

THE BELL NEWS

AND RINGERS' RECORD:

A JOURNAL OF THE RINGING EXERCISE; AND COMPENDIUM OF
INFORMATION FOR THE CLERGY & CHURCHWARDENS.

No. 8.—VOL. I.

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[ONE PENNY.]

ON A RING OF BELLS IN PERFECT TUNE.

BY THE REV. C. D. P. DAVIES.

The last division of the subject now claims our attention.

Before turning to it, however, I would express a hope that, in what has preceded, I have been enabled to give my readers, with some approach to clearness, an explanation of the following points:—(a) the true relation of the notes in a perfect major and minor scale comprised within the compass of an octave, that is, of a ring of eight bells; (b) the extension of this to the case of twelve or more bells; and (c) the impossibility of obtaining this relation perfect in all keys on an instrument with fixed notes.

Lastly, then, we come to the consideration of some of the methods by which the constituents of a ring of bells may be brought into correct tune with each other.

This condition, as was remarked at the commencement, may be, theoretically speaking, exactly fulfilled, and should practically be so to the utmost extent to which modern scientific appliances can reduce it. In a ring of bells all the notes are fixed ones; the whole ring may therefore, when seen in that light, be regarded as an imperfect instrument. But a further consideration will convince us that this is not the case. Take any note in a piano: the position of this note in a scale will be different, according to the key in which the scale is being played; that is, one note has to do duty in several places, and has to be made to suit its mean or average place. But in a ring of bells there is but one scale and one key, and each note has to do duty in one position only; therefore its value should be such as exactly to suit that position, that is, the number of its vibrations should be in exact proportion to that of the other bells, according to the fractions before given, which is equivalent to saying that a ring of bells, as far as it goes, forms a perfect musical instrument.

We can never, however, be safe in asserting that any given ring is of this kind, if, in tuning it, we trust to ear only. We must have recourse to scientific instruments for *counting the vibrations*.

The chief of these, four in number, I will now attempt to describe.

FIRST.—*Savart's apparatus*: so called from the name of its inventor. In this there is a tolerably large toothed wheel, which can be moved with any desired velocity. A card, or other membrane, is fixed in such a manner, that the teeth of the wheel, in revolving, strike against it, and cause it to vibrate. The card, being struck by each tooth, makes as many vibrations as there are teeth. Attached to the wheel there is an indicator, which gives the number of revolutions of the wheel, and consequently the number of vibrations in a given time.

But this instrument is of little value, for, in order to count the vibrations of a given sound, the apparatus must be brought into exact agreement with it, and we have only the ear to inform us when this result is obtained: but then the ear is the very element we wish to eliminate, as being inexact, and unscientific.

SECOND.—*The Syren*: a name given to it by its inventor, Cagniard Latour. To give a description of its parts would occupy more time and space than we have at command. I shall therefore merely attempt to describe the principle on which it acts. There are two brazen discs or plates, pierced with the same number of equal equi-distant holes. These two plates are close together and one above the other, the lower fixed, the upper revolving. The holes are pierced at such an angle, that a current of air, in passing first through the holes in the lower, and then through those in the upper, causes the latter to revolve. By this means the current of air is alternately opened and closed. When this takes place with sufficient rapidity a sound is produced. The number of holes being known, and an indicator affixed to the upper disc shewing the number of its revolutions in a given time, the number of vibrations per second of the sound may be easily calculated. By increasing or lessening the force of the current of air, the sound may be sharpened or flattened at pleasure, and may be brought into agreement with another sound, whose vibrations we desire to measure; or, reversing the process, having caused the syren to emit a certain number of vibrations per second, another body may be tuned so as to be in unison with it. But the use of this instrument lies

open to precisely the same objection as that to Savart's apparatus, namely that it depends upon the ear.

THIRD.—*Duhamel's Graphic Method*: This consists in fixing a fine point to the body emitting the sound, and causing it to trace the vibrations on a properly prepared surface. The apparatus consists of a wood or metal cylinder fixed to an axis, and turned by a handle. One end of the axis is a screw working in a fixed nut, so that, according as the handle is worked backwards or forwards, the cylinder in revolving proceeds in one direction or another parallel to its axis. Round the cylinder is rolled a sheet of paper covered with an inadhensive film of lampblack. On this film the vibrations register themselves. This is effected as follows. The body emitting the note, suppose either a tuning fork or a bell, carries a fine point which grazes the surface of the cylinder. If the body is made to vibrate, and the cylinder is at rest, the point would describe a short line; but if the cylinder is turned, the point produces an *undulating trace*, containing as many undulations as the point has made vibrations. Consequently the number of vibrations can be counted. Now, in bringing one bell into tune with another, it is not necessary to know the *actual* number of vibrations which they make in a given time, but only the *relative* number, that is the number emitted by one during the time that any given number is emitted by the other. The two may be most suitably compared by comparing each separately with some fixed standard. The most natural standard is a tuning fork. For effecting this let us employ Duhamel's method.

One prong of a tuning fork is furnished with a point, and the lip of a bell, suppose the tenor of eight, is treated in the same manner. The two points are now brought into contact with the lamp-black. The bell and the fork are set vibrating together, and each produces its own undulating trace. When the paper is unrolled the vibrations of both may be counted. Count any number of vibrations of the tuning fork, say 1000, then count the number yielded by the bell in the same space; suppose these to be x . Next repeat the whole process taking the seventh instead of the tenor. If this bell is in perfect tune its vibrations will be $\frac{25}{7}x$. For example, if x was found to be 626, then $\frac{25}{7} \times 626$ should be the number yielded by the seventh; and if so, it is in perfect tune; if they are more it is sharp, if fewer flat. Of course it is not necessary always to use the tenor as the base of operations: all the bells should be tried, and the most convenient taken, namely, that one which will cause the fewest alterations in the others, and of the least amount. The great advantage of this plan is that no time-keeper is required, the vibrations of the fork being isochronous, and therefore keeping their own time.

FOURTH.—*M. Léon Scott's Phonautograph*: This beautiful apparatus possesses the great advantage of being able to register the vibrations produced by any noise whatsoever. It consists of an ellipsoidal cask about a foot and a half long, and a foot in its greatest diameter. It is made of plaster of Paris, a substance which has but little tendency to deaden the vibrations of air within it. One end is open, but the other is closed by a solid bottom, to the middle of which is fitted a brass tube, bent at an elbow, and terminated by a ring on which is fixed a flexible membrane, either bladder or very thin indiarubber. A second ring forced on the first, stretches the membrane to the required amount. Near the centre of the membrane fixed by sealing-wax is a very light style, which of course moves with the membrane. The latter must be so arranged that the style is always at a part where the vibrations are at a maximum.

This being the construction, it follows that when a sound is produced near the apparatus, the air in the ellipsoid, the membrane, and the style will vibrate in unison with it; and it only remains to trace on a sensitive surface the vibrations of the style and to fix them. For this purpose a cylinder similar to that used in Duhamel's method is employed. Round the cylinder is wrapped a sheet of paper covered with a thin layer of lamp-black to receive the impression of the vibrations of the style. If now, when a sound is heard, the cylinder be caused to revolve, an undulating line is traced out, each undulation corresponding to a vibration of the style. Consequently the figures thus obtained faithfully denote the number, amplitude, and isochronism of the vibrations. The figures are large if

the sound is loud, small if the sound is weak, stretched out when the sound is low, squeezed together when it is high. When the sound is clear they are free and regular, feeble and irregular when it is confused. It seems, however, that the figures do not represent the whole vibration of the membrane, but only that part of it which takes place in a direction parallel to the axis of the cylinder.

To fix the curves on the blackened paper M. Scott dipped them first into a bath of pure alcohol; and when they were dry, he dipped them into a solution of resin—for instance, sandrach—in alcohol. By this means the lampblack is perfectly fixed. Such is the substance of the account given by Ganot of this delicate instrument.

To discover the actual number of vibrations yielded by any body per second, all that is required is to ascertain the number of revolutions, or fraction of a revolution, performed by the cylinder in a second. The vibrations contained in a corresponding space on the paper will be the number required.

Having thus briefly touched upon the points indicated at the commencement of this article, I would now bring my words to a close. But I cannot do so without venturing to offer a few observations on the subject in general.

It will have been seen that in the present advanced state of the science of acoustics, and with the exact and delicate means at our disposal for the analysis of a musical sound, there can be no valid excuse for the sending forth from the foundry of a ring of bells in incorrect tune. That this has often been the case in the past is, I believe, an indubitable fact; the cause being that the ear of the tuner, and that possibly not very acute or correct, has been the only test to which the tuning has been subjected. In some cases perhaps the organist has been called in to judge the result, and has given it the weight of his favourable opinion.

But the more accustomed a person has become to imperfect instruments, and to the scale of equal temperament, the more "spoiled" is his ear, and the less likely is it to be a good judge of the true scale. If the ear of a musician is at all to be referred to, it should be that of an accomplished performer on such instruments as the violin or trombone, and on such instruments only.

But one of the chief points of this article has been to shew that we may, and most certainly ought, utterly to dispense with the ear. The most acute ear can give a result which at the best is but a guess—a guess more likely to be wrong than right. All guesswork must be entirely eliminated. The only safe foundation is that of mathematical and scientific calculation. For *rule of thumb* must be substituted *rule of three*.

To make sure of this, it would be best for those who have the procuring of the bells to make it part of the agreement between themselves and the founders, that the bells be tuned according to some defined scientific process, such as one of the four above described, preferably one of the two last.

The founders, on their part, should not grudge the spending of time, however long, in bringing bells into correct tune with each other. Indeed, it would be well, if, on the completion of the work, they were to publish a table shewing the effects of the tuning. This might be in three columns: the first giving the number of vibrations per second yielded by the bells when first cast; the second, that after tuning; and the third the theoretically correct number. All fanciful affectation for "maiden" bells should be abandoned. If a bell is not cast in *perfect* tune, it must without more ado be brought into that condition.

It should be borne in mind that a bell once tuned is practically always in tune, at all events for years to come, and therefore amply repays all the toil bestowed upon it.

It has always struck me that much of the beauty of some of our famous rings is owing to the fact that they approach nearer to correct tune than most others—owing, perhaps indeed, more to this than to any excellence of the alloy of which they are formed. Of course this has been matter of chance; let us hope that a day is coming when it may be one of comparative certainty.

We should consider, too, that the bells in the tower bear a great part, I think we may say the principal part, in the formation of the ear of the neighbourhood. Where the bells are out of tune the singing is often out of tune. Indeed, I know a place where one of the bells in the clock quarters is incorrect, and in consequence the quarters may often be heard whistled or sung in the same erroneous manner. When a new ring is cast we cannot be too careful in seeing that all is right.

In fine, it should be remembered that a ring of bells is not a thing of a day. A piano may be tuned for a concert, and tuned again for the next; but with bells far otherwise—once done they are not easily undone; a good ring of bells is a pleasure for life—a veritable *κτῆμα εἰς αἰ*—far indeed from being merely *εἰς τὸ παρ᾿ ἑξῆς ἀκούειν*.

PEALS RUNG BY THE LATE WILLIAM HARRISON.

The following is a list of all the peals known to have been rung by the late WILLIAM HARRISON, of Mottram-in-Longdendale, Cheshire. On some future occasion we hope to present to our readers some further particulars of the ringing career of this well-known composer.

No.	DATE.	CHURCH.	CHANGES.	METHOD.
1	1838, November 4	Mottram	5040	Grandsire Triples, †
2	1840, March 22	"	5120	Kent Treble Bob Major.
3	" August 15	"	5120	"
4	1841, April 4	"	6144	"
5	" August 23	"	5088	"
6	1844, October 14	Ashton	5003	Grandsire Caters.
7	1845, January 4	Pendleton	5088	Kent Treble Bob Major.
8	" July 8	Mottram	5120	"
9	" August 20	Liversedge	5088	"
10	" Sept. 21	Mottram	5280	"
11	" Dec. 15	"	5008	Bob Major. *
12	1846, March 15	"	5088	Kent Treble Bob Major.
13	" November 5	"	5184	"
14	1847, January 2	Halliwel	5050	"
15	" Nov. 6	Mottram	5120	"
16	" 29	"	5920	"
17	" Dec. 31	"	8448	"
18	1849, February 10	"	5040	Bob Major. *
19	" 20	"	5024	Kent Treble Bob Major. *
20	" Nov. 19	"	5024	"
21	1850, January 16	Ashton	5075	Grandsire Caters.
22	" February 9	"	5040	Kent Treble Bob Royal.
23	" April 7	Oldham	5088	Kent Treble Bob Maximus
24	" May 4	Ashton	5000	" Royal.
25	" August 19	Liverpool	5000	"
26	1851, May 19	Mottram	5048	" Major. ‡
27	" August 18	Woolwich	5088	"
28	" Nov. 17	Mottram	5184	"
29	" Dec. 25	"	5088	"
30	1852, January 3	Elland	5280	"
31	" November 7	Mottram	5152	"
32	" December 6	"	5088	"
33	" 11	Liversedge	5056	"
34	1853, January 3	Staleybridge	5088	"
35	" April 18	Hyde	5088	"
36	" 25	Staleybridge	5088	"
37	1854, Sept. 11	Hyde	5040	Bob Major. *
38	" Nov. 11	Eccles	5056	Kent Treble Bob Major.
39	" Dec. 9	Hyde	5040	Grandsire Triples.
40	" 23	Staleybridge	5040	"
41	1855, January 13	Hyde	5040	"
42	" Feb. 19	"	5040	"
43	" April 10	Earlsheaton	5088	Kent Treble Bob Major.
44	" May 13	Hyde	5040	Grandsire Triples.
45	" July 16	Prestbury	5040	"
46	" August 18	Mottram	5048	"
47	" September 1	Glossop	5040	"
48	" 9	Hyde	5040	"
49	" December 1	Staleybridge	5088	Kent Treble Bob Major.
50	1856, January 12	Hyde	5023	Grandsire Major.
51	" February 9	Glossop	5656	Kent Treble Bob Major.
52	" March 24	Hyde	9600	Grandsire Major.
53	" May 31	"	5088	Kent Treble Bob Major. *
54	" June 2	"	5040	Grandsire Major.
55	" 14	Staleybridge	5184	Kent Treble Bob Major.
56	" 21	Hyde	5040	Grandsire Triples.
57	" July 5	"	5024	Kent Treble Bob Major.
58	1857, January 3	Earlsheaton	5056	"
59	" Feb. 15	Oldham	5015	Grandsire Cinques.
60	" March 2	Hyde	5040	" Triples.
61	" 8	Staleywood	5088	Kent Treble Bob Major. *
62	" April 25	Glossop	5280	"
63	" July 6	"	5248	"
64	" Sept. 15	Hyde	5184	"
65	" Nov. 24	"	6080	"
66	1858, March 20	Ashton	5120	Kent Treble Bob Royal.
67	" 29	Hyde	5040	Stedman Triples. *
68	" April 20	Staleybridge	5088	Kent Treble Bob Major. *
69	" June 1	"	5088	"
70	" Sept. 11	Glossop	5280	"
71	" Nov. 13	"	5088	"
72	1859, February 7	Hyde	5088	"
73	1860, June 23	Ashton	5000	Kent Treble Bob Royal.
74	1862, April 7	Hyde	5248	Kent Treble Bob Major.
75	" October 4	Staleybridge	5280	"
76	1863, April 6	Hyde	5184	"
77	" October 24	Mottram	5376	"
78	1864, April 16	"	5088	"
79	" June 11	"	5120	"
80	1865, Feb. 28	Birch	5088	"
81	" April 17	Mottram	5376	"
82	1866, November 5	Lees	5088	"
83	1871, Dec. 23	Staleybridge	5184	"
84	1873, Nov. 22	Gorton	5088	"
85	1874, Feb. 28	Ashton	5184	"

† Holt's Ten-part. * Conducted. ‡ St. Peter's.

Errata:—

- Page 42, line 10, for $\frac{5}{3} : \frac{5}{4} \div \frac{1}{16}$, read $\frac{5}{3} \div \frac{5}{4} = \frac{1}{16}$.
- Page 49, in the table:
 - The 5th of the Minor Twelve, for $\frac{5}{10}$ read $\frac{5}{11}$.
 - The 5th of the Minor Eight, for $\frac{2}{10}$ read $\frac{2}{11}$.

THE WESTMESTON (Sussex) BELLS.—H. E. Lane, Esq., Churchwarden of Westmeston, writes:—"I have great pleasure in supplementing the account in the last number of THE BELL NEWS relating to our new bells, cast at the Redenhall Foundry, by the announcement that they are most sweet and melodious in tone, and are much admired by all our neighbours."

THE MONTH.

THE ANNUAL FESTIVAL OF THE CITY OF WORCESTER SOCIETY.

The members of this society had their annual excursion on Bank Holiday, August 1st, the spots selected for visiting being Hanbury, Feckenham, and Droitwich—places in the county having each a ring of eight bells; and for the journey a break was chartered to convey the company. At the parish church of Hanbury (the seat of the Vernon family), a quarter peal of Grandsire Triples was rung in 44 mins. T. Owen, 1; J. Hinton, sen., 2; N. Wale, 3; G. Hobbs, 4; H. Wilkes (conductor), 5; G. Cleal, 6; T. Gwynn, 7; T. Malin, 8. Tenor about 16 cwt. At Feckenham several touches of Triples were rung with the bells half-muffled, owing to the funeral of Mr. Wyatt taking place, J. Reynolds, W. Hales, and J. Allen taking part. On the return journey, a halt being made at Droitwich (the well known depot for salt), several touches of Triples were rang at St. Andrews, Mr. A. Hunt, a local ringer, assisting. Tenor about 19 cwt. After this the company returned homeward, the "faithful city" being reached about 10 p.m., and everyone being gratified with their day's holiday.

THE ST. PHILIP'S SOCIETY, BIRMINGHAM.

On Monday, August 1st, the above society paid a visit to King's Norton, Worcestershire, where, by kind permission of the vicar, they rang several musical touches of Grandsire Triples. They afterwards adjourned to the "Bell Inn," where an excellent repast was provided by host Foster. After doing ample justice to the good things provided, they rang some very creditable courses of Caters in hand. During the afternoon eight of the company rang a capital touch of Triples. Several songs and readings were admirably rendered, and the company returned to Birmingham highly pleased with their day's enjoyment.

On Wednesday, August 17th, the first Annual General Meeting of the above society was held, when the accounts and the proceedings of the committee were read and approved. The following resolution was proposed by T. Hodson and seconded by G. Russam: "That this Society most heartily approves of the action of their secretary in regard to their late president, and they wish to express their confidence by re-electing him for the ensuing year." The usual votes of thanks, and the election of officers then took place, and the proceedings terminated.

QUARTERLY MEETING OF THE ROCHDALE AND DISTRICT ASSOCIATION.

On Saturday, August 6th, the quarterly meeting of this Association was held at St. Mary's Church School, Balderston, Mr. A. Hurst, president, in the chair. About thirty members were present at the meeting. After the business was over and the usual votes of thanks to the vicar and churchwardens for the use of the bells and school had been unanimously accorded them, a mixed band rang a touch of Grandsire Triples, containing about 800 changes. The bells, by Messrs. Mears & Stainbank, are a good ring, tenor about 16 cwt., but their "go" is very bad, owing to the steeple being so small, and ringing a thousand changes upon them necessitates great labour, so much so, that after the first band had rung, those that were awaiting their turn for a pull declined the ordeal. The members dined together at the "Royal Oak," and a very pleasant evening was spent. The Rochdale hand-bell ringers placed their splendid peal of hand-bells, 90 in number, at the disposal of the members, and the Todmorden ringers played some splendid selections on them. Altogether this meeting must be considered to be the most successful one the Association has yet held. The next quarterly meeting will take place at St. James's Church, Milnrow, on the 5th of November.

THE YORKSHIRE ASSOCIATION.

At the Beverley meeting in July last it was decided that in default of an invitation elsewhere, the next meeting, on Saturday, October 1st, should be held at the head-quarters, Leeds. Since that time the Tong society have invited the Committee to appoint the meeting to be held at Tong, near Leeds, where they have obtained permission for the use of the six bells in that tower, and also the eight bells in the adjacent tower of St. Paul's, Drighlington. This invitation the Committee unanimously decided to accept. The Tong meeting will be the Annual General Meeting of the Society, at which the election of officers will take place. The retiring officers are as follows:—President, one Vice-President, one Steward, and three Committee-men. Names of candidates for any of these positions must be nominated by a proposer and seconder in writing, and forwarded to the hon. sec. (W. Whitaker, 22, Marsh Lane, Leeds), on or before August 31st. The term of three years for which the head-quarters was fixed at Leeds terminates at the next meeting, and any other town may now be nominated.

OXFORD DIOCESAN GUILD.

On Saturday, August 13th, eight members of the Reading branch of the above Guild visited Great Marlow, Bucks, and rang several good touches of Grandsire Triples, conducted by Mr. William Newell, secretary of the branch. The outing was enjoyed very much, the bells being in first-class order. Our correspondent adds: "If any of our London ringing friends are seeking for a spot where they can ring an easy 5000 and enjoy themselves, Great Marlow is the place."

THE HUBBARD TESTIMONIAL FUND.

SUBSCRIPTIONS RECEIVED.

	£	s.	d.
Chas. A. W. Troyte, Esq., Huntsham Court, Devon	5	0	0
Cambridge University Guild of Change-Ringers	2	6	0
York Minster Society, and the Dean of York	1	11	0
Royal Cumberland Youths Society, London	1	0	0
A Veteran Ringer (aged 91 years)	1	0	0
Headingley St. Michael's Society, near Leeds, Yorkshire	0	13	6
Woodlesford Society, near Leeds, Yorkshire	0	12	6
Great Yarmouth Society, Norfolk	0	12	6
Holbeck Society, near Leeds, Yorkshire	0	11	6
Messrs. Shaw and Son, Bell Founders, Bradford, Yorkshire	0	10	0
Bawtry Society, Yorkshire	0	10	0
Cheltenham Society, Gloucestershire	0	10	0
Mr. William Whitaker, Yorkshire Association, Leeds	0	10	0
Mr. J. W. Snowdon, Yorkshire Association, Leeds	0	10	0
Hull Holy Trinity Society, Yorkshire	0	10	0
Keighley Society, Yorkshire	0	7	0
Rotherham Society, Yorkshire	0	6	6
Hull St. James's Society, Yorkshire	0	6	0
Mr. Robert Tuke, Yorkshire Association, Bradford (1st sub.)	0	5	0
Wolverhampton St. Peter's Society, Staffordshire	0	5	0
Armley Society, near Leeds, Yorkshire	0	5	0
Mr. J. R. Haworth, College Youths, London	0	5	0
Mr. William Banister, Devonport, Devon	0	5	0
Mr. C. H. Hattersley, Yorkshire Association, Rotherham	0	5	0
Mr. G. H. Phillott, Yorkshire Association, Cheltenham	0	2	6
Mr. A. Brearley, Yorkshire Association, Loxley, near Sheffield	0	2	6
Mr. J. Winder, Yorkshire Association, Leeds	0	2	6
Mr. J. Carter, Hockley, Birmingham	0	2	6

£19 6 6

Besides the sums announced above, the following have been promised: Leeds St. Peter's Society, £2 2s., to be paid in four quarterly instalments; Hunslet (Leeds) Society, 10s. per quarter until further notice.

From the week commencing Monday, April 24th, the committee have made Mr. Hubbard an allowance of 5s. per week, the balance of the money being placed in the Post Office Savings Bank. Further subscriptions will be thankfully received.

JASPER W. SNOWDON.

Old Bank Chambers, Leeds, August 29th, 1881.

THE CLOCK AND CHIMES IN THE CLARK TOWN HALL, PAISLEY.—A clock and chimes by Messrs. Gillett and Bland, of Croydon, has lately been erected in the above building, respecting which the *Paisley Express* says:—"The machinery of the town hall clock has been set in motion. The clock strikes the hours upon a bell of 20 cwt., and chimes the four quarters on four other bells (weighing altogether about 3 tons). The chime part of the clock is constructed on Gillett & Bland's improved principle, with moveable steel pins, so that the chimes can be adjusted to the greatest nicety, or changed at any time if required. It is made on the horizontal plan, and contains all the manufacturers' recent improvements, and of which they are the inventors. The bells, which have been cast and tuned in their foundry at Croydon, are of the following notes,—hour-bell, E flat, and the quarter-bells F, B flat, C, and D. The entire cost has been about £1000." The same firm has also been entrusted with the casting of two new bells for the Eddystone lighthouse. They are two tons weight each, and are favourably spoken of.

THE BEACONSFIELD MEMORIAL.—The first instalment of the memorial at Hughenden to the late Earl of Beaconsfield has just been completed by the addition of two bells to the ring of six already in the tower of Hughenden Church. It was desired in setting this memorial on foot to effect among other things, the augmentation of the six bells to eight, and when contributions were invited for these purposes, Mr. Robert Warner, of the firm of Warner and Sons, Bellfounders, offered to give the two bells required. This offer has been gratefully accepted. The two bells are the treble and second, and each has, besides a verse, the following inscription:—"Cast by John Warner and Sons, London, 1881. In memory of Earl Beaconsfield. Presented by Robert Warner, Esq., Bellfounder to Her Majesty Queen Victoria." We congratulate the vicar of Hughenden and his parishioners upon this addition to the old ring, and hope soon to hear of a peal being rung upon the eight bells by a talented company.

MAGAZINES RECEIVED.

THE ANTIQUARY (*Elliot Stock*), maintains its high position among its contemporaries. The papers in the August number seem to be of unusual interest. THE CHURCHMAN, from the same publisher, contains, besides articles on interesting subjects from a churchman's point of view, a brief report of the recent Rochester Diocesan Conference, amongst which we should have been glad to have seen Archdeacon Cheetham's paper given more fully.

THE PRESS NEWS has its usual summary of gossip about everything connected with the printing profession.

All communications respecting advertisements must be addressed to
A. F. Phelps, 12a, Paternoster Row, London, E.C.

Everything for insertion in this Journal, to be addressed "The Editor
of THE BELL NEWS, Walthamstow, London."

J. C. GRANT.—Mr. S. B. Goslin, of the firm of Messrs. Warner & Sons, Cripplegate, will, no doubt, give you the information you seek.

The Bell News.

SEPTEMBER, 1881.

THERE can be no doubt that public interest in the art of change-ringing is greatly increasing; many persons, who but a few years ago looked coldly or with indifference upon it, being now numbered among its most ardent followers and most active patrons. This fact, while it cannot be otherwise than gratifying to the Exercise generally, should also have its effect upon ringers in enlarging the scope and raising the character of their performances. It is especially incumbent upon them that they should learn to discriminate between what is legitimate and what is illegitimate in peal-ringing. A legitimate peal is a *true* peal rung throughout in some *one* regularly constructed and recognised method. Any number of changes, however well they may be rung, if produced by fanciful vagaries and tortuous devices, unrecognised and unpractised by the Exercise generally, would have no claim to be considered or recorded as a *legitimate* peal. Nor is there any real reason why, for the sake of novelty, any such eccentric performances should be attempted, while so many recognised and really excellent methods remain unpractised and virtually ignored. The working of the bells is so varied in different methods, that a company trained in the trick might be called from one method to another without much risk of repeating changes already rung, and it would no doubt be quite possible to construct a peal of considerable length in Major which would be perfectly true so far as the changes are concerned, and into the composition of which several methods might enter, the ringers being called from one method to another by the conductor at the given course-ends. Such a peal might be very good practice for sharpening the wits of a company; but it would not, we imagine, be entitled to general acceptance as a *legitimate* peal, or be allowed to claim a place in the peal-book.

We have been moved to make these remarks by the consideration of a performance by the Ripon Cathedral Society, the details of which will be found in our Records of last month. They appear to have rung a 720 of Treble Bob Minor of a very quaint character in more than one respect. First, it was a mixture of the Kent and Oxford variations. Secondly, this mixture, according to the plan pursued, involved the making of *singles*. Thirdly, a ring of eight bells being available, it was rung with the tenor behind and the second omitted. We are not informed what the music produced was like; that point being, perhaps wisely, left to the imagination of the reader. The performance itself appears to be true, but the manner in which it was produced is surely open to question. The composer seems to have ignored or forgotten the proper and recognised function of the evolution called a *single*, which is to reverse the character of the succeeding changes from *in course* to *out of course*, or *vice versa*, until another single is called, which brings them back to their original character. It is well known to most ringers that in Treble Bob methods *no single* is required, because the changes of each character being equal in number with the Treble in each position, there is no necessity for any reversal. In the Ripon performance the single is deprived of its usual office, being attended with the beautiful result of leaving the character of the changes

exactly as it was before for each position of the Treble. It is even without the solitary merit possessed by Holt's single in Grandsire Triples, of being a useful expedient to meet an emergency. Indeed, the single in this instance, instead of producing any definite result, is itself produced by the change from the Kent to the Oxford variation just previously. It is difficult to see what advantage is gained, or how the true interests of change-ringing are advanced by such queer and needless devices as produced this 720: and it cannot be too well understood that for the purpose of peal-production they are distinctly *illegitimate*, because unnecessary. While we would never disparage a really good and true performance, we feel it is our duty to discourage all attempts of such a mixed and doubtful character as the one in question, and we trust that the Ripon example may not be followed elsewhere. If ringers want novelty, or some relief from the monotony of constant practice at Kent, or Oxford, or Bob Minor, or Grandsire, let them seek it, not by having recourse to bastard methods, but by turning their attention to some of the many true born ones which have too long been left out in the cold. They will thus be advancing their own knowledge and capabilities as ringers, as well as promoting the art itself.

LAVENHAM CHURCH BELLS.

The following communication to the Editor of the *Saturday Magazine*, bearing date October 17th, 1832, has been forwarded to us by a valued correspondent. It would be interesting to know if the income from the "roods of land" bequeathed is still devoted to the purpose intended by the devout benefactor:—

"Observing an excellent article in one of the numbers of this Magazine on the History of Bells, I beg to send you the following account of one of the finest-toned bells in England, if not in Europe. At Lavenham, an obscure little town in Suffolk (once celebrated for the manufacture of blue cloth and hand-spun yarn), stands a noble monument of ancient munificence, ranked among the most beautiful gothic fabrics in the kingdom, both for durability and grandeur. In the steeple of this church is a bell, weighing only 2576 lbs., with such a melodious note as to be universally styled 'The Matchless Tenor'; and *Magna Britannia* (B), treating of Lavenham Bells, says 'The tenor hath such an admirable note, as England has none to compare to it.'

"Its weight, its shape, its size alike admir'd
And tone wherewith each ringer is inspired,
The merry eight with music fill the ear;
Euterpe, too, invites from far and near.
And though in floating all sounds slowly die,
They're quick revived by Echo's sweet reply;
Heard through the woods their soft melodious ring
Inspires the warbling feathered tribe to sing,
Nestling 'mid leaves or skimming o'er the plain,
Distinct to hail each harmonizing strain.

"These charming bells are not heard at a very great distance, on account of the elevated situation of the steeple. Sound is heard farther on plains than on hills, and still farther in valleys than on plains; the reason of which will not be difficult to assign, if it be considered that the higher the sonorous body is the rarer is its medium, consequently the less impulse it receives, the less proper vehicle it is to convey it to a distance.

"Tradition says, that at the time of casting this tenor bell at Lavenham (1625), some rich wool staplers there and other gentlemen in the neighbourhood contributed great quantities of silver, and even gold, to the usual metal, which may, perhaps, account for the vast superiority of its tone. Three roods of land were left to the church by some admirer of ringing for the repair of the bell ropes.

"Judge Hale, Sir Simon De Ewes (one of the most learned antiquaries of his time and Lord of the Manor of Lavenham), and William Cecil (Lord High Treasurer of England), were celebrated bell ringers, and no doubt travelled miles to assist at the rejoicings of village festivals.—CLIO."

NORWICH DIOCESAN ASSOCIATION OF RINGERS.

A committee meeting will be held in St. Andrew's School-room, Post Office Street, Norwich, on Saturday, September 3rd, at 12 o'clock, for the purpose of making arrangements for the Annual Meeting, &c., &c.

G. H. HARRIS, *Hon. Sec.*

THE ROYAL CUMBERLAND SOCIETY, LONDON.

Members belonging to the above society are invited to attend the next meeting, which will be held on Friday, September 2nd, at the "Green Man," St. Martin's Lane, when the annual election of officers will take place.

J. HANNINGTON, *Hon. Sec.*

The Ringers' Record.

*** We beg our correspondents to address all communications for insertion in this Journal as follows:—The Editor of THE BELL NEWS, Walthamstow, London. No other address will reach us.*

THE PROVINCES.

THE YORKSHIRE ASSOCIATION.

OTLEY (Yorks).—On Sunday, August 7th, eight members of the above association rang for morning service at All Saints, 5008 changes of Bob Major, in 2 hrs. 56 mins. E. Tuff (Guiseley), 1; F. Maston (Otley), 2; T. Lockwood (Leeds), 3; D. E. Rhodes (Guiseley), 4; J. Horner (Otley), 5; L. Cawood (Otley), 6; J. Baldwin (Guiseley), 7; J. Barraclough (Otley), 8. Composed by the late W. Garrard of Ipswich, and conducted by J. Barraclough. Tenor 16 cwt.

BROMBOROUGH (Cheshire).—On Saturday, August 13th, the following members of the St. Peter's and St. Nicholas' Societies of Liverpool, visited Bromborough, and rang a true peal of Grandsire Triples, comprising 5040 changes, in 3 hrs. 12 mins. R. Williams, sen., 1; G. Helsby, 2; W. Woodhead, 3; T. Hammond, 4; H. Brooks, 5; R. Williams, jun. (composer and conductor), 6; J. Egerton, 7; E. Foster, 8. Tenor 24 cwt. These bells were opened on Easter Monday last; they were cast by Messrs. John Taylor and Company, Loughborough. Full particulars of this new ring of bells, with their inscriptions, weights, etc., were given in our March number. The above was the first peal performed upon them, and we hear that a suitable tablet is to be erected in the tower to record its performance.

The annexed is the first course (210 changes) of the first part of the peal. The second course is called in the same manner; the second single is omitted in the third course; and in like manner, a Bob is substituted for the last single in the fourth course; this brings up the first part-end, 4 2 3 5 6 7. The whole five times repeated, a single being substituted for the bob half-way and end.

MAISEMORE (Gloucestershire).—On Tuesday, August 22nd, six members of the local society rang thirty-two six-scores of Grandsire Doubles with extremes, and ten without, the whole containing 5040 changes, in 2 hrs. 35 mins. A. Price, 1; C. Powell, 2; W. Brunson, 3; J. Clark, 4; B. Etheridge (conductor), 5; G. Bennett, 6. Tenor about 12 cwt.

RAWMARSH (Yorks).—On Saturday, August 13th, the Rotherham Society, with Mr. Samuel Whitworth of the Rawmarsh company, rang at Rawmarsh 5088 changes of Kent Treble Bob Major in 3 hrs. 15 mins. G. Briggs, 1; J. Coates, 2; W. Coates, 3; T. Lee, 4; G. Flint, 5; C. H. Hattersley, 6; A. Rodgers, 7; S. Whitworth, 8. Tenor 10 cwt. This peal has the sixth its extent in 5-6, and was composed and conducted by C. H. Hattersley.

SAFFRON WALDEN (Essex).—On Monday, August 1st, at the parish church, a peal of Kent Treble Bob Major, comprising 5024 changes, in 3 hrs. 14 mins. Samuel Slater (Glensford), 1; C. T. Hopkins (London), 2; H. Thompson, (Cavendish), 3; F. Wells (Glensford), 4; H. Hopkins (London), 5; N. J. Pitstow (Saffron Walden), 6; G. Taylor (Cambridge), 7; F. Pitstow (Saffron Walden), 8. The peal contains the fifth and sixth their extent in 5-6, and also five course-ends at home, and is the first rung with these qualities in this number of changes. It was composed by N. J. Pitstow, and conducted by his brother, F. Pitstow. Tenor 24 cwt. in D. Messrs. C. T. Hopkins, H. Hopkins, and N. J. Pitstow, are members of the Royal Cumberland Society of London.

WESTHOUGHTON (Lancashire).—On Saturday, August 6th, the following members rang at St. Bartholomew's church, Holt's ten-part peal of Grandsire Triples, containing 5040 changes, in 2 hrs. 49 mins. Joseph Prescott (Hindley), 1; William Brown (Westhoughton), 2; Edmund Brown (Hindley), 3; James Vickers (Westhoughton), 4; Edward Kay, first peal (Westhoughton), 5; Thomas Tickle (Hindley), 6; John Whittingham (Westhoughton), 7; Simeon Gerrard, first peal, (Westhoughton), 8. Conducted by Joseph Prescott. Tenor 13 cwt. 1qr. 14 lbs.

DATE TOUCHES.

BIRMINGHAM.—(*Handbell Ringing*).—On Sunday, August 14th, a company rang upon Handbells (retained in hand) at 63, Heaton Street, Hockley, a touch of Grandsire Triples, containing 1881 changes, in 1 hr., with the twenty-four 6-7s, and Queens, Tittums, and Whittingtons. J. Carter, 1 and 2; R. Hunt, 3 and 4; T. Miller, 5 and 6; W. Kenney, 7 and 8. Composed and conducted by J. Carter.

BROMLEY (Kent).—On Monday, August 1st, at SS. Peter and Paul, Messrs. Pead, Taylor and Shade, of the Deptford St. Nicholas Society, with five of the Bromley Society, rang a Date Touch of 1881 Grandsire Triples, in 1 hr. 7 mins. J. Golds, 1; T. Durling, 2; W. Pead, 3; T. Taylor, 4; J. Fullex, 5; I. G. Shade, 6; E. Dunn, 7; W. James, 8. Tenor 19½ cwt. Composed and conducted by I. G. Shade.

KNARESBOROUGH (Yorks).—On Saturday, August 28th, the following members of the Bradford parish church company of ringers (who are also members of the Ancient Society of College Youths, and those marked thus * are members of the Yorkshire Association of change-ringers), rang at the above place a date touch of Kent Treble Bob Major in 1 hr. 9 mins. Jas. Angus, 1; Jesse Maylor, 2; * John Jenkinson, 3; T. Pollard, 4; * J. Cheetham, 5; J. Hardcastle, 6; * W. Gill, 7; * J. Wilson, 8. The touch was composed and conducted by J. Hardcastle.

MISCELLANEOUS.

(Comprising performances under 5000 changes.)

THE GLOUCESTER AND BRISTOL DIOCESAN ASSOCIATION.

KEMERTON (Gloucestershire).—On Wednesday, August 6th, six members of the above association rang at St. Nicholas' a 720 of Bob Minor, in 30 mins. A. Grizelle, 1; E. Devereux, 2; T. Devereux, 3; C. Bown, 4; M. Devereux, 5; E. Wallis (conductor), 6. This was rung with the bells muffled as a tribute of respect to the memory of the late Mr. C. Whittle, who died on August 3rd, after a long and painful illness, aged 30 years; he had been a member of this company ten years. This 720 was rung with 18 bobs and 2 singles. Tenor 13 cwt.

ASHCHURCH (Gloucestershire).—On Monday, August 15th, six members of the local society rang at St. Nicholas' a 720 of Grandsire Minor, in 26 mins. T. Hampton, 1; E. Devereux, 2; W. Hampton, 3; T. Devereux, 4; J. Baylis, 5; E. Wallis (conductor), 6. Tenor 14 cwt.

KENT COUNTY ASSOCIATION.

ASHFORD.—On Monday, August 22nd, being the day fixed for a committee meeting at Ashford, a mixed company rang in the fine old tower of St. Mary's, a touch of 896 Bob Major. H. Ovenden (Canterbury), 1; E. Ruck (Mersham), 2; G. Finn (Mersham), 3; Jas. Harrison (Folkestone), 4; John Laker (Ashford), 5; G. Finn (Brabourne), 6; F. Finn (Mersham), 7; T. G. Newman, (Mereworth), 8. Also three courses Grandsire Triples. W. Day (Ashford), 1; E. Ruck, 2; G. Finn, sen., 3; Jas. Harrison, 4; J. Laker, 5; G. Finn, 6; F. Finn, 7; F. Grayling, Esq. (Sittingbourne), 8. Also 480 Bob Major. E. Ruck, 1; G. Finn, jun., 2; G. Finn, sen., 3; Jas. Harrison, 4; J. Laker, 5; E. Hyder (Aldington), 6; F. Finn, 7; T. G. Newman, 8. Also 896 Bob Major. E. Ruck, 1; J. Laker, 2; G. Finn, sen., 3; Jas. Harrison, 4; T. Foord (Ashford), 5; G. Finn, jun., 6; E. Hyder, 7; T. G. Newman, 8. Tenor 24 cwt. Conducted by John Laker.

ALDINGTON (Kent).—On Saturday evening, August 20th, at St. Martin's Church, six members of the above association rang a 360 of Bob Minor: also a 720 in the same method, in 28½ minutes, with 14 singles, and 4 bobs. C. Slingsby, 1; T. Hodgkin, 2; T. Post, 3; E. Hyder, 4; W. Hyder (conductor), 5; P. Hodgkin, 6. Tenor 14 cwt. in G.

THE DURHAM DIOCESAN ASSOCIATION.

DARLINGTON (Durham).—On Tuesday evening, August 2nd, at St. John's, the following members of the St. John's Society, who are also members of the above Association, rang a 720 of Grandsire Minor in 27 mins., containing 34 bobs and 2 singles. W. Bolton, 1; J. H. Blakistow (first 720), 2; W. Patton, 3; J. H. Whitfield, 4; R. Moncaster, 5; Geo. Overton (conductor), 6. Tenor 10 cwt.

OXFORD DIOCESAN GUILD.

OXFORD.—On Saturday, July 16th, the following members of the above Guild rang on the bells of St. Thomas-ye-Martyr, a 720 of Grandsire Minor in 23 mins. D. Francombe, 1; S. Buckle, 2; O. Thomas, 3; W. Baston, 4; W. Washbrook, 5; J. Field, 6. Conducted by J. Field. Tenor 9 cwt. Also on Saturday, July 23rd, on the bells of St. Andrew's, Headington, near Oxford, a 720 of Grandsire Minor in 25 mins. H. Cox, 1; D. Francombe, 2; S. Buckle, 3; W. Baston, 4; J. Field, 5; W. Washbrook, 6. Conducted by W. Washbrook. Tenor 11¼ cwt.

BROMSGROVE (Worcestershire).—On Sunday, August 14th, for morning service, on the occasion of the Lord Bishop of Worcester preaching in aid of the Sunday and Day Schools, the following members of the St. John's Society rang a true touch of Kent Treble Bob Major, containing 768 changes, in 32 mins. T. Albutt, 1; G. Bourne, 2; O. James, 3; E. Crump (conductor), 4; R. Broomfield, 5; H. Lawton, 6; W. Rea, 7; W. Duffill, 8. Tenor 20 cwt. It is now upwards of 50 years since this method was rung by the Bromsgrove Society, but they hope, by perseverance, soon to accomplish a peal, and so bring to the present society at least some portion of that renown which their forefathers, by their indefatigable exertions, enjoyed.

BAWTRY (Yorks).—On Sunday evening, June 26th, the following members of the company of Change-Ringers at the Parish Church of St. Nicholas, rang a 720 of Bob Minor, containing 18 bobs and 2 singles, in about 27 mins. W. Robinson, 1; F. J. Oram (conductor), 2; J. W. Taylor, 3; T. Robinson, 4; F. N. Cartwright, Esq., 5; N. Wilson, 6. Also on Thursday evening, July 21st, the same members rang a 720 in the same method, containing 14 bobs and 2 singles, F. J. Oram (conductor), and J. W. Taylor changing places. Weight of tenor 12 cwt. Treble Bob has hitherto been only partially practised by this company, the loss of competent members compelling the disuse of that method, hence Bob Minor only has lately been rung. It is hoped, however, that during the coming winter months Treble Bob will again have to be recorded by this Society, as the above members are by application making themselves worthy successors of those who have left the town.

BISHOP STORTFORD (Essex).—On Monday, August 1st, the following members of the Bishop Stortford Society rang a touch of 1008 changes of Grandsire Caters, with the six 968s, and six 89s, in 44 mins. W. Rickett, 1; W. H. Tucker, 2; J. Newman, 3; N. White, 4; Sergt.-Major A. Tucker, 5; G. Martin, 6; C. Martin, 7; H. Champness, 8; H. J. Tucker (composer and conductor), 9; T. Newman, 10. Tenor 20 cwt. This is the greatest length rung on ten bells by the present society. Also on Tuesday evening, August 23rd, at the above church, 1,316 changes of Grandsire Triples, with the twenty-four 6-7s, in 50 minutes. T. Newman, 1; W. H. Tucker, 2; Sergt.-Major A. Tucker, 3; G. Martin, 4; J. Newman, 5; H. Champness, 6; H. J. Tucker (conductor), 7; H. Doughty, 8. Tenor 20 cwt.

CHISLEHURST (Kent).—On Saturday evening, August 13th, at St. Nicholas, a united band of change-ringers from St. Nicholas, Deptford, and St. Nicholas, Chislehurst, rang a half-peal of Grandsire Triples, 2520 changes, in 1 hr. and 32 mins. G. French, 1; T. Durling, 2; J. Thomas, 3; W. Pead, 4; J. Fullex, 5; I. G. Shade (conductor), 6; T. Taylor, 7; T. Phillips, 8. Tenor 17½ cwt. 4lb.

DARESURY (Cheshire).—On Sunday, August 7th, the local society rang, for morning service, 720 of Grandsire Minor, in 27 mins. T. Houghton, sen. (conductor); also for evening service, 720 of London Single, in 26 minutes, P. Hamblett, conductor. On Sunday, August 14th, for morning service, 720 Bob Minor, in 25 mins., T. Houghton, sen., conductor. Also for evening service, 720 Kent Treble Bob Minor, in 26 mins., J. Ellison, conductor. Also on Thursday, August 18th, 720 of Bob Minor, in 26 mins., T. Houghton, sen., conductor. Also on Tuesday evening, August 23rd, 720 of Woodbine Treble Bob, in 28 mins. T. Houghton, sen., 1; P. Johnson (conductor), 2; T. Ellison, 3; P. Hamblett, 4; J. Ellison, 5; T. Houghton, jun., 6. Tenor 12 cwt.

FARNHAM ROYAL (Bucks).—On Saturday, July 16th, was rung a 720 of Grandsire Minor in 29 mins. J. Parker (conductor), 1; J. Basden, 2; W. Wilder, 3; G. Alder (first 720), 4; G. Buckland, 5; R. Flaxman, 6. Tenor 12 cwt. in F sharp.

HAVERSTOCK HILL (Middlesex).—On Sunday evening, August 7th, after divine service at St. Martin's, a 720 of Kent Treble Bob Minor in 26 mins. J. Leach, 1; J. Page, 2; T. Titchener, 3; G. Newman, 4; W. A. Tyler, 5; J. Hannington (conductor), 6. Also on Sunday evening, August 21st, for divine service at the same church, Holt's one-part 720 of Bob Minor, containing 21 bobs, in 27 mins. J. Wilson, 1; J. Hannington, 2; J. Leach, 3; T. Titchener, 4; W. A. Tyler, 5; G. Newson (conductor), 6. Tenor 12½ cwt.

HULL (Yorks).—On Thursday, August 4th, the following members of the Yorkshire Association, with Mr. T. Gibbons of Market Rasen, rang upon the bells of Holy Trinity Church, 720 of Kent Treble Bob Minor in 31 mins. T. Stockdale, 1; W. Southwick, 2; T. Gibbons, 3; J. W. Stickney, 4; C. Bennet, 5; C. Jackson (conductor), 6. Tenor 25 cwt.

HULL.—On Friday, August 5th, the following members of the Ancient Society of College Youths, London, viz.: Messrs. T. Walker, C. Bennett, W. Jackson, and W. Southwick; together with Messrs. T. Gibbons, H. Eastwood, and F. Drabble, rang at St. Mary's, Lowgate, a 720 of Kent Treble Bob and a 720 of Bob Minor, in 63 mins., making a total of forty-four 720s rung during the past two years in the above tower.

MAIDENHEAD (Berks).—On Monday, June 27th, on the back six of the fine ring of eight bells, at All Saint's, Boyne Hill, a 720 of Grandsire Minor in 27 mins. J. Parker (conductor), 1; E. Rogers, jun., 2; A. Garraway, 3; W. Wilder, 4; W. Wilkins, 5; R. Flaxman, 6. Tenor 17½ cwt. in E.

READING.—On Tuesday, July 19th, the following members of the above Guild (it being the occasion of their first annual meeting), rang a 720 of Grandsire Minor in 30 mins., at St. Giles' Reading. J. Parker (Farnham Royal), conductor, 1; T. Newman (Caversham), 2; R. Flaxman (Farnham Royal), 3; S. Paice (Reading), 4; W. Wilder (Farnham Royal), 5; H. Egby (Reading), 6. * First 720.

SPALDING (Lincs.).—On August 7th, at SS. Mary and Nicolas, 720 of Bob Minor, 30 bobs and 2 singles; 720 College Single, with 18 bobs and 2 singles; and 60 of London Single, in all 1500 changes, in 1 hr. T. Measures, 1; J. R. Jerram, 2; J. Woodcock, 3; J. S. Wright, 4; G. L. Richardson, 5; R. Mackman (conductor), 6. Also on August 20th, 720

of Oxford Treble Bob, with 9 bobs, in 29 mins. T. Measures (his first 720 in this method), 1; G. L. Richardson, 2; T. Blackburn, 3; J. R. Jerram, 4; R. Mackman, 5; J. S. Wright, 6. Also 720 of Bob Minor, with 9 bobs and six singles: T. Blackburn, 1; T. Measures, 3. August 21st, for morning and evening service, 360 of Oxford Treble Bob, J. S. Wright, conductor. Tenor 18 cwt.

TOTTENHAM (Middlesex).—On Tuesday, July 26th, the following members of the Tottenham Society rang at All Hallows, a 720 of Grandsire Minor with 38 bobs and 22 singles, in 29 mins. R. Bagnall, 1; T. Scarlett, 2; S. G. Bower, 3; E. Bower, 4; H. Barnett, 5; A. H. Gardom (conductor), 6. Tenor 20 cwt. The first 720 of all the foregoing except the conductor.

WIGAN (Lancashire).—On Monday, August 1st, the following members of St. Peter's and St. Nicholas' Society, Liverpool, visited this town, and rang at the Parish Church at intervals throughout the day, touches of Grandsire and Stedman Triples, and Kent Treble Bob Major, upwards of 6000 changes in all. R. Williams, sen., R. Williams, jun., H. Meadows, E. Booth, W. Littler, W. Brooks, G. Helsby, E. Foster, W. Woodhead, W. Wood. Conducted by R. Williams. The company returned home highly pleased with their journey, and the excellent ringing order in which the bells are kept by Mr. Thomas Halliwell, superintendent of the Wigan Society. Tenor 28 cwt.

WORCESTER.—On Sunday, August 7th, at St. Helen's, before morning service, being the occasion of the return of the Rector, Rev. J. B. Wilson, from his wedding tour, the following members of the Worcester Society rang a quarter-peal of Grandsire Triples in 44 mins. F. Owen, 1; N. Wale, 2; W. Hunt, 3; W. Blandford, 4; J. Reynolds, 5; H. Wilkes (conductor), 6; G. Cleal, 7; T. Gwynn, 8. Tenor 19 cwt. Touches were also rung before and after evening service.

BELL FOUNDING OPERATIONS.

MESSRS. MEARS AND STAINBANK.—Seven new bells for St. Andrew's, Derby: 1st, 2nd, 3rd, 4th, 5th, 7th, and 8th; tenor, 20½ cwt.—Two trebles for St. Mary-le-Bow, Cheapside, London, thus making a peal of twelve; also rehanging 3rd and 4th.—A ring of eight for St. Mary's, Sydney, tenor, 25 cwt.—New 2nd in ring of eight at Stratton, Cornwall. Rehanging 1st, 4th, and 7th at St. Matthew's, Bethnal Green.—Set of 130 bells for the Royal Handbell Ringers (Mr. D. S. Miller.)

MESSRS. JOHN TAYLOR AND CO.—Downham, near Clitheroe, Lancashire, a new tenor to make four; recasting 3rd; also entire new frame and fittings.—Didlington, Norfolk, new frame and fittings for ring of five.—Southleigh, Devon, recasting 2nd in a ring of four.—Caddington, near Luton, recasting treble in ring of six.—Alfreton, Derbyshire, recasting 4th of ring of five, new frame and fittings for all.—Pencombe, near Bromyard, a new treble; recast second and tenor (weight of latter 8 cwt., 2qr. 23lbs.), also new frame and fittings for the whole ring.—Brent Knoll, Somerset, recasting the three back bells of a ring of five, tenor 21 cwt. 16lbs.—Ring of sixteen bells for Bombay University Buildings; we give the particulars of these bells below:—

c.	q.	lb.	G	c.	q.	lb.	D	c.	q.	lb.	A	c.	q.	lb.	F
4	1	13	G	6	2	23	D	10	1	26	A	20	1	14	F
4	1	27	F shp.	8	3	7	C	12	2	25	G shp.	23	1	7	E
4	2	22	F	8	3	18	B	15	0	14	G	32	3	0	D
4	3	20	E	10	1	2	B flat.	17	0	10	F shp.	49	0	10	C

The total weight of these bells is 11 tons, 14 cwt., 4 lbs. They are the gift of Mr. Premchund Roychund, and were tested and certified for by the Rev. Canon Cattley, of Worcester Cathedral, and Dr. Stainer, organist of St. Paul's Cathedral, London.

RESTORATION OF THE BELLS OF ST. LAURENCE, READING.—An endeavour is being made in the town of Reading to have this fine ring of ten restored. For this purpose a committee, comprising several of the most influential residents, with the Rev. Charles Kerry chairman, has been formed. In the appeal made to the good people of Reading, the committee say: "These bells have been almost as much used for civic and political purposes, as for religious and ecclesiastical. In old times they sent forth their ponderous notes at the victory of Flodden, over 'The deth of the Kyng of Scots,' and in later days, have witnessed to the heroism of a Moore at Corunna, a Nelson at Trafalgar, and a Wellington at Waterloo. The restoration of these bells is in every way most desirable; they have 'rejoiced with them that did rejoice, and wept with them that wept;' they have gladdened the hearts of the bridegroom and the bride, and mourned 'the loosing of the silver cord, when man goeth to his long home,' for many a generation. . . . Let us give to them as God has blessed us, and as Englishmen, proud of our old and venerable institutions, proud of the traditions of the past, and resolving by God's help, to maintain these things, and hand them down intact to succeeding generations." We entertain hopes that this appeal for such an object will be promptly and liberally responded to.

We hear that the beautiful peal of eight bells at St. Mary's, Ross, Herefordshire, are being rehung by Messrs. George Day & Son, of Eye, Suffolk.

PEALS OF TREBLE BOB MAJOR.

COMPILED BY JASPER W. SNOWDON.

PEALS WITH NINE COURSES IN EACH PART.

The following is the shortest peal yet composed with this number of courses in each part.

7008

2 3 4 5 6	M	B	W	H	2 3 4 5 6	M	B	W	H
3 5 2 6 4	-				3 2 6 5 4	-	I	2	
5 6 3 4 2	-				5 3 6 2 4	-			I
6 4 5 2 3	-				2 6 4 3 5	I			I
6 4 2 3 5	-	I			3 4 5 6 2	I			I
3 6 2 4 5	I				2 5 4 6 3	I			I
4 2 5 6 3	I	I			5 6 2 3 4	-			
6 5 3 2 4	I	I			6 3 5 4 2	-			
5 4 3 2 6	I		2		3 4 6 2 5	-			
4 2 3 5 6	I	-			4 2 3 5 6	-			

N. J. PITSTOW.

7392

2 3 4 5 6	M	B	W	H	2 3 4 5 6	M	B	W	H
3 5 2 6 4	-				3 2 6 5 4	-	I	2	
5 6 3 4 2	-				3 2 5 4 6	-			I
6 4 5 2 3	-				2 6 5 4 3	2	-	I	2
6 4 2 3 5	-	I			4 3 2 6 5	-	2		
4 3 2 6 5	2				4 5 3 6 2	2			I
6 5 3 2 4	2	2			5 6 4 2 3	-			
3 2 6 5 4	I	2	I		6 2 5 3 4	-			
5 3 2 4 6	-	2			2 3 6 4 5	-			
3 4 2 5 6	I	-			3 4 2 5 6	-			

N. J. PITSTOW.

PEALS WITH TEN COURSES IN EACH PART.

By a bob at home at the second part-end the following peal is reduced to 5408 changes.

8064

2 3 4 5 6	M	B	W	H	2 3 4 5 6	M	B	W	H
3 5 2 6 4	-				3 2 6 5 4	-	I	2	
5 6 3 4 2	-				6 5 3 2 4	-			I
6 4 5 2 3	-				4 3 5 2 6	I			I
6 4 2 3 5	-	I			2 6 4 3 5	2			I
3 6 2 4 5	I				3 4 5 6 2	I			I
4 2 5 6 3	I	I			2 5 4 6 3	I			I
3 2 6 5 4	I	2	I		5 6 2 3 4	-			
6 5 3 2 4	I	I			6 3 5 4 2	-			
5 4 3 2 6	I	2			3 4 6 2 5	-			
4 2 3 5 6	I	-			4 2 3 5 6	-			

N. J. PITSTOW.

First rung as 5408 on February 9th, 1880, at Holy Trinity, Long Melford. Conducted by F. Pitstow.

The following peal is the same as the foregoing with a bob at home in the sixth course, and the bob at the middle omitted at the seventh.

8064

2 3 4 5 6	M	B	W	H	2 3 4 5 6	M	B	W	H
3 5 2 6 4	-				3 2 6 5 4	-	I	2	
5 6 3 4 2	-				6 5 3 2 4	-			I
6 4 5 2 3	-				4 3 5 2 6	I			I
6 4 2 3 5	-	I			4 6 3 2 5	2			I
3 6 2 4 5	I				2 3 5 6 4	I			I
5 4 2 6 3	I	I			4 5 3 6 2	I			I
2 4 6 5 3	2	I			5 6 4 2 3	-			
6 5 2 4 3	I	I			6 2 5 3 4	-			
5 3 2 4 6	I	2			2 3 6 4 5	-			
3 4 2 5 6	I	-			3 4 2 5 6	-			

N. J. PITSTOW.

CORRECTION.—The 7968 given on page 31 was originally composed by J. Thorp, and appeared in print a few years ago. As it then appeared in a mutilated condition so as to furnish some unnecessary number of changes, I unfortunately overlooked it, nor do its merits seem to have been generally noticed.

PEALS WITH THE TENORS PARTED.

If the third course in any one part of the following peal be called 1 W., the number will be reduced to 10,016 changes.

10,080

2 3 4 5 6	2 3 4 5 6	M	B	W	H
5 6 7 4 3 2	{ Out and fourths; fourths and in; fifths and 2 H.				
2 3 7 5 4 6	{ Fourths and 1 H.				
5 2 7 3 4 6	{ 1 M, out, and 2 W.				
	M	B	W	H	
2 6 4 3 5	In & out, 2 I				
6 3 2 5 4	-				
3 5 6 4 2	-				
5 4 3 2 6	-				
2 5 4 6 3	-	2			
5 6 2 3 4	-				
6 3 5 4 2	-				
3 4 6 2 5	-				
4 2 3 5 6	-				

W. HARRISON.

The following peal contains the sixty course-ends, and is, in my opinion, the best peal of 10,000 changes yet composed.

10,176

2 3 4 5 6	M	In	B	5	W	H
7 3 2 5 6 4	-				I	
5 7 3 4 6 2	-				2	
5 6 7 4 3 2	I	-	-	2	2	
	M	B	W	H		
2 6 4 3 5	In & Out	2				
3 2 4 6 5	-				I	
2 5 4 6 3	I	-			2	
2 4 6 5 3	-				I	2
2 6 5 4 3	I	-	2		2	
4 5 6 2 3	I	-			2	
5 4 3 2 6	-				I	2
4 2 3 5 6	I	-				

W. HARRISON.

10,272

2 3 4 5 6	M	In	B	4	5	W	H
5 6 7 4 3 2			I	2		I	
2 3 7 5 4 6			I			I	
5 2 7 3 4 6						I	
3 6 2 4 5		I	I				
6 4 3 5 2		I					
4 5 6 2 3		I					
5 2 4 3 6		I					
5 2 3 6 4		I					
2 5 4 6 3	2	I			I		
5 6 2 3 4		I					
6 3 5 4 2		I					
3 4 6 2 5		I					
4 2 3 5 6		I					

W. SOTTANSTALL.

First rung on Easter Monday, April 10th, 1871, at Liversedge, Yorkshire, in 5 hrs. 28 mins. Conducted by Mr. J. Illingworth. Tenor 16 cwt. Also rung on October 16th, 1880, by the Norwich Association at St. Mary's, Debenham, Suffolk, in 6 hrs. 35 mins. Conducted by W. Ireland. Tenor 20 cwt.

FIVE-PART PEALS.

Amongst the peals given the following should have been included. I find, however, that I have admitted a 5120 (the one at the top of page 19), by N. J. Pitstow which had already been composed by J. Dixon, and will be found in Part II. Page 2 of my *Treatise on Treble Bob*.

5120

2 3 4 5 6	M	W	B	H	2 3 4 5 6	M	B	W	H
2 6 3 5 4	-	I	I		6 3 5 4 2	2	-		I
4 2 5 6 3	-	2	2		4 5 3 6 2	I	-		2
4 5 6 2 3	I	-	2		5 2 3 6 4	2	-	I	2

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HAND-BELL MUSIC arranged in an easy and effective style (with instructions by an experienced ringer and musician.

"The Huntsman's Chorus," Weber's "Der Freischütz"	1/6
"The Blue Bells of Scotland," with two easy variations	1/6
"Ye Banks and Braes"	1/6
"Auld Lang Syne"	1/6
"The Moon behind the Hill"	1/6
"Weel may the Keel Row"	1/6
"March of the Men of Harlech"	1/6
"The Curly-headed Ploughboy"	1/6
"La Saraband," Two Spanish Valses	1/6
"Brittania," Selection of English Melodies	1/6
"Napoleon's Grand March,"	1/6

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For small Peals of 2 octaves in G, with the 2 F naturals also; for which the following pieces are arranged:—

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"Lammas Day" Welsh Melody	1/0
"Glorious Appollo," Glee. S. Weber	1/0
"The Blue Bells of Scotland"	1/0
"The Harp that once," Irish Air.	1/0
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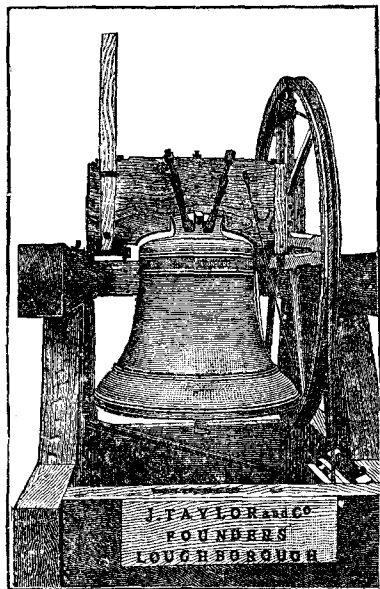
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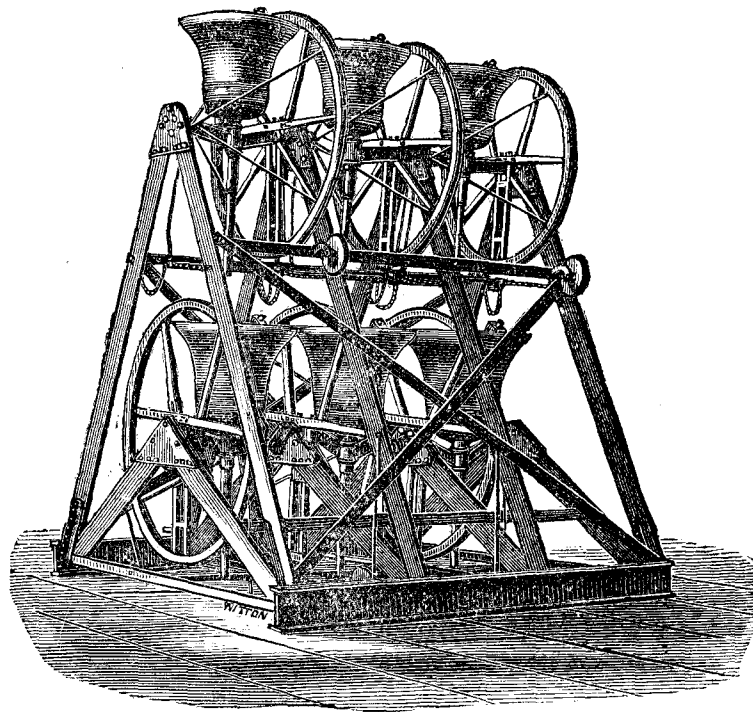
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