



THE RINGING WORLD

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These famous bell-founding firms have kindly consented to this adaptation of their advertisements to meet the pressure on our space, due to the compulsory reduction in the number of our pages this week.

ROPESIGHT.

The advertisement on another page which announces a war time reprint of Jasper Snowdon's 'Ropesight' is a good sign, for it is evidence that an elementary text book on change ringing of proved value is being widely circulated among the many young recruits that are coming into the Exercise. Once, and not so long ago, a major problem was the absence of recruits and the seeming hopelessness of seeking for them; now the problem is rather how best to deal with the many that are coming. In training ringers, as in all other similar things, nothing can fully take the place of the competent teacher, and the beginner is fortunate who comes under the influence of someone that not only knows himself what should be taught, but also how to impart his knowledge. Really good teachers, however, are rare. Fortunately, there is no lack of men who are willing to devote their time and patience and enthusiasm to the training of beginners. They do a vast amount of good, and without them the Exercise could not exist. But their knowledge of the things really essential is not always equal to their zeal, and their efforts need to be supplemented by other things. Here it is that the use of text books comes in, and here it is that the value of 'Ropesight' has been so greatly shown.

'Ropesight' was first published in the year 1879, and now, 65 years later, what is substantially the same book is being reprinted and for the ninth time. How many copies have been sold altogether we do not know, but the number must be greater than twenty thousand. It is a striking testimony to the popularity of the book and to its value, but it also raises another question. Good and useful as a text book on any subject may be when it is written, there is always the tendency for it to become out of date and obsolete. New ideas and new ways of expressing old ideas are continually arising, and the teacher must develop his methods to embrace them. It is so in all living subjects, and it is so in change ringing. Two years after the publication of 'Ropesight' its author, Jasper Snowdon, issued another text book, 'Standard Methods,' which in popularity and usefulness has more than equalled the earlier book. But here is a distinction. While 'Ropesight' is to-day what it was when it first left its author's hands, 'Standard Methods' has been so altered in later editions and by other authors that it is now an almost completely new book in which advantage has been taken of all the

(Continued on page 334.)

developments and improvements in the art up to the present time. Must we conclude that 'Ropesight' is out-of-date for lack of a similar revision?

Now it is true that 'Ropesight' does, on the face of it, bear unmistakable marks of the time it was written in, and the opinions and standards which were then current. If its author were living to-day he would not use exactly the same illustrations, nor would he express himself exactly as he did then, and we are betraying no confidence when we say that the question has been considered carefully whether the time had not come to rewrite the book entirely, and to give new illustrations and new instructions. It has been considered and the decision was that it is not necessary since the book answers the purpose for which it was intended as well now as it has ever done.

The things in which 'Ropesight' may fairly be said to be out of date are the inclusion of Plain Bob Triples as a standard method and the selection given of peals of Bob Major. The practice of Bob Triples has been condemned by a resolution of the Central Council and the method has fallen into disuse. The pages which treat of it in 'Ropesight' are now superfluous, but they can scarcely harm anyone. The peals of Bob Major given by Jasper Snowdon are largely five-part and three-part in-course compositions which no one rings to-day, but they are of great value to those who are interested in composition, and conductors need have no difficulty in finding all the peals they want for calling elsewhere.

On the other hand, since the book deals with the most elementary part of the art, in its essentials it is not in any way out-of-date or obsolete, and whatever limitations Jasper Snowdon may have had as a writer, he had the great gift of being able to put himself into complete sympathy with his readers, which is the first essential of a good teacher.

Had the book been rewritten it could not have been published at the present time except at too great a price. As it is, the cost of paper and printing make an extra charge a necessity. But ringers will not mind that, and will gratefully acknowledge the debt they owe to Miss Snowdon for keeping in circulation a book which has proved so useful to the Exercise.

SERVICE TOUCHES.

CAMBRIDGE AND SUPERLATIVE SURPRISE MAJOR.

1,024				1,024					
23456	B	M	W	R	23456	B	M	W	R
35264	1				23564	1			
63254					52364				
42356					35264				
34256					63254				
23456					23456				
1,024				1,024					
23456	B	M	W		23456	B	M	W	
35264	1				52436				
63254					34625				
52436					23645				
35426					42635				
23456					23456	1			

RECONSTRUCTION.

To the Editor.

Sir,—With reference to your leader of August 4th, so far as the Church of England is concerned, most if not all of the dioceses have 'Bishop's Advisory Committees.' Every application for a faculty for alteration or repair to the fabric of a church goes before this committee, which is composed, in the main, of people who are knowledgeable, if not experts. Mr. Ernest Morris has recently been appointed to the Leicester Diocesan Committee; so ringing problems in church towers will be in safe hands in this diocese.

A. M. SAMSON.

St. Peter's Vicarage, Loughborough, Leics.

EIGHT BELL PEAL.

GUILDFORD, SURREY.

THE GUILDFORD DIOCESAN GUILD.

On Monday, August 7, 1944, in Three Hours and Twenty-One Minutes,
At the Cathedral Church of the Holy Trinity,
A PEAL OF STEDMAN TRIPLES, 5040 CHANGES;

DEXTER'S VARIATION.		Tenor 2 3 cwt., 3 qr., 9 lb. in D.
FREDERICK OLDROYD ... Treble	WILLIAM J. ROBINSON ... 5	
GEORGE L. GROVER ... 2	C. ERNEST SMITH ... 6	
ALFRED H. PULLING ... 3	GEORGE W. STEERE ... 7	
CLARENCE H. DOBBIE ... 4	† FRANK C. W. KNIGHT ... Tenor	

Conducted by A. H. PULLING.

* First peal in the method. † First peal.

SIX BELL PEALS.

KEMPSEY, WORCESTERSHIRE.

THE WORCESTERSHIRE AND DISTRICTS ASSOCIATION.

On Saturday, July 29, 1944, in Two Hours and Fifty-Nine Minutes,

At the Church of St. Mary-the-Virgin,

A PEAL OF GRANDSIRE DOUBLES, 5040 CHANGES;

Forty-two six-scores, ten different callings. Tenor 19 1/2 cwt.

* FRANK SALTER ... Treble	CHARLES J. CANN ... 4
† FRANCIS J. CUBBERLEY ... 2	ERNEST F. CUBBERLEY ... 5
HAROLD WILLET ... 3	ARTHUR I. BLIZZARD ... Tenor

Conducted by CHARLES J. CANN.

* First peal. † First peal of Doubles. Rung for the 65th wedding anniversary of Mr. and Mrs. F. A. Rea.

WEST DEEPING, LINCOLNSHIRE.

THE LINCOLN DIOCESAN GUILD.

On Saturday, July 29, 1944, in Two Hours and Fifty-Two Minutes,

At the Church of St. Andrew,

A PEAL OF MINOR, 5040 CHANGES;

Being 720 each of Double Court, London, York and Cambridge Surprise, Plain Bob, Oxford and Kent Treble Bob. Tenor 10 cwt.

WILLIAM NEAL ... Treble	SIDNEY G. SMITH ... 4
CHARLES WOODS ... 2	HORACE M. DAY ... 5
WILLIAM H. WALDRON ... 3	WILLIAM OLDMAN ... Tenor

Conducted by H. M. DAY

HANDBELL PEALS.

OXFORD.

THE OXFORD UNIVERSITY SOCIETY.

On Thursday, July 27, 1944, in Two Hours and Six Minutes,

At the Inorganic Chemistry Laboratory, South Parks Road,

A PEAL OF KENT TREBLE BOB MAJOR, 5120 CHANGES;

Tenor size 15 in C.

* JEAN A. SOUTHERST ... 1-2	JOHN E. SPICE ... 5-6
† SHEILA M. MCKAY ... 3-4	BETTY SPICE ... 7-8

Composed by J. WILDE. Conducted by JOHN E. SPICE.

* First peal of Treble Bob. † First peal on an inside pair.

ACCRINGTON, LANCASHIRE.

THE LANCASHIRE ASSOCIATION.

On Sunday, July 30, 1944, in Two Hours and Nineteen Minutes,

At Newstead, Willows Lane,

A PEAL OF BOB DOUBLES, 5040 CHANGES;

Forty-two extents, four callings. Tenor size 8 in C.

* K. HINDLE ... 1-2	R. LEIGH ... 3-4
* L. WALSH ... 5-6	

Conducted by R. LEIGH. Witness: C. JOHNSON

* First peal. First peal for the Accrington Grammar School Society.

ENFIELD, MIDDLESEX.

THE MIDDLESEX COUNTY ASSOCIATION AND LONDON

DIOCESAN GUILD.

On Thursday, August 3, 1944, in Two Hours and Fifty-Six Minutes,

At 24, Suffolk Road,

A PEAL OF BOB MAXIMUS, 5016 CHANGES;

ERIC A. DENCH ... 1-2	CHARLES W. ROBERTS ... 7-8
MRS. J. THOMAS ... 3-4	WILLIAM L. B. LEES ... 9-10
JOHN THOMAS ... 5-6	DENNIS H. LANGDON ... 11-12

Composed by C. W. ROBERTS. Conducted by J. THOMAS.

SEVEN BELL METHODS.

(Continued from page 329.)

There still remain three seven-bell methods to be considered—College, Hereward Bob and London Bob. None is quite the quality which would entitle it to be chosen for regular practice, but any one of them could easily be rung by a competent band that has made itself familiar with the other methods we have dealt with. The point we want to stress is that if the whole group is studied as a whole and in the right way, there is no reason why any one of the eleven methods should not be rung when desired.

College Triples.	
1234567	continued.
2143657	7251364
2416375	7523146
4261735	5732416
4627153	7534261
6472513	5743621
4675231	7546312
6457321	5764132
4653712	7561423
6435172	5716243
4631527	5172634
6413257	1527364
6142375	1253746
1624735	2135476
1267453	2314567
	3241657
2176543	3426175
2715634	etc.

College Triples is simply St. Clement's Bob without the Grandsire Thirds place and its attendant dodging. The two bells left on the front dodge together (a 3-pull dodge) until the treble returns. Every bell, after hunting down from the back, makes Thirds place and hunts up again, unless the treble is below it. All the dodging and all the place making are at backstroke.

In detail the work of a single bell is as follows (we follow the path of the Third in the plain course). After having been turned from the front by the treble, the bell hunts straight up behind and lies a whole pull. It is again turned by the treble, hunts down, and makes Thirds place. It hunts up, lies behind, hunts down and makes a second Thirds place. On its way up it passes the treble in 5-6 and turns the bell-in-the-hunt from behind. It then hunts straight through to the front, passing the treble in 2-3, leads full, does a 3-pull dodge in 1-2 up, lies behind and again makes Thirds place. After a whole pull behind it hunts down, passing the treble in 3-4 and does a 3-pull dodge in 1-2 down. It then leads full, the treble turns it, and it is ready to begin the work of the plain course over again. The work takes many words to describe, but once the general plan of the method is grasped it can be taken in at a glance.

The bob, like that of every one of the methods in the group, is the Grandsire bob; but (as in Court and Double Court) with single dodging. It will present no difficulty whatever to the band that has already rung Grandsire, and St. Clement's, and Double Court.

A bob at the first lead end of the course will produce the Wrong. At the second lead end the Seventh is called into the hunt. A bob at the third lead end brings

up the course end (the Right). At the fourth lead end the Seventh is Before. And a bob at the fifth lead end produces the Middle.

Hereward Bob.	London Bob.
1234567	1234567
2135476	2143657
2314567	2416375
3241576	4261357
3425167	4623175
4352617	6432715
3456271	4637251
4365721	6473521
4637512	4637512
6473152	6473152
4671325	4671325
6417235	6417235
6142753	6142753
1624735	1624735
1267453	1267453
2164735	2176543
2617453	2715634
6271435	7251643
6724153	7526134
7642513	5762314
6745231	7563241
etc.	etc.

Hereward Bob is the same as Double Court, but with the Grandsire Thirds place added; and is the same as Double Oxford Bob, but with the Fifths place (made by the bell which is turned from behind by the treble) omitted.

London Bob is the reverse of Hereward Bob. It is the same as Double Oxford Bob with the Grandsire Thirds place omitted.

Hereward Bob is the same as Double Oxford above the treble, and the same as Double Court below the treble.

London Bob is the same as Double Court above the treble, and the same as Double Oxford below the treble.

A competent band, that knows Double Court and Double Oxford and realises these things, will have no difficulty in ringing Hereward Bob and London Bob without much study.

(To be continued.)

LLANDAFF AND MONMOUTH ASSOCIATION.

MEETING AT PENTRE.

A meeting of the Llandaff and Monmouth Association was held at Pentre, Rhondda Valley, on July 29th, when a fair number of ringers mustered from the two dioceses. Service was conducted by the Vicar, the Rev. D. Spencer Jones, and the Rev. T. J. Prichard gave the address. Tea, provided by the local ringers, was served in the Church Hall.

At the business meeting the Vicar presided and welcomed the visitors. Mr. Stitch explained why the Central Council meeting, which had been arranged to be held in London on Whit Monday, was postponed. Various matters were discussed and a number of new members were elected. The next meeting will be held at Usk.

BURBAGE, LEICESTER.—On Sunday, July 16th, 1,260 Grandsire Triples: Jack Veasey 1, Frank Measures 2, Edward Clough 3, William Aldridge 4, William A. Wood 5, Cyril Ison 6, Frank Trotman (conductor) 7, Norman Iliffe 8.

SUTTON-ON-TRENT, NOTTS.—On Wednesday, August 2nd, 720 Bob Minor, with 7-8 covering: Miss K. Burchnell 1, Rev. C. J. Sturton 2, N. Moxon 3, Miss G. Burchnell (conductor) 4, *W. O. Saunders 5, *D. Cheverton 6, F. Foster 7, R. Sleep 8. *First 720 in the method. Rung for the 84th birthday of Mr. N. Moxon.

SEFTON, LANCS.—On Sunday, July 30th, 720 Bob Minor: W. Thorley 1, S. Flint 2, J. Prescott 3, A. Williams 4, J. Lunham 5, R. Guy (conductor) 6.

'THE RINGING WORLD.'

The official Journal of the Central Council of Church Bell Ringers.

President of the Council: EDWIN H. LEWIS, M.A.
 Hon. Secretary of the Council: GEORGE W. FLETCHER.
 Treasurer of 'The Ringing World': A. A. HUGHES, J.P.,
 34, Whitechapel Road, E.1.

All communications for this journal should be addressed to:—

The Editor,
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'The Ringing World' is sent direct by post from the office for 4s. 3d. per quarter payable in advance, but for the time being, owing to paper shortage, new orders cannot be accepted. We shall be obliged if subscribers will send their payments to Mr. G. W. Fletcher, 3a, King's Road, Bramhope, near Leeds, Yorks.

Cheques and remittances should be made payable to 'The Ringing World.'

HENRY THOMAS ELLACOMBE.

To the Editor.

Dear Sir,—I was very interested in this article in your current issue. My father, who knew Ellacombe, used to tell me about his work in Devonshire. The Rev. Charles Pearson, also a ringing clergyman near Exeter, published a book 55 years ago entitled 'The Ringers' Guide to the Church Bells of Devon,' and much of the data collected by Ellacombe is given in this volume. Mr. Ellacombe obtained information concerning the condition of Devonshire bells from four groups as follows: A (good order), B (bad order), C (clean), D (dirty). It is sad to relate that 175 cases came under headings B and D, quite different to the present state in the county to-day.

I remember seeing Ellacombe chiming apparatus parts when I was a boy, for my father installed many sets in various parts of England. My uncle, Mr. Edwin Shepherd, now 82, and still living at Exeter, would doubtless remember Mr. Ellacombe in his later years.

W. SHEPHERD.

22, Chapel Grove, Addlestone, Surrey.

ALPHABET BELLS.

To the Editor.

Dear Sir,—The whole alphabet, or more often a portion of it, is not infrequently met with as a bell inscription, from the 14th or 15th to the 17th century. The letters are often in reversed order or otherwise misplaced, and are mostly placed in groups of three, four or five letters spread out with intervening spaces or bits of ornament such as fleur-de-lys, grotesque animals or foliage.

Many such 'alphabet bells' are scattered all over the Midland Counties of Warwickshire, Northamptonshire, Bedfordshire, Lincolnshire, Rutland and Leicestershire. These mostly came from the Leicester foundries of the Newcombes and Watts (c. 1560-1642). In Leicestershire we have examples undated at Beeby (2), Bruntingthorpe, Dalby Magna, Edmonthorpe, Hoby, Horninghold, Ilston-on-Hill, North Kilworth, Peatling Magna, Queniborough, Scraptoft, Shearsby, Sheepy Magna, Swinford, Tugby and Welby.

Of dated 'alphabet bells' there are examples at Barrow-on-Soar 1642, Cosby 1612, Fleckney 1604, Husbands Bosworth 1611, Lowesby 1613, Lutterworth (2) 1604, Narborough 1640, Rearsby 1607, Rotherby 1611, Skeffington (3) 1610-12. The most interesting, however, is one at Thurlaston, and Ellacombe gives a most learned attempt to decipher this in Greek in his 'Miscellaneous Scraps' supplement to the 'Church Bells of Devonshire,' but even here (which he says is the correct version) it is quoted wrongly. The bell is thus inscribed:—
 + DECBA + REDCBA + FEDCBA + FEDCBA + R
 and fleur-de-lys thrice. It is actually an Early Newcombe casting c. 1570.

Other alphabet bells are at Side, Gloucestershire; Bemerton, Wiltshire; Partington, Yorkshire; Elford, Staffordshire; Eltisley, Cambridgeshire; Bloxham, Oxfordshire, and a few in Devon.

ERNEST MORRIS.

Leicester.

THE J. D. & C. M. 'CAMPANALOGIA.'

(Continued from page 327.)

In the earliest systems every change (with certain definite exceptions) was made by the treble changing positions with one of the bells immediately next to it. The exceptions were changes made by the two bells furthest from the treble, and these changes naturally were called 'extremes.' These extremes were sometimes called by the ringer of the half hunt (by saying 'Extreme') and so the term came to be used of any special movement of the bells. The word 'bob' originally was used in much the same sense as the word 'dodge,' and the origins of the two are practically the same. In ordinary speech a dodge meant a rapid movement backwards and forwards, and to bob meant to move rapidly up and down. Duckworth, in the 'Tintinnalogia,' says that in Grand-sire Doubles there are two sorts of bobs, a single and a double, which correspond to the modern plain and bobbed leads; but to him they were equally part of the method and neither was called. J.D. and C.M. say that 'the word extream we must confess is the most proper signification, but now there is, and for some time has been, a word called bob instead of extream; upon what account the word was changed we know not; yet, nevertheless, for fashion's sake, we advise every one to use it.' This is an excellent example of how we got our ringing terms.

A 'single' meant a single change (i.e. a change in which only two bells changed position) and it was long before the term was applied to any special call used to turn the nature of the rows. In the same way a 'double' was a double change, and it was some time before every five-bell method was called Doubles, and every seven-bell method Triples. In the earliest days we have 'Singles and Doubles on four bells,' 'Doubles and Triples on six,' and so on. One of Stedman's six-bell methods is called College Doubles, and one of his eight-bell methods College Tripples. Minor, as the general sub-title of all six-bell methods, does not appear in the 1702 'Campanalogia,' and Major as the sub-title of all eight-bell methods dates from the early years of the eighteenth century. Royal and Maximus are a little later. Both probably were introduced by the College Youths, and the first use of the title 'Maximus' seems to have been in connection with the peal of Plain Twelve in rung by that society in 1725. The extant record of the performance dates from twenty or thirty years later.

The use of the word Bob as part of the title of a method grew up in early times and is quite distinct from the use of the word as a call. Both usages came from the same original meaning, i.e., as the equivalent of dodge; for what chiefly distinguishes one method from another is the amount and position of the dodging, and the word Bob was used (in titles) as meaning much the same thing as method; Grandsire Bob was the Grandsire method, Oxford Bob the Oxford method, Court Bob the Court method, and so on. It would be a mistake to suppose that early ringers used the word to distinguish one sort of method from another, or to see in early usage anything of modern classification.

There was one early term, which, although now obsolete, might still occasionally be very useful. Any deviation from the strict method, made to produce results not otherwise attainable, was called an 'alteration.' The term covers all special calls like Holt's Singles, and the

various forms of Doubles used in the early peals of Stedman Triples, all irregular goings-off such as were often employed in Grandsire Caters and Cinques, and home-comings as in Lockwood's 9,120 of Treble Bob Major.

The J.D. and C.M. 'Campanalogia' was financially a success, the issue was quickly sold out and three years later Sawbridge published a second edition. The first edition is now very rare. The second edition is an exact copy of the first except for the title page, mistakes and printer's errors being copied. The title page reads as follows:—'The Second Edition. Corrected. London. Printed for G.S. and sold by Henry Green at the Sun and Bible on London Bridge, 1705.' The usual custom of the time was for authors to sell the copyright of their books outright, and it is not likely that J.D. or C.M. had any interest in this or any of the three other editions which subsequently appeared.

'The Third Edition. Corrected. London. Printed for A. Bettesworth and C. Hitch at the Red Lion in Paternoster Row MDCC XXXIII.' This is merely a reprint of the second edition; but, owing to the spacing of the letterpress, it contains one leaf more. Concerning this edition Thomas Hearne wrote in his Diary under the date Tuesday, July 9th, 1734: 'Anno 1733 came out in London a little book in 12's, being the third edition of Campanalogia or the Art of Ringing. One Annables is now putting out a new edition of the same book which 'tis said will be the best of its kind that ever yet was printed on that subject. The said Annables is one of the London ringers that rung at Oxford at Whitsuntide in 1733. He rang the 9th, and is judged to understand ringing as well as, if not better, than any man in the world.'

Annable's edition did not appear, but one of the drafts he made of it is now in the British Museum. So far as seven-bell ringing and that on the higher numbers are concerned, there is an immense advance on the earlier book; but Annable did not understand five-bell composition as Stedman did, nor six-bell composition as Doleman and Patrick did, nor is there any reason to suppose that he had the literary skill necessary to write the letterpress. The existing manuscript was a preliminary to another book which has disappeared and may have been the finished work as handed to the publisher; but, if so, some hitch occurred, and it was not until twenty years later, three years before he died, that the next 'Campanalogia' appeared.

'The Fourth Edition. Corrected. London: Printed for C. Hitch and L. Hawes in Pater-noster-Row; and J. Hodges, near London Bridge, MDCC LIII.' This contains twelve pages more than the third edition and some attempt is made to bring it up to date. The first part of the book is reproduced unaltered, but the remarks about the whole peal of Grandsire Triples are dropped. Several touches of Plain Bob and College Single Triples are given and Annable's peals in the two methods, as well as Robert Baldwin's method and peal of Union Triples. On eight bells the methods are Bob Major, with touches up to 1,680 changes, and Annable's three-part peal; Treble Bob Eight, commonly called Union Bob, with the original 5,120; Bob Major Double with a brief note that peals of Plain Bob Major will apply; and College Single. The old crude peals of Grandsire Caters are reproduced unaltered and ten bell ringing is dismissed in a short paragraph.

There certainly was some improvement, but when we consider that by the time the edition appeared the work as composer and ringer of both Benjamin Annable and John Holt was virtually completed, that peals of Royal, Cinques and Maximus had been accomplished, and fifteen thousand changes had been rung on eight bells—we can hardly praise the man (whoever he was) who acted as editor.

'The fifth edition. Corrected by J. Monk. Printed for L. Hawes, W. Clarke and R. Collins; and S. Crowder in Paternoster Row MDCCCLXVI.' This is a reprint of the fourth edition, but College Exercise Major and Cambridge Surprise Major are added. The latter, however, is Annable's defective extension of the six-bell method, in which the only places made in the second section are firsts and seconds. Concerning it Monk wrote, 'The ingenious performer, having rung the foregoing peals, will need no other directions for ringing the following intricate peal than to carefully peruse it as it is pricked down, and he will be the best judge which method to take in order to ring it.' Joseph Monk was, during many years, one of the foremost members of the London Exercise, and had as good an opportunity as anyone of knowing the state and progress of change ringing at the time. It is probable, however, that he had not a free hand and was employed by the publishers merely to supply a few new items to give the book an appearance of being up-to-date which was not really warranted.

The five editions of the 'Campanalogia' were widely dispersed among the ringers of England and supplied the standard text book for many years even after the appearance of the 'Clavis' had rendered obsolete almost everything in them beyond six-bell methods. It must, however, be remembered that eight-bell towers were still rare and five-bell ringing was much more widely practised than it is now. The number of copies still existing is considerable. Many are in private hands and the ringing libraries are generally well supplied. The British Museum owns a perfect copy of each of the first four editions, including the copy of the first edition which belonged to John Patrick, who assisted the authors, and which contains his marginal notes. The Cambridge University Library also has a copy of the first edition. This came from William Carter Pearson's collection.

In 1887 'The Bell News' published a reprint of the last edition. (Concluded.)

MIDLAND COUNTIES ASSOCIATION.

MEETING AT HINCKLEY.

A meeting of the Hinckley District of the Midland Counties Association, held at Hinckley on July 29th, was attended by about 50 members, friends and ringers from H.M. Forces. Touches in various methods were rung on the tower bells during the afternoon and evening.

Tea was followed by the business meeting, at which Mr. H. Bird (chairman) presided. A discussion took place on the suggested scheme for the decentralisation of the association, some members speaking in favour and some against. On one point all agreed; no alteration should take place until the members at present in H.M. Forces are able to have their say in the matter.

It was decided to hold a meeting at Market Bosworth and Deasford on August 12th, at Broughton Astley on August 26th, and at Barwell on September 9th.

Thanks were given to the Rector and the local ringers.

HARSTON, CAMBS.—On Saturday, July 29th, 720 Bob Minor: *M. R. D. Harford 1, J. Green 2, *S. E. Darmon 3, G. Easy 4, G. Dodds 5, C. W. Cook (conductor) 6. *First 720. Also 720 Oxford Bob Minor: J. Green 1, B. Dean 2, C. W. Cook (conductor) 3, *G. Easy 4, *G. Dodds 5, A. Hurst 6. *First 720 in the method.

GRAPHICAL REPRESENTATION OF MINOR METHODS.

By BRIAN D. PRICE.
THE ICOSAHEDRON.

The icosahedron is a geometrical solid, with 20 faces, each an equilateral triangle, grouped in fives around the vertices. It has 20 faces, 12 vertices and 30 edges. For change-ringing purposes it is identical with the dodecahedron that Thompson used, faces of one corresponding to vertices of the other. The icosahedron is easier to make and use.

THE REPRESENTATION.

The even permutations of five figures can be placed symmetrically on the icosahedron. There are 60 such, and each face has 3, one in each corner. The reason why this can be done is interesting but advanced mathematically, and we must take its truth for granted. An illustration will make the word 'symmetrical' clear. If we have two pairs of permutations with the same transposition in each pair, then each pair is situated with the same relation of position between its members. Thus, any fixed transposition when written as an arrow on the icosahedron from the permutation to its resultant will give the same sort of arrow on the figure whatever permutation with which we commence. There is, however, more than one such representation, for if we start with any one and replace each permutation by another, got by the same transposition for each of the 60, then each of the resulting permutations must be all different also, and will moreover have the same symmetrical property. We may speak of this process as a modulation from one representation to another.

GRAPHICAL USE.

We think of each permutation as an even (positive or in-course) lead end (hereafter abbreviated to L). Thus, for any Minor method, all 60 even L's are placed on the solid. Take any L, and transpose it according to a resulting plain lead, say L'. Then, L to L' involves the same change of position whatever L we start with. Join up all the L's by a red arrow to its resulting L'. We have now 12 red circles, each being a P-block of (usually) 5 L's. We here meet a marvellous property of the representation.

Any 5 L's connected by the cycle of a 5-fold transposition lie at the corners of a pentagon, and have 5-fold symmetry about an axis of the solid through 2 opposite vertices. These 6 axes are the only axes of 5-fold symmetry possessed by the solid. Thus our P-blocks will lie in 6 pairs, each pair around one of the 6 axes.

Any 3-fold transposition exhibits 3-fold symmetry about an axis through the centres of a pair of opposite faces. There are 10 such axes. Now any 3-fold transposition between even L's must have 2 figures at rest, and the other 3 rotation cyclically. Another marvellous property of our representation is revealed; for any 3-fold transposition which exhibits symmetry about the same 3-fold axis has the same pair of figures lying still. We may, in fact, name this axis by the pair. We may further christen each face thus—examine the 3 leads on any face, and christen that face by the two figures which remain in their places, and in the order they occur; thus, say the 3 and 4 axis will be through faces 34 and 43. We have thus also a symmetrical representation of the 20 pairs out of 5 figures. Two faces ab and cd will be next door if the permutation abcd is even.

Now, do the same for the operation of Bob—join every L by a green arrow to the L resulting from it by a Bob. We will now have either 20 B-groups about each face, and being symmetrical in pairs about the 10 axes of 3-fold symmetry, in the case of Bob being 3-fold (e.g. Bob Minor); or else 12 B-groups one around each corner, and in pairs about the 6 axes of 5-fold symmetry, if the operation of Bob is 5-fold (e.g. in Cambridge Surprise Minor). We thus have complete symmetry.

FALSE L's.

Any Minor method has in general one false L to each L, being the first Treble Lead at the end of the Lead. Write out two leads joined by a plain, (i.e. no Bob), underline the two false leads, and turn the whole upside down. We now have two leads joined by a plain, but with the former false leads as leads, and the leads as false leads: if we write the false lead end of L as T(L) then we may say,

if L gives L' by plain (or bob)
then T(L') gives T(L) by plain (or bob).

This means that if we have any true touch, by turning it upside down we have another true touch, with the same changes, with the former leadends as false leadends, and vice versa, and moreover with the reverse calling.

All this gives us a useful tip. When we represent a method it is convenient to place each L and T(L) diametrically opposite each other (i.e. on opposite faces, opposite corners). If now we choose a touch, and trace it on the diagram we drew, following red arrows for plains and green ones for bobs, we will have a graphical route, including as railway stations as L', and moreover on the opposite side of the solid there will now be in latent existence an *image route* being the touch got by turning the existing one upside down, and so called by me because it has the reverse calling, and is consequently a mirror image of the former one. If we have a 360 of minor plain method (i.e. all the even L's joined by bobs) or a 720 of Minor Treble Bob, we will

have 30 leads in a touch, and also an image route of the other 30 L's being a mirror image of the former route, and the two together using every available L. (Thompson's Q-set rule tells us, of course, that we can only have an even number of routes which together use up all L's.)

Q-SETS.

Minor Q-sets have in general 3 members. For a bob usually leaves 2 bells alone, and thus the transposition between members is 3-fold. Thus, each Q-set belongs to a face, the 20 Q-sets coming in pairs on the 10 axes of 3-fold symmetry. Now, provided that the L and T(L) are opposite, as mentioned above, a pair of Q-sets on one of the axes will contain in one a set of L's and in the other the corresponding T(L)'s. Thus a simple condition for the search for true blocks of 30 L's complete with image route is that Q-sets are bobbed in pairs on the 10 axes of symmetry. It is not true to assume without investigation that any touch may be got in this way, but certainly every touch with 30 true leads is, and moreover any touch produced in this way must be true, for the T(L) of any L and the L itself belong to different routes which are mutual images. In fact, arbitrary bobbing of these pairs of Q-sets produces an even number of round blocks which fall into pairs, each pair being the mutual relation route and image route. In our systematic search in a given method for true routes of 30 leads (i.e. 720's of Treble Bob or 360's of plain, to be joined by 2 singles) we may use only a table of representative groups of Q-set pairs, including every possible pair configuration. The number of these is not large, in fact is 44 (I believe), many of which are obviously fruitless.

NUMBER PAIRS BOBBED

	None bobbed	Total
0.	1	1
1.	One pair bobbed	1
2	23 45 or 23 36	2
3.	64 52 65 64 52 43 64 52 26 52 65 26 52 65 54	5
4.	23 24 25 26 23 24 53 54 23 45 42 56 23 45 42 34 23 45 42 62 23 45 56 62 23 45 56 25 23 45 56 46	8
5a.	63 34 42 25 56 63 25 34 56 35 63 34 25 56 64 63 25 34 56 23 63 25 34 23 35	5
		22

The other classes, 5b, 6, 7, 8, 9, 10, are obtained by bobbing instead of plaining and vice versa, classes 5a, 4, 3, 2, 1, 0. That is, 44 in all. To use this table, start off with 23456 (for if we have two true routes of 30 each, 23456 is bound to be in one), and, starting from this, we continue to write out a touch as directed by the particular set in the table we are testing. For the method we choose, we examine the three generating L's of a Q-set, e.g., in Bob Minor, 23456, 35426, 52436, and notice where the two recurring figures are. These—here 4 and 6—will be the name of the axis of symmetry that this Q-set and its opposite number are situated on. Hence when we come to a lead with the 3rd and 5th numbers as members of a pair we have to bob, we bob the next lead. Example on right, where the Q-sets 52, 65, 54 are to be bobbed. Thus if 2 and 5, or 5 and 6, or 4 and 5 occur in the 3rd and 5th positions, we bob the next lead. This leads us to a 360, in fact the 'old Chestnut' calling, wrong right wrong 3 times, which is even mentioned in the first edition of Stedman's 'Tintinnalogia.' Of course, if our touch ends short of 30 leads, then the particular Q-set arrangement we are testing does not bear the fruit of two true 360's. We have only to test the 44 configurations to get all the possible 360's without singles, or in the case of Treble Bob Methods, all possible 720's. Do not forget that each fruitful arrangement gives two fruit, with mutually reverse calling. Of course, with different methods, the position of the critical figures (here 3rd and 5th) may be different, but the 44 arrangements are always valid for 3-fold Q-sets (in Cambridge it is 1st and 3rd).

65 AT BACKSTROKE.

We distinguish all L's giving rise to 65 at backstroke, by e.g. red circles around the L's, and when we have a desired touch we try to fit it in on the solid so that the 65's are not used.

Practical details.—Which of the possible modulations we use depends on three factors, placed here in relative order of importance:—

1. L and T(L) diametrically opposite.
2. P-groups kept neatly one around each vertex, occupying the five corners immediately around.
3. Corresponding to the 4 possible ways of placing 5 members of a P-group around a vertex, with condition 1 this determines the geographical meaning of the Bob transposition. The one is selected which gives the neatest figure, and consequently in appealing to the eye is the clearest to use.

BLETCHLEY, BUCKS. — On Sunday, July 30th, 1.260 Grandshire Triples: *W. R. Loveridge 1, A. Crane 2, W. Fay 3, *W. Daniells 4, H. Sear (conductor) 5, F. Sear 6, W. Sear 7, H. Pearson 8. *First quarter-peal.

NOTICES.

THE CHARGE FOR ONE INSERTION of a notice of a meeting is 2s. Other insertions are at the rate of 1s. each. Altered notices count as new notices.

All lines exceeding six in any one insertion are charged at the rate of 4d. per line.

The charge for notices other than of meetings is 2s. 6d. for each insertion.

NOTICES must be received NOT LATER THAN MONDAY.

ANCIENT SOCIETY OF COLLEGE YOUTHS.—Meeting at Bell Foundry, Whitechapel, Saturday, Aug. 12th, 3 p.m.—A. B. Peck, 1, Eversfield Road, Reigate.

OXFORD DIOCESAN GUILD.—Reading Branch.—Monthly practice meeting at Shiplake on Saturday, Aug. 12th. Bells (8) from 6 p.m. to 9 p.m.—E. G. Foster, Hon. Sec. and Treasurer, 401, London Road, Reading.

LINCOLN DIOCESAN GUILD.—Eastern Branch.—Meeting at Sutterton, Saturday, Aug. 12th. Bells (8) 2.30 p.m. Service 4.15. Tea 5 p.m.—W. E. Clarke, 99, Norfolk Street, Boston, Lincs.

HERTFORD COUNTY ASSOCIATION.—Northern District.—Meeting at Knebworth, Saturday, Aug. 12th, 3 p.m. Service 4.30. Tea 5 p.m.

MIDLAND COUNTIES ASSOCIATION.—Loughborough and Burton Districts.—Meeting at Ashby-de-la-Zouch Parish Church on Saturday, Aug. 12th, 3 p.m. Tea 4.30.—A. E. Rowley and J. W. Cotton, Hon. Secs.

WINCHESTER AND PORTSMOUTH DIOCESAN GUILD.—Portsmouth District.—Quarterly meeting at Alverstoke, Gosport, Saturday, Aug. 12th, 2.30. Service 4 p.m. Tea at 4.30.—R. J. Stone, 16, Penhale Road, Fratton, Portsmouth.

MIDLAND COUNTIES ASSOCIATION.—Leicester District.—Meeting at Ashby Folville on Aug. 12th. Bells (8) 3 p.m. Bring food. Cups of tea provided. Business in belfry.—R. Barrow, 10, East Road, Birstall.

MIDLAND COUNTIES ASSOCIATION.—Hinckley District.—Meeting at Market Bosworth, Saturday, Aug. 12th, 3.30 to 5 p.m., and at Desford from 7 p.m. onwards. Bring own food. It may be possible to provide cups of tea.—W. A. Wood, Dis. Sec.

MIDDLESEX COUNTY ASSOCIATION.—Scuth and West District.—Meeting at Harmondsworth (bus from Hounslow West), Saturday, Aug. 12th, 3 p.m. It is hoped to provide cups of tea in the Vicarage Hall.—J. E. Lewis Cockey. Per. 5320.

LANCASHIRE ASSOCIATION.—Furness and Lake District Branch.—Practice meeting at Broughton-in-Furness (8 bells) on Saturday, Aug. 12th, 2.30 p.m.

HERTFORD COUNTY ASSOCIATION.—Western District.—Meeting at Flamstead, Saturday, Aug. 12th. Bells (6) 3 p.m. Usual arrangements.—W. Ayre, Leverstock Green.

WARWICKSHIRE GUILD.—Next meeting at Berkswell, near Coventry, Saturday, Aug. 19th. Bells (6) 3 p.m. Tea, 5 p.m., at The Cafe, Berkswell.—D. E. Beamish, 21, Gipsy Lane, Nuneaton.

EAST GRINSTEAD GUILD.—Meeting at Balcombe, Aug. 19th. Bells (8) from 3 p.m. Tea for those who advise Mr. A. Lake, 4, Barnfield Cottages, Balcombe, Haywards Heath, by Aug. 16th.—C. A. Bassett, Hon. Sec.

EAST DERBYSHIRE AND NOTTS ASSOCIATION.—Meeting at Heath, Saturday, Aug. 19th, 3 p.m. Tea 5 p.m. Names to Mr. T. Jennings, 14, Cambridge Crescent, Bramley Vale, Chesterfield, by Aug. 16th.

HERTFORD COUNTY ASSOCIATION.—St. Albans District.—Meeting at Northaw, Aug. 19th, 3 p.m. Bring food; cups of tea provided.—R. Darvill, 23, Elm Drive, St. Albans.

DURHAM AND NEWCASTLE DIOCESAN ASSOCIATION.—Eastern District.—Meeting at Gateshead St. Mary's, Saturday, Aug. 19th. Bells (8) 2.30 p.m. Bring food; cups of tea provided.—Frank Ainsley, 30, Aysgarth Avenue, Grangetown, Sunderland.

LANCASHIRE ASSOCIATION.—Manchester Branch.—Meeting at St. Mary's, Prestwich, Saturday, Aug. 19th, 3.30 p.m.—Frank Reynolds, 180, St. Ann's Road, Prestwich.

BATH AND WELLS DIOCESAN ASSOCIATION.—Chew Deanery.—Meeting at Portbury, Saturday, Aug. 19th, 4.30 p.m.—Percy G. Yeo, Long Ashton.

NORTH STAFFORDSHIRE ASSOCIATION.—Meeting at Cheddleton (6 bells), Saturday, Aug. 19th. Names to Mr. H. Sutton, 22, The Avenue, Cheddleton, Leek, Staffs, by Aug. 15th.—Andrew Thompson.

ST. MARTIN'S GUILD FOR THE DIOCESE OF BIRMINGHAM.—Meeting at the Parish Church, Sutton Coldfield, on Saturday, Aug. 19th, 3.30. Tea 5 p.m. Names to Mr. W. Anker, 4, Florence Avenue, Florence Road, Sutton Coldfield, by Aug. 16th.—T. H. Reeves, Hon. Sec.

BATH AND WELLS DIOCESAN ASSOCIATION.—Ilchester Deanery Branch.—Meeting at East Coker, Aug. 26th. Service 4.30 p.m. Tea and meeting to follow. Notify early for tea.—F. Farrant, Martock.

KENT COUNTY ASSOCIATION.**MEETING AT ROCHESTER.**

A meeting of the Rochester District of the Kent County Association, held at Rochester on July 29th, was attended by nearly sixty members and friends.

The ten bells of the Cathedral were rung for an hour before evening, which was attended by the majority of the ringers. Tea, provided by the association, was in the City Cafe, and among those present were the Dean of Rochester, the Archdeacon and the Vicar of Gillingham.

The Dean presided at the business meeting. Mr. W. Spice, sen., and Mr. E. A. G. Allen, district representatives, and Mr. G. H. Spice, hon. district secretary, were re-elected, and eleven new members, including seven from Minster, Sheppey, were elected.

It was decided to hold the next district meeting at Rainham in the late autumn.

After the meeting, bells of the Cathedral, Frindsbury and Rainham were available. The methods included Grand sire and Stedman Caters, Kent Treble Bob Royal, Cambridge Surprise Major and rounds.

A large number of young and keen recruits were present, for most of whom it was their first meeting.

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