Review

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Romance. By H. R. Woledge. Original Compositions for the Organ (New Series, No. 33).

[Novello & Co., Ltd.]

A melodious piece, of the 'song without words' type, quite easy to play, and pleasant to hear.

Schmücke dich, O liebe Seele. By J. S. Bach. Edited by John E. West. Original Compositions for the Organ, No. 445.

[Novello & Co., Ltd.]

Of the many beautiful choral preludes of Bach there are few, if any, more beautiful than 'Schmücke dich,' so praised by Schumann and Mendelssohn and loved by countless organists. This edition, with its excellent phrasing and its judicious disposition of the voice-parts, should be a boon to players, especially to those taking up the work for study as a test-piece at the Royal College of Organists' examinations.

Thus saith the Lord God. Harvest Anthem. By George C. Martin. Octavo Anthems, No. 1052.

[Novello & Co., Ltd.]

Opening with a vigorous declamatory passage for tenor and bass in unison, this anthem proceeds by way of a four-part chorus (*Allegro*) and a quieter section (*Andante pastorale*) to a verse of 'Now thank we all our God,' the famous melody being sung in unison with a flowing organ part, and providing an imposing ending to an excellent work. The music would present few difficulties to an average church choir.

BOOKS RECEIVED.

Vocal Technique. How it feels to sing. By W. H. Breare. Pp. 228. Price 3s. 6d. net. (London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd.)

The Evolution of Harmony. By C. H. Kitson. Pp. 475. Price 8s. 6d. (Oxford: At the Clarendon Press.)

THE SCIENTIFIC BASIS OF TUNING.

By E. P. LENNOX ATKINS.

On June 11 an entertaining lecture on the above subject was delivered by Mr. H. Keatley Moore, Mus. Bac. Cantab., before the recently-formed 'Pianoforte Tuners' Association of Great Britain and Ireland.' As last year in the February number the *Musical Times* printed an editorial article headed 'Equal temperament: An unrealised theory,' many readers are no doubt interested in the subject. And last January—I am quoting from the *School Music Review*—the editor referred at the West London Vacation Conference to the unsatisfactory condition of 'teaching-pianofortes' generally, and their unsatisfactory state for ear-training purposes after they had been 'tuned.' In addition, Messrs. Novello, acting I believe on the advice of Dr. McNaught, recently added Spain's 'Primer on equal temperament' (founded on the larger treatises) to their fine series of educational works on music. These are hopeful signs for the tuning profession, the members of which to this extent are evidently more beholden to those responsible for the policy of the journals named than perhaps is at present realised.

Towards the end of his lecture Mr. Moore announced to his audience that he accepted certain figures, &c., offered by Mr. William Braid White, which have been published in the course of some articles headed 'Tuning as an exact science.' He said (I quote from the full report of the lecture that appeared in the *Music Trades Review* for June 20):

Having set your pitch C to your fork (say 522) and your middle C as exact an octave as you can below it—no man can tune an octave or a unison *exactly*, but you all can get near enough, for practical purposes—then proceed thus. From C tune a fourth down to G truly,

then flatten the G till it beats with the C ten beats in ten seconds—one beat a second. From G tune a true fifth up to D without beats, and then flatten the D till it beats six times in ten seconds with the G, a little more than one beat in two seconds. (If your tone will not last ten seconds then count five and three respectively for five seconds. If you can count as long as ten seconds the count is surer.) Go on in the same way, making the fourths down beat ten in ten seconds, and the fifths up beat six in ten seconds. Do not go above F upwards, so that when you go down from E to B (ten beats in ten seconds), you go down again from B to F $\sharp$ below (ten beats in ten seconds). You will end in F below middle C, and this F ought to beat six in ten seconds with middle C that you started from. Tune F up to F, a true octave, or as near as a man may, and your bearings will lie between F and F with middle C in the middle. I will run over the notes in their proper order: C down to G, up to D, down to A, up to E, down to B, down again to F $\sharp$, then up to C $\sharp$, down to G $\sharp$, up to D $\sharp$, down to A $\sharp$, down again to F, then F to F.

Always remember to keep between F and F, and with pitch C not lower than 512 nor higher than 540, and to get ten beats in your downward fourths and six beats in your upward fifths in ten seconds. If you do not keep within these limits the rule is incorrect; but if you do it is quite correct for all practical purposes. I will have this rule printed, and I shall be happy, in a few days, to send a copy to anyone who will give his name and address to any of the attendants.

There is scarcely need for me to remind your readers that the tempering—I demur to the word tuning—of pianofortes and organs is carried out in practice by judging the speed of what is sometimes called the 'overtone beat.' The 'tuner' commences somewhere about the middle of an instrument, sets his equal-tempered scale within the compass of an octave generally, and then proceeds upwards and downwards.

Of course, strictly speaking, the equal-tempered scale must be *first of all in his own mind*. Thus the pianoforte, having no sound in itself—'Sound is an affection of the mind': Woolhouse, Stainer, &c.—is a manufactured article, plastic so far as regards its strings, and capable, under favouring circumstances, of reflecting a mental impression of what is believed to be equal temperament. A good pianoforte *will reflect a mind in equal temper*; but only to another mind if this second mind is of a similar way of thinking.

No University has a degree in this connection—there is no authoritative diploma in equal temperament; and if the equal-tempered scale is, as many say it is, the foundation of modern music, then is the idea so very far-fetched that tuners who provide, or are supposed to provide, us all with this essential musical scale are, in essence, *the real music teachers of the day* so far as regards ear-training?

The rule for obtaining the equal-tempered scale is *not* that the speed of the overtone beat must remain constant as pitch rises, and the number of vibrations therefore of each sound forming the interval increase. On the contrary, the rule is: that the speed of beat must *increase in proportion* to the rise of the two generators of the beat in pitch.

I am obliged to say that Mr. Moore's conclusions and figures are misleading and founded on error, and that on behalf of the Equal-Temperament Committee I repudiate them. In the first place, his statement that *all* the flattened fifths in his scale when laying the bearings in the middle of the pianoforte between the F above centre C and the F below are to beat at the rate of *six beats in ten seconds*, is quite wrong. The figures are given later, and it will be seen that if the fifth down from centre C to F beats at this rate with C at a certain pitch, by no possibility can any other fifth above or below beat at a similar speed if equal temperament is to be the goal.

In the second place, Mr. Moore's statement that this constant speed of six beats in ten seconds for all the flattened fifths holds good at all pitches from C 512 up to C 540, I dispute. If he is right, why stop at C 540? Call C 840, or shall we say C=1080, and then see by our figures into what sort of an impasse the lecturer is leading the members of this Association. There is seemingly a loophole of escape: