

# Campanology in India

## Bell-Ringing, an Aid to Worship

By S. Srikantha Sastri, M.A.

Bell-ringing as an aid to worship is an art of extreme antiquity in India and China where some of the oldest and the biggest bells in the world are to be found. In Agamic worship, the sound of the bells indicates the beginning as well as the ending of the ritual. Its function is to invite the Gods and chase away the evil influences so that the worship might proceed uninterrupted to the very end when, at the waving of lights, the union of light and sound is intended to convey the esoteric significance of the two aspects of Brahman as *tejas* and *Sabda*. Therefore the agamas prescribe elaborate rules as to the shape, size, and the tuning capacity of the bell and several deities are supposed to preside over the different parts of the bell. The small bells used in daily worship are surmounted usually by the figure of some minor God like Nandi, Hanuman or Garuda, to act as the mediator between the worshipper and the chief deity. Except perhaps on the war-chariots, the bell, in India was used little for secular purposes, and its present shape is evidently of *tantric* origin. The pinched waist, and the broadened skirt, it can be conjectured, are the result of the evolution from the steatopygous figurines of the Mothergoddess, found at Harappa and Mohenjodaro as well as in other ancient sites through out Asia.

### The Bell-Capitol of Mauryan Art

The Bell-capitol of Mauryan art is now recognised to be of indigenous origin, developed from the lotus-motif. But the whole pillar represents nothing but a variety of the usual flag-staff (*Dhvaja-stambha*) which was adorned with bells and it is not improbable that, as the column became more and more stereotyped, the artists converted the top itself into the shape of a bell which due to the decorations, assumed the aspect of an inverted lotus. We know for certain that in the days of Patanjali, the bell along with the other musical instruments played a prominent part in the worship of the deities.

The Bell was adopted by the Catholic church in Europe along with other Eastern ceremonial forms, but as an art, bell-ringing developed late and though some excellent bells were cast in Italy and Netherlands, they were not tuned to

a definite scale. Campanology as an art dates from the 16th century in England. Stedman worked out the “changes” by permutation and combination according to the number of the bells, but it was not until the principle of the fivestone harmonic system was standardised by Canon Simpson, that it was definitely recognised as both a science and an art.

In India some of our great temples boast of a few excellent bells, given by pious donors as gifts in memory of favours received. Two huge bells attached to the over-hanging precipice at Sivaganga, near Bangalore, have now disappeared but in the ancient temple on the hill, are several bells dating from the days of Magadi chiefs. Elsewhere we find several bells mellow with age but in the modern temples, it is a sad fact that the bells are so crude and unscientifically tuned that they defeat, by their discord, the very purpose for which they are intended. Therefore, since even in the west, no attempt is made to play hymn-tunes on the church-bells, but harmony is produced by ringing the changes, the system can be adapted to suit our conditions.

### The English System

Briefly, the English system is as follows. Three bells give six distinct changes, four yield 24 changes, five bells give 120 and so on up to a maximum of 12 bells the greater the number of bells greater the skill required in jumping ?? that at the close ??? change is repeated. In the “Bob ????” six bells are used, in the “Gra ?? Doubles and Stedman Doubles.” five bells with the tenor following behind; in the “Grandsire and Stedman Triples.” there are seven bells with the tenor covering; in the Bob Major whole 8 change of bells, in Caters nines in Cinques and Maki Mus, 12 bells are employed. The notes are five:— the *strike*, the *hum* (an octave below the strike), the *nominal* (an octave above), the tierce (a correct third above the strike) and the *Quint* (a fifth above the strike).

Several modifications are necessary before this system can be adopted to our Karnatic scale. The equal temperamental system is alien to use and the indigenous system gives us better fifths and thirds than any other cyclical system. But it is advisable to go back to the older Kharaharapriya scale as more appropriate than the Mayamalava Gowla or Sankarabharana of the present day. And tanam varnams can also be reproduced if slight mechanical changes are effected. Seven or eight bells, as in the “Bob Major” tuned to our Svara scale can be made to yield sweet and rich music. The sacred character of the Pranava sound underlying all the variations in the tune, becomes apparent and reverberates in the hearts of devotees. It is to be hoped that the huge *gopurams* of our most important temples will be equipped with properly tuned bells and this neglected but necessary part of religious ritual will receive due attention of all lovers of music.