise, say 50°C, and anchoring the cable in this position. Any subsequent expansion due to heating would merely serve to reduce the tension (up to the given temperature) and no disruptive forces would occur within the cable.

The practical difficulties of applying the method in the field were considerable, particularly in regard to the joints which had to be specially designed and were anchored to enormous concrete blocks. But this method was successfully applied in many cases and proved a complete answer to the problems arising in existing cables of the belted type. However, it was at best a palliative and the real solution lay with screened cables.

Attempts to make cables for use at still higher voltages (up to 66 kV) resulted in a different kind of problem (9). Failures in these high voltage single-conductor cables were clearly distinct from the three-core instability which had been largely cured by the introduction of core-screening, and a disturbing feature was that through entirely satisfactory when tested before leaving the factory they tended to break down after relatively short period in service. The breakdowns were characterised by extensive tracking and a waxy deposit associated with the track marks.

The mechanism of breakdown when eventually determined proved to derive from the behaviour of the cable under the influence of repeated heating cycles. Expansion of the compound forced it to migrate outwards through and past the paper layers, finding eventual relief in distension of the lead sheath beyond its elastic limit to accommodate the increased volume. On cooling the contracting compound lacking any appreciable restraining force, was unable wholly to find its way back through the paper layers, and partly vacuous spaces were formed in the dielectric. Since the cable cooled from the outside inwards, these voids tended to form in the area of greater stress near the conductor, and breakdown of the vacuous spaces by disruptive discharge led to progressive deterioration, spreading further and further outwards until eventual failure occurred.

Two possibilities presented themselves, either a means could be provided of accommodating the increased volume of compound without permitting the irreversible migration which resulted in void formation, or a compensating mechanism could be provided which would enable the compound to flow freely with the heating and cooling fluctuations within the cable.

The first method was adopted by the Callender Company when in 1930, and partly as a result of researches carried out at Ormond Yard, the oval conductor cable was introduced. In this type, while the lead sheath retained its circular shape, the conductor and insulation were in the form of an oval, so that the effect of expansion was to increase the minor and reduce the major axis, rendering the insulated core more nearly circular and thus accommodating the increased volume without any distension of the sheath. On cooling the core reverted substantially to its elliptical form and since no migration had taken place, the danger of void formulation was largely eliminated.

The alternative method - that of compensation - had for some years been the subject of attention based as it was on a principle which had been tried out a generation earlier (9). It led directly to the general adoption of the oil-filled cable and a rapid increase in permissible voltages up to 132 kV and in some cases 220 kV. (See Chapter Five).

In the preceding pages several references have been made to "Ormond Yard" without actually describing the size and scope of the premises. Initially, when telephone work predominated, these premises consisted of No.1, Ormond Yard, a corner house on two floors, in a mews which had originally housed Georgian stables. As more and more interest in high voltage work became apparent during the 1920's it became obvious that the existing premises were inadequate for the testing equipment required. In November 1927, therefore, negotiations were put in hand for the leasing of space in a furniture depository owned by G. Bailey and Sons on the other side of Ormond Yard. This was a four-floor rectangular building with brick walls and steel window frames and with concrete floors laid on steel joists. Callender's gradually took more and more space in this building and eventually occupied the whole of the 1st, 2nd and 3rd floors, each with an area of 4 200 ft<sup>2</sup> and also 1 000 ft<sup>2</sup> on the ground floor. The flat roof of this building was used for storage space and a goods lift 15 ft<sup>2</sup> was available. The building boasted stone stairs, unbalustrated, and there were no toilet facilities available except that in No.1, Ormond Yard! In these surroundings worked about 25 staff and 15 to 20 hourly paid workers - the nucleus of today's research organization. Apart from testing equipment these entire premises contained offices for the senior staff, a general office, a telephone switchboard, a storeroom and a blueprint room. During this period (1928-31) various personalities, now well-known to all at Wood Lane, joined Callender's at Ormond Yard. These were Messrs. Condon, Davis, Bradbery, Hall, Hartshorn and Tempest. The sometimes laborious task of compiling this History has been frequently enlivened by their personal recollection (and not always printable anecdotes) about those early days.

Probably the greatest highlight of this period was the troupe of "Power's Dancing Elephants" who used to play cricket in the yard! During the circus seasons the elephants were stabled on the ground floor of the depository, i.e. underneath the Research Department! One employee, whose name is apparently cloaked in secrecy, had an accident on his bicycle on his way to work one morning, damaging a wheel. He completed his journey to work carrying the bicycle. On arrival he parked it in its usual place. Later, and very indignantly, he complained to the elephant trainer that the elephants had damaged his bicycle. He claimed compensation - and got it'.

There were still stables in Ormond Yard and an opportunist with a small cart and a ready market had contracted to remove the manure at weekly intervals. Imagine his chagrin when he turned up as usual with his little cart and found the result of a week's board and lodging by a troupe of elephants! The story has it, however; that he was held to his contract!

In addition to this form of diversion, correspondence of the following nature would sometimes flow between Callender's and its neighbours:

"- to draw attention again to the very bad smells in the neighbourhood of our entrance door resulting from crates of fish and refuse that you keep at that point. We now have a large number of staff and employees continually using this entrance and these smells constitute an intolerable nuisance. I have previously written to you on this matter but have not had your reply. I must ask you to give this your serious attention".

If the fish and the elephants were there at the same time the atmosphere must have been "electric" to say the least:

Yet a further incident concerned a night watchman on his very first night's duty. He heard a strange noise coming from one of the rooms. Being a conscientious night watchman and not having the key on him he broke in with an axe! The cause of the noise is not recalled, but was quite inconsequential.

By 1930 it became obvious that the existing premises at Ormond Yard were too limited for the type of work in hand. Mr. Hunter, realising that an expansion of research and O.T.D. was essential if the department was to continue its useful work, persuaded the Board of Directors that larger premises were imperative, and that such ideal premises actually existed in the then disused Wood Lane Power Station.

In these circumstances approaches were made to the London Power Company and the Wood Lane site was taken on a twenty-year lease, effective as from October 1931. The first "resident" at Wood Lane in charge of the adaptation of the buildings, etc., was Mr. A.S. Butler, who recalls that he first saw the establishment while negotiations were being commenced on (of all dates) the 5th November, 1930.

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# the FILM column

## Film Poll 1973

Fifty people returned their Film Poll forms, and in consequence films are now being booked for next season. Details in next month's BT. In the meantime, make a note of the date of the first show; Wednesday 26th September. As usual, we will be having a soiree after the film.

The voting in the Poll was as follows:-

The Royal Hunt of the Sun	22	Scott of the Antarctic	11
Dance of the Vampires	13	The Reckoning	11
Valerie and her Week of Wonders	18	La Guerre des Boutons	11
Cactus Flower	18	When Eight Bells Toll	10
Z	17	Les Parapluies de Cherbourg	10
Investigation of a Citizen above Suspicion	16	Getting Straight	8
The Devil Rides Out	14	Mayerling	7
The Night of Counting the Years	13	Kind Hearts and Coronets	7
Blow-Up	13	Oliver Twist	6
Targets	12	Shock Corridor	5
The Flight of the Phoenix	12	Days and Nights in the Forest	5
		The Householder	3

## National Film Theatre

The major seasons this month are devoted to "RKO in the Thirties"-films made at this studio by such famous directors as George Cukor and Raquel Walsh - and "The Actor as Director" - with film directed by many people better known as actors; particularly notable here are Albert Finney's CHARLIE BUBBLES on 17th August (if you missed the Wood Lane showing) and Peter Lorre's DER VERLORENE on 2nd September. There are also virtually complete retrospectives of the films directed by Joseph Losey and those produced by Val Lewton, of CAT PEOPLE fame. And coming next month is a Festival of Underground (or Independent, Avant-Garde or Experimental - there is no agreement on the correct term, but I am sure you know what is meant) Film. The dates are September 3rd - 16th.

## ATTENTION ALL ARTISTS

The film committee are searching for volunteers to produce posters for next season's film shows. There are seven shows planned and at least one poster for each show is required. Will anybody and everyone interested in helping us in this way please contact Carol Tilbury (365) now.

W. C. FIELDS NIGHT - A minor tribute to the thirties

DATE: Wednesday May 23rd 1973  
PLACE: BICC Ltd Wood Lane London W.12  
OCCASION: See Title

Well what we did was this;

We showed some old movies - the excellent Mickey Mouse cartoon went down pretty well as did the ancient "How to use a telephone" GPO propaganda short, the early Laurel and Hardy print was in a shocking condition however, which distracted somewhat from the inherent charm of the film (that's showbiz), but an amazing George Pal Horlicks film revived interest.

Thirties authenticity lost ground a bit when we supplemented the programme with a selection of cinema commercials, drawn mainly from (and most representative of) the fifties, but in keeping with the current fifties fascination they went down very well.

All this led to the interval, when Mac gave almost his all at the organ, and Georgina gave all her all off the tray (ice creams and lollies). These tender ministrations soon had the audience eating out of her tray, and piling jugs of foaming brew on Mac's organ. The audience fell back in their seats as the Noble W. C. Fields took the centre of the stage for the Bank Dick and demonstrated that a good film is never out of date. The print was as well as could have been expected but the humour shone through anyway; although with the number of children that were present a more visual comedy such as "Never give a sucker an even break" might have been more widely appreciated. However, on the whole it was great fun, and the experience does point to fertile grounds for future interest in showing programmes of film of a particular decade for interest and entertainment value. With cinema organ and ice creams - it's got to be a winner; this programme may not have been the best in the world, but it definitely show of promise for the future.

NB

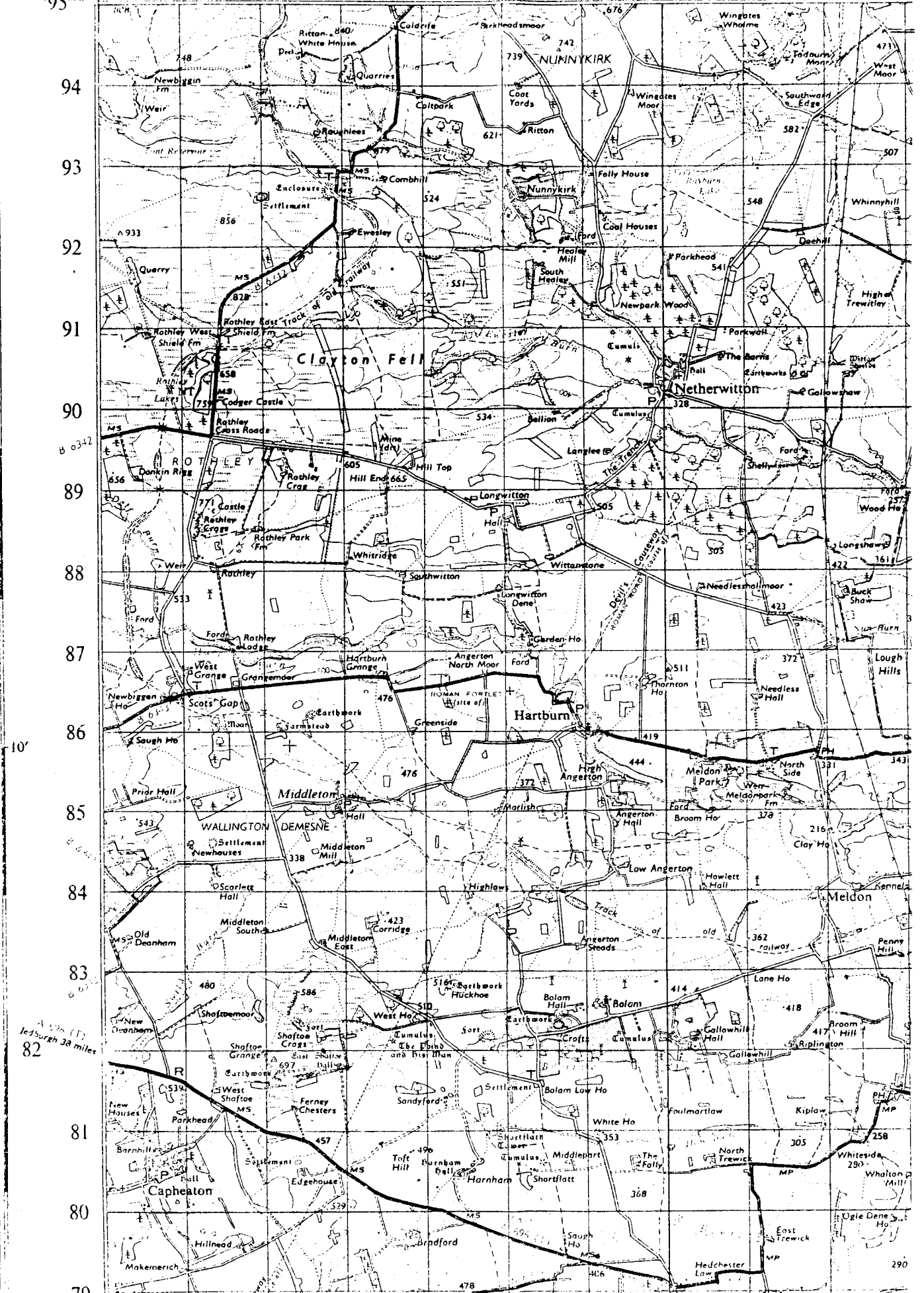
The photographs taken for the event were received too late for inclusion in this month's Bush Telegraph, but we hope to publish them next month.

Ed.

Lat 55° 15' 05" N

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# Table top navigation trial

The section instructions and questions are to be found overleaf. You are advised to read these before starting the run.

## SECTION A ROUTE CARD

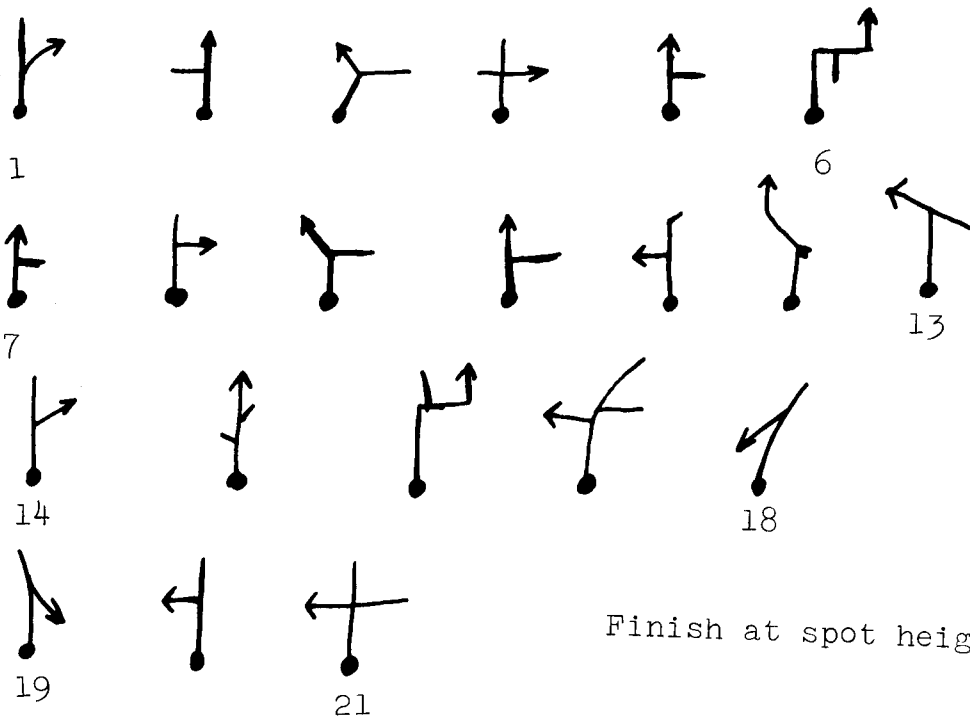
Start at 030843. Heading South East

TL, TR @ TJ, TL @ XR, TR @ TJ, TL, SO, TR @ TJ, BL, TL,

SO, TL @ TJ, TL, SO, TL just beyond church, FL, TR @ TJ,

TL @ TJ, TR @ TJ, TL @ XR Finish at Public Telephone Box.

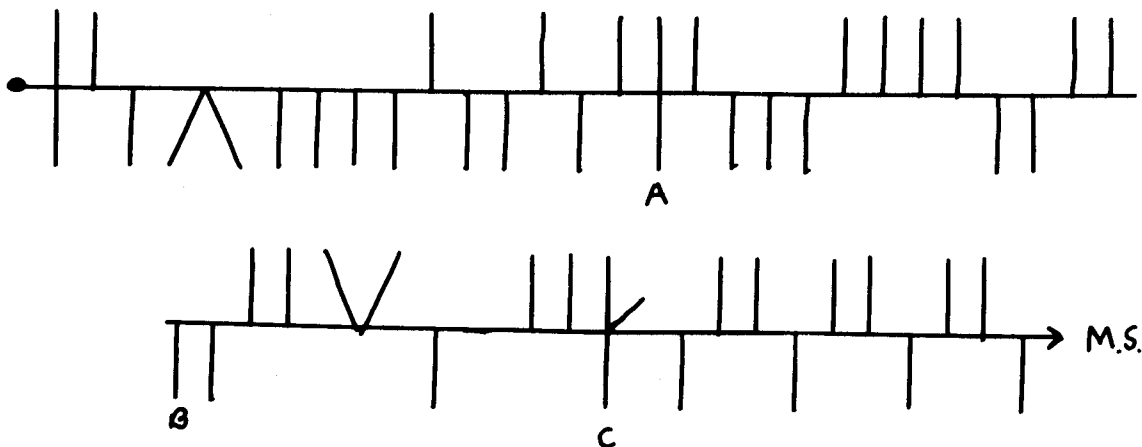
## SECTION B Tulip Diagram



Finish at spot height 479.

## SECTION C Straight Line Diagrams

Start at the spot height at the end of Section B travelling in a South Westerly direction.



Each section follows on from the previous one and the clues are in 3 conventional codes. Due to the difficulties of reading a black and white O.S. map we have included special notes and instructions at the start of each section to help you.

### Section A

For this section ignore all nothrough roads including those around Bolam Hall and Middleton Mill/Hall. No through roads may be included where they make up a cross roads.

<u>Abbreviations</u>	TL Turn Left	BR Bear Right	FL Fork Left
	TR Turn Right	BL Bear Left	FR Fork Right
<u>Route Questions</u>	TJ Tee Junction	SO Straight On	XR Cross Roads.

1. Give Grid Reference of finish of section A at the Telephone Box.
2. What is the highest spot height passed on the route.
3. Name the villages passed through that have churches without a spire or Tower.
4. Give Grid References of the Public House passed on route.

### Section B

Start at the "blob" and leave by the arrow at each consecutive junction. Begin at the Telephone Box reached at the end of Section A travelling in a westerly direction. Again nothrough roads are not included. The roads around Wittanstone are included.

#### Route Questions

5. Give the Grid Reference of the spot height (479) at the finish of Section B.
6. Grid Reference of Disused Mine close to route.
7. How many times does the route cross the Devils Causeway?

### Section C

Due to the difficulty in deciding what roads to include all roads are included in this section to try and make it slightly easier. Several along-route clues have also been included:-  
A = Thornton Ho.  
B = T  
C = M.S.                      Finish at M.S.

#### Route Questions

8. Grid Reference at the M.S. at the end of Section C.
9. How many times does the route pass over (or under) an old railway track?
10. Name of village passed through with an illness?

Send your answers to P. Revell Chemistry Dept. and depending on the response there may be a small prize awarded for a correct entry.

# PHONETIC

# PHONETICS

North see oyl pozez the bigzest challenj yet fore the offshore oyl industre. Wythin thare teknolojekal grahsp li a poseble 31 bilyun barels of rekuverrabable oyl and vahst kwontetes of natyewral gas. But ekstreem wawter depth, strong wynds, larj waves and grate distance from land poot this petrohleum at the frunteer of industres abiliti to ekstrakt it.

Eksplorrayshon haz established the prezence of 3 distinkt petrohleum provenances in the North see, an oyl and gas reejun northward from the 59th paralel, a sentral oyl reejun in the vesinete of the Norweejan Ekofisk operrayshuns, and a gas reejun off South East England.

Mishaps whitch hav awlrede okkured dewring the eksplorrayshon of these fields poynt up the difekultes of offshore drilling. The Sea Gem, a jak up drilling rig, kolapsed and sunk dewring a storm kiling 13 men. Hy wynds and hewj sees tor a French barj from its moorings and poosed it 250 miles northward to the Shetlands whare it broke up. Vybrayshon du to wave impakt dewring a storm kawzed the loss of barering strength of sand suporting the drilling rig Ohshan Prince. The legs sank so fahr into the sand that the waves destroyed the rigs sewperstruktwr

Oyl operrayshons in more plaside wawters hav awlso sufered a number of aksedents in reesent yers. An oyl platform eksploded and burnt out ov kontrole in 1970. When the fire waz fineally kild bye blahsting with dynamite, oyl kontinyewd to spil into the see for a further 21 days before the floh woz stopped.

The oyl industre responses to this and uther dizahsters with a reserch and development pohgram aymed at improving awfshore teknologie. Just hou mutch the oyl kompanes hav been aybl to upgrade those teknologie iz debateabl.

Hy polewshon potenshal egzists dewrring eech faze ov awfshore oyl eksploytayshon. Dewring eksplorrayshon operrayshons test wels ahr drild intoo jeeolojekal struktewrs whitch hav been ohnle vaygle outlined by sizemik awr uther means. Bloouts okkur when the drill bit penetrates zones whare oyl aur gas iz under grater preshur than antissepated. In the kace ov eksplawratore drilling from floteing vessels, a bloout preventor stak on the see bottum iz supozed to klose the wel awtomatekale and prevent oyl and gas from eskapeing to the surface. Like awl kompleks peeces of masheenerie operrayting in adverse envyronments subsee bloout preventer staks ahr not kompleetly relyabl and bloouts do take place.

# \* \* GOING SAILING \* \*



by R.J. Arekion

No attempt is made here to try to teach anyone how to sail; there are enough books on the subject. Anyone seriously considering taking up sailing, can't do better than to go to one of the many recognised schools dotted all over the country. This article is intended more as an introduction to sailing so that you don't feel quite so foolish if you ever have the opportunity to go sailing in somebody else's boat.

To the uninitiated, the world of sailing is a world apart with a language of its own. This feeling has been created in the main by the uninitiated. It is a passtime and/or a sport depending on your inclinations, the followers of which I have always found to be very friendly and helpful.

The owning of one's own boat is not essential to take up sailing. There is always a shortage of crews so that most owners providing they are not racers, are only too pleased to take out anyone who is keen and willing to learn. So here are a few tips which could add to your enjoyment and safety and help towards your being asked out again.

Never ever go sailing unless you are wearing a life-jacket, irrespective of how good a swimmer you may be. There are basically two types of jackets, first there is the 'bouyancy aid' which as the name implies only an aid and will support an average of 25 lbs. The second is the genuine life jacket which will support the whole weight of the body. As one would expect there are many varieties of both types. Having decided on the type you are going to have, an important point for dinghy sailors is comfort and freedom of movement.

One sure way of giving the owner of the boat heart attack or exploding with high blood pressure is to step aboard his beautifully varnished craft in hobnailed boots. So do wear plimsoles or even short wellingtons. Soft soled shoes (not black soles) also give you a better grip so that your tendency to remain upright is greater. Another point to remember is that it is often cooler out on the water. Wear warm clothing and don't allow yourself to get too cold as it will slow your reactions. Clothing should be comfortable and not restrict your movements.

Helping with launching and rigging the boat is important if you wish to get off on the right foot with the skipper. It is also an excellent opportunity to enquire into the various working parts of the boat. Above all, DO NOT forget to assist with the tidying up and mooring or recovery of the boat after your outing. Leaving the skipper on his own to put the boat away is just not done.

Stepping into a small dinghy should be done gently but decisively and not rushed. Do not jump into the boat. Step into a dinghy and not on the gunwale. Once in, sit down and don't rock the boat. Always keep rope ends coiled. The skipper will instruct you how to deal with the sheets when you go aboard. When making a halyard or warp fast ask him if they are to his liking.

If the skipper knows you are new to the game he is less likely to expect you to react in certain situations as an experienced crew would. The sketches on the "points of sailing" should help you to understand how a sailing boat moves against the wind. Briefly a sailing boat can only sail 45° against the wind. Hence the need to tack e.g. If the wind is blowing from the north and you wish to travel in a northerly direction, you can sail NW for a time and then alter course to NE and so make slow progress northwards.

As this is only a limited article if one wishes to go a step further with this passtime as mentioned earlier there are many books on the subject and the very important point of Highway Code for boats should be studied.

### GLOSSARY OF TERMS

(Taken from Reed's Nautical Almanac)

Back Stay	Standing rigging from a masthead leading off to take the strain of the mast
Battens	Thin pieces of wood or plastics set into the sail to preserve the shape
Beating	Sailing towards the direction of the wind by tacking
Boom	A spar (pole) for many purposes such as to stretch out the foot of a fore or aft sail
Broach	To come up to the wind
Broad Reach	With the wind on the quarter
Burgee	Swallow tail flag indicating the yacht club the vessel's owner belongs to
Centre Board	A wood or metal plate lowered through the bottom of the sailing boat to prevent lee way
Close-hauled	Sailing close to the wind
Pend off	To prevent touching when coming alongside
Pender	Soft rubber or other soft material
Fore Stay	Standing rigging from the upper part of the mast to the bows to take the strain of the mast and to which the fore sail is hanked
Gunwale	Upper edge of the boats side
Go About	To tack
Goose Neck	A metal fitting for securing a boom to a mast
Gybe	To allow a fore and aft sail to swing from one side to the other when running
Halyards	Ropes or tackles used to hoist sails or flags
Hanks	Strong clip hooks which attach heat sails to the mast stays



Head Foreward in a ship, headsails are those set forward of the mast

Heave to To stop by sail or engine action to so reduce speed when head into wind that vessel has as little forward motion as possible. Vessel is then "hove to"

Helm The tiller or wheel, the helmsman is he who steers a vessel

Horse An iron bar parallel to the deck, running athwartships for a sail sheet to travel

Jib The triangular sail set as the forward head sail

Leeward (Loo'ard) Towards the sheltered side

Painter The bows of a small boat. The rope attached to the bows of a small boat used for securing her to anything

Port The left hand side of a ship looking forward

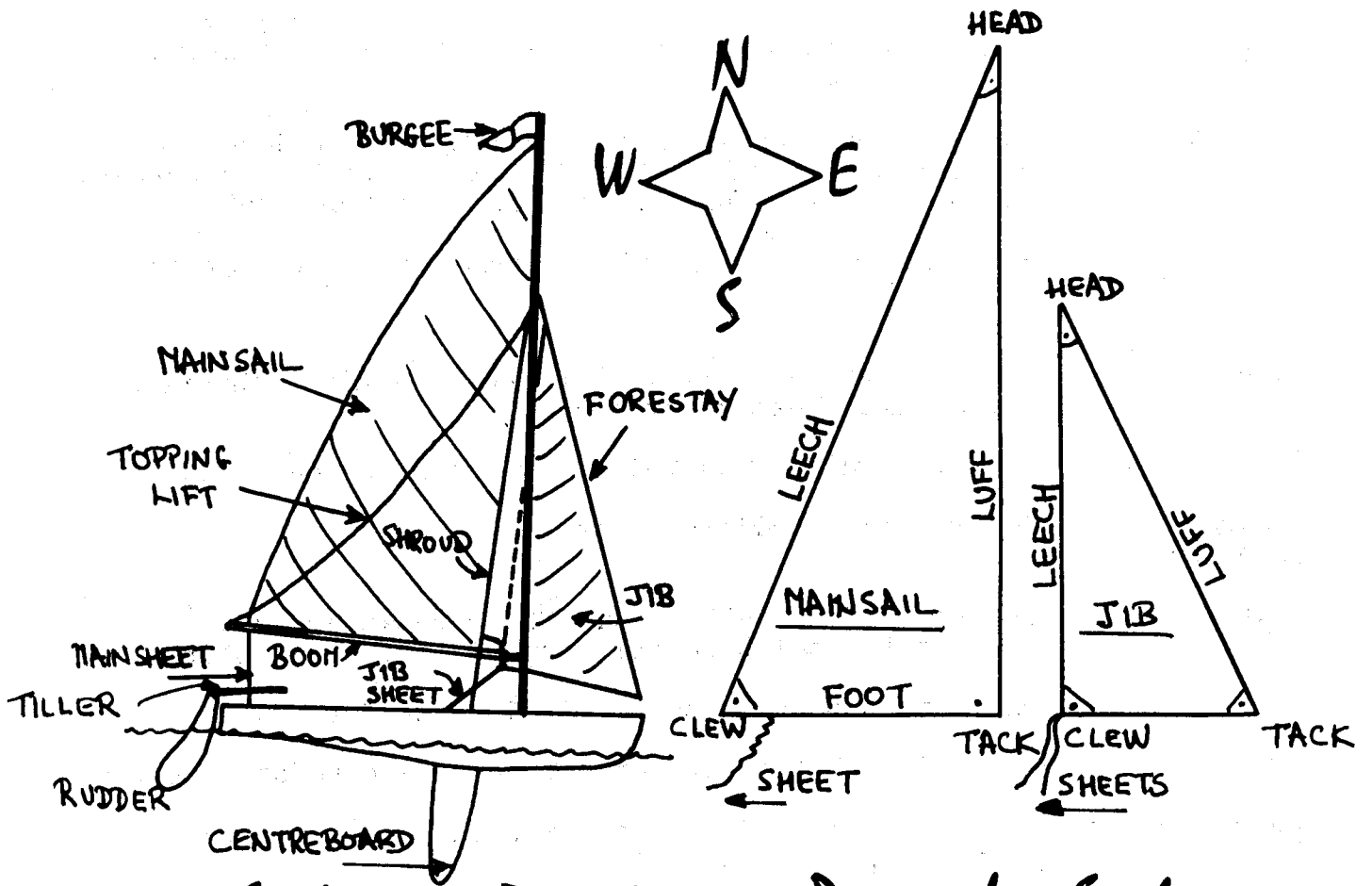
Port Tack To sail with the wind on the port side before the beam

Running Rigging That rigging which is not standing e.g. balyards gantlings, purchases etc.

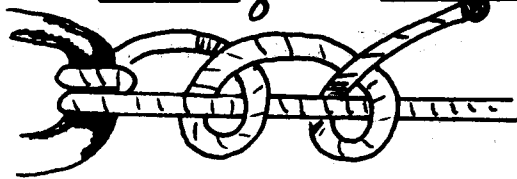
Starboard The right hand side of a ship looking forward

Starboard Tack With the wind on the starboard side forward of the beam

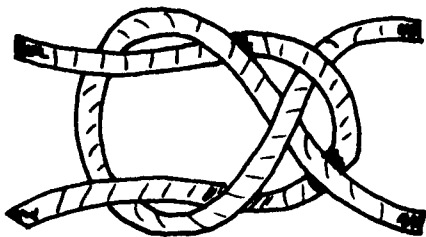
Tiller Lever for turning the rudder



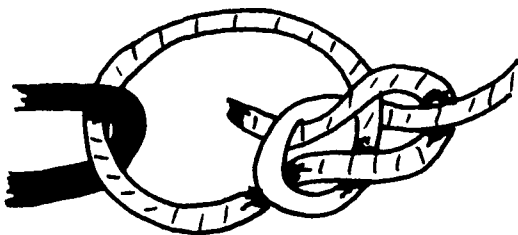
Sailing Dinghy



ROUND TURN AND TWO HALF-HITCHES



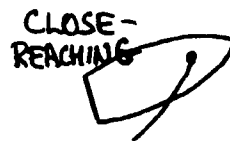
SINGLE SHEET BEND



BOWLINE

Knots worth Knowing

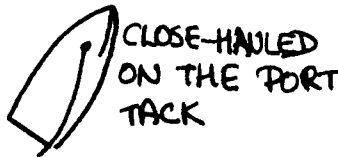
Parts of a Sail



CLOSE-REACHING



BROAD-REACHING



CLOSE-HAULED ON THE PORT TACK



RUNNING ON THE PORT GYBE



HEAD TO WIND



RUNNING ON THE STARBOARD GYBE



CLOSE-HAULED ON THE STARBOARD TACK

Points of Sailing