

NED. KLOKKENSPEL VERENIGING

~~Red. Mededelingenblad~~

~~te Hago de Grootstraat 1~~

~~AMSTERDAM-WEST~~

Beiaardkunst

☘ Handelingen van ☘
het Tweede Congres
's-Hertogenbosch

1925

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BIBLIOTHEEK

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NED. KLOKKENSPEL VERENIGING

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Druk van J. J. Arkesteijn & Zoon, 's-Hertogenbosch

*Voordracht van den heer Cyril F. Johnston te Croydon (Engeland):
(met lichtbeelden)*

The Art of Tuning Carillon Bells.

Tuning is the most important of the steps in the manufacture of a bell. The bellfounder of Holland and Belgium of three centuries ago endeavoured to control, with varying success, the harmonics that are in every bell. A representative example of a beautiful old Dutch bell being the low "F" No. 3-bell of the new carillon at the Cathedral of 's-Hertogenbosch.

This bell, cast by Hemony in 1663, was sent to Croydon this year, not to be tuned, but to give the pitch of the new bells in the carillon.

The founder evidently attached great importance to the appearance of the bell as well as its qualities of tone. You can even see cherubs playing the clavier in the ornamental bands at the top of the bell.

There is no evidence that this higher art of tuning was ever aimed at in England until the past 25 years, although there are bells in churches in the Eastern Counties that appear to show the influence of the early Flemish founders.

An example of a modern correctly tuned chime of bells (13) can be heard at the Royal Exchange, London.

It is, however frequently possible to improve old bells by tuning the harmonics, as is instanced by the carillon which was inaugurated yesterday at the Cathedral in this town, where three of the old bells were tuned, and 39 new bells added.

The tone and tune of the carillon were tested and approved in Croydon by the Committee of experts.

A similar example in England is shown here of four bells cast in 1490 and 1620 for the Church of St. Maurice, Winchester, which were brought so near to perfection that only the ear of an expert could detect the difference between these and the modern additions to the peal.

The old English method of tuning was by chipping away the metal round the soundbow — a slow, tedious and inaccurate process.

The modern method utilizes heavy boring machinery which enables the tuner to attain extreme perfection in the tones of the bells.

The chord of five tones that a correctly tuned bell gives is probably well-known to all; there are also four or five other tones that can be heard by the

expert tuner, and, as the size of the bell increases, these tones are detected more easily.

It is not always realised how greatly the composition of the tones of a bell differ from those of almost all other musical instruments. The human voice, the string, the French horn, all develop correct harmonics of the fundamental in true mathematical progression, viz., the octave above, the fifth above that, and so on, ascending the scale.

Owing to its complicated design, this does not apply to the bell. The most striking divergence from the ordinary rule is, of course, the minor third, which—the musician will tell us—has no right to be in the position or octave in which it is. The minor third, however, if it is correct, does not appear to spoil in any way the resultant tone of a good bell; and the interference that would occur of the minor third of a big bell with an individual bell which is a major third is avoided, because good carillon music is effected by playing all the harmony and chords in the upper register, and using the big bells singly and only as a bass accompaniment.

Mijnheer Brandts Buijs, however, is going to deepen this mystery. He has promised to show me some bells in Holland with good major thirds.

Many good carillons were cast in Holland before the scale of equal temperament was introduced, the founders apparently arriving at some compromise of their own, but to enable the carillonneur to play in any key, it is essential that the whole carillon should be tuned to the tempered scale, entailing great care, patience, and time on the part of the tuner.

Although a few of the older carillons are the work of one firm, most of them were cast by founders of widely different periods. For example, at Malines there are bells by eight different founders, cast at times extending over four centuries. Modern carillons, on the other hand have the advantage of being the work of one bellfounder, and of being cast and tuned at the same time and under the same conditions; so that, whatever might be the perfection of the individual bells of the old founders, the modern carillon can justly claim superiority over the old carillon as a complete musical instrument.

The reference to Malines leads me to mention how much the carillon art and the musical public owe to the modern community of carillonneurs of Holland and Belgium, and to the School at Malines with M. Denyn at its head, who has done so much to increase the popularity of the carillon these last 30 years.

M. Denyn is here seen at the clavier of the carillon of 53 bells which has just been completed for New York.

M. Lefèvere, Assistant Carillonneur of Malines, also came over to Croydon to play these bells when the King and Queen came to hear them; he is here seen talking to their Majesties; M. Verrees of Turnhout gave his assistance, too; and Holland was represented by M. Wagenaar of Utrecht, and M. Brom.

The bellfounder is greatly encouraged to make as perfect an instrument as possible when he knows that it is going to be played well by skilled beiaardiers.

In England, as you know, the use of bells is for the most part different from that to which you are accustomed. There are about 40,000 bellringers in England, practising the art of change ringing which was begun 300 years ago, and has been developing ever since.

This ring of ten bells at Rochester Cathedral is a typical example of an English ringing peal. The metal in these re-cast bells was in the original bells, erected 1,000 years ago by Bishop Gundulph, who was a soldier and a priest.

We believe that ringing bells should be in tune with themselves just as carillon bells, and many of our English peals have been re-cast in recent years for that purpose—sometimes in the face of strong opposition at the outset by conservative members of committees. But the result is always appreciated by everyone who has the slightest appreciation of music.

These carillons are well-known to all of you:—

Dom Tower, Utrecht; Delft; Bruges; Antwerp.

Of late, however, carillons are being erected in all parts of the world, and some of the most recent are:—

Tilburg—35 bells.

Simcoe, Canada—23 bells.

Cohasset, Mass., U.S.A.—43 bells.

Park Avenue Church, New York, U.S.A.—53 bells, which are now in course of erection.

In conclusion, may I say that the study of this subject and the increasing interest in the carillon art and perfection of bells represent a movement that may well be highly approved by the League of Nations. It is providing an interest that is shared at present by many countries represented in Bois-le-Duc at this important Congress.