This edition of Music on Monday is more in the form of written word than the usual video you receive from me.

Craig Symons

Minister of Music

Recently, two friends of mine posted on social media about their church “Drive-In Carillon” concerts being presented on their church property. That got me to thinking about our bells at First Church. This week, we will examine definitions and differences in bells heard in towers, in churches, institutions of learning, and community buildings.

We are particularly fortunate to have the history of First Church, both written and oral, as well as the Historical Committee, to tap into when we need to know something about our congregation and its background. To start off, let’s learn about the definitions of these bells.

When you think of church bells, you think of just that; bells in a church tower. But they actually have varied names based on what types of bells and how many are installed in a building. The most heard type of bell is a “swinging bell” or “peal”, first heard in medieval times and often used to notify the locals for fires, storms, wars, or other events. The tradition of ringing bells dates back to 400 AD, and in 604 Pope Sabinianus officially sanctioned their use.

A peal is a set of two or more bells hung for swinging in less than a full circle. Consequently, each bell swings at its own natural pendulum frequency, so that it appears to sound randomly with respect to the other bell(s) in the peal. In Canada and the USA, some churches have peals of two to five bells; in churches of

continental Europe and Spanish-speaking countries, cathedrals and very large churches may have peals of more than a dozen bells. ***http://www.towerbells.org/***

Here is a video example of a swinging bell in a church tower

Peal

A peal is a more complex system of two or more bells and is typically rung, in modern times, by an electrical system.

Adding more bells to a peal, one creates “Rings” or “Change Ringing”. Rings are sets of tower bells tuned to the diatonic scale and hung to swing in a full circle, with one person controlling one bell by means of a single rope and wheel. Most rings are hung and rung in the English style called "change ringing". This is typically *not* done by electrical means, but by sheer physical strength.

Here is a video of a “ring” performed at Trinity Church, Wall Street, in New York City.

Change Ringing

While this form of bell ringing might seem random, it’s anything but that. Wikipedia states:

Change ringing is the art of ringing a set of tuned bells in a tightly controlled mannerto produce precise variations in their successive striking sequences, known as "changes". This can be by method ringing in which the ringers commit to memory the rules for generating each change, or by call changes, where the ringers are instructed how to generate each change by instructions from a conductor. This creates a form of bell music which cannot be discerned as a conventional melody, but is a series of mathematical sequences.

The next term is what is housed in the First Church tower and that is a “chime”. From **http://www.towerbells.org/**

Chimes *are smaller musical instruments (8 to 22 conventional tower bells, hung fixed) in which the bells may or may not have been tuned, but nevertheless approximate the diatonic or chromatic scales sufficiently well to be able to play tunes recognizably. Some are in fact tuned to the same precision as carillons, and thus can be used to play harmony as well as melody. Several different kinds of mechanisms have been used to play chimes, either manually or automatically, but in comparison to carillons there is less need to distinguish between traditional and non-traditional mechanisms.*

First Church is home to a chime, a set of 12 tuned bells from F below middle C, to the A above that, and weigh from the largest bell at 2000 lbs to 250 lbs for the smallest. You can learn about these bells, see pictures, and read the sermon given by Rev. Allen Lorimer on October 26, 1930 when the Robert Stewart Memorial Chimes were dedicated to an overflow crowd in our Meetinghouse.

http://www.fccog.org/about-us/our-building/our-bell-tower/

Each bell is inscribed with scripture passages or other familiar words. The inscription on the lowest bell (F3), “Unto the church I do you call; death to the grave will summon all.”, is found on the lowest and largest bell in our chime, and on several instruments around the world, and is often rung for funerals or burials.

Our bells are played in two ways, from the organ console, and by an electric controller located in the lower level in the preschool hallway. Because we have 12 bells, tunes can actually be played by the organist if the music is in (or transposed) to the keys of C F or Bb. There are only two “black notes” in our chime, those being Bb and Eb, which is the limiting factor for playing certain pieces on the bells.

Last, but not least, the largest instrument is named the carillon.

Again, from http://www.towerbells.org/

Carillons *are musical instruments made of at least 23 conventional tower bells which have been tuned so that they can be played together in harmony. The bells are hung fixed in a frame, or "dead", and are played by some kind of mechanism which operates internal clappers and/or external hammers. There are two varieties:*

Traditional *carillons use a keyboard with baton-shaped manual keys, a pedalboard, and "tracker" action (direct mechanical connection) for precise dynamic control and dynamic musical expression.*
Some traditional carillons are equipped with additional mechanisms of various kinds for automatic play. A common motive for doing this is to strike the quarter-hours and the hour as a clock-chime would do.

While some refer to our bells as the “carillon”, in the strictest terms, that definition is limited to instruments of 23 bells or more. Christ Church Greenwich has a chime, but has a playing console similar to this keyboard at Middlebury College.

As opposed to the full-size carillon keyboard, pictured below from Ottawa's Parliament Building.

The closest true carillon is at First Presbyterian Church of Stamford (Fish Church) and contains 56 bells, located in the tower next to the church building. Read more about the carillon here

https://www.fishchurch.org/carillon

It's fascinating to watch someone play the carillon, which is another physical workout, because the way technique used is a closed fist, used to strike the lever, or baton with the 5th finger area, to engage the mechanism that strikes each bell. During my graduate studies, the University of Michigan was home to two carillons (the lowest bell [bourdon - at a whopping 12 tons!] at University of Michigan is pictured at the top of this email, before being hoisted to the tower) and I spent a year studying

the instrument. Much like an organist, a ***carillonneur*** (someone who plays the carillon) is fairly isolated as the keyboard is nearly always connected to the mechanism which directly rings the bells, high up in a tower, or some other remote location. Watch this video to learn about a carillon.

https://www.youtube.com/watch?v=K_8vta9XDpc

The largest carillon in the world, in terms of number of bells, with 120 bells, is in the Palace of Mafra in Portugal. The heaviest carillon, in terms of combined weight of all the bells, is at The Riverside Church, in New York City, located 23 stories above the famed church, totaling over 100 tons and 74 bells.

Here are a couple more videos about carillons if you haven't had enough yet!

Exploring the Old Central clock tower in Duluth
https://www.youtube.com/watch?v=sAVENhda4ew

Washington National Cathedral Tour: Carillon and Peal Bells
https://www.youtube.com/watch?v=j36v1xPWE_w