

Chapter 6

Carillons

A carillon is primarily a musical instrument for playing tunes that is typically housed in a bell tower of a church or municipal building. The instrument consists of at least 23 bells which are traditionally played by striking batons with the fists as well as pressing the keys of a pedal keyboard with the feet. The keys mechanically activate levers and wires that connect to metal clappers that strike the inside of the bells, allowing the performer on the bells to vary the intensity of the note according to the force applied to the key.



Les Carillons en Belgique. Taken from *L'illustration*, 17 August 1895, page 137 (22cm by 31cm)

It is different from a chime of bells which is a set of 22 or fewer bells, arranged in a chromatic series and tuned so when sounded together they produce a harmonic sound. The player is called a chimer.

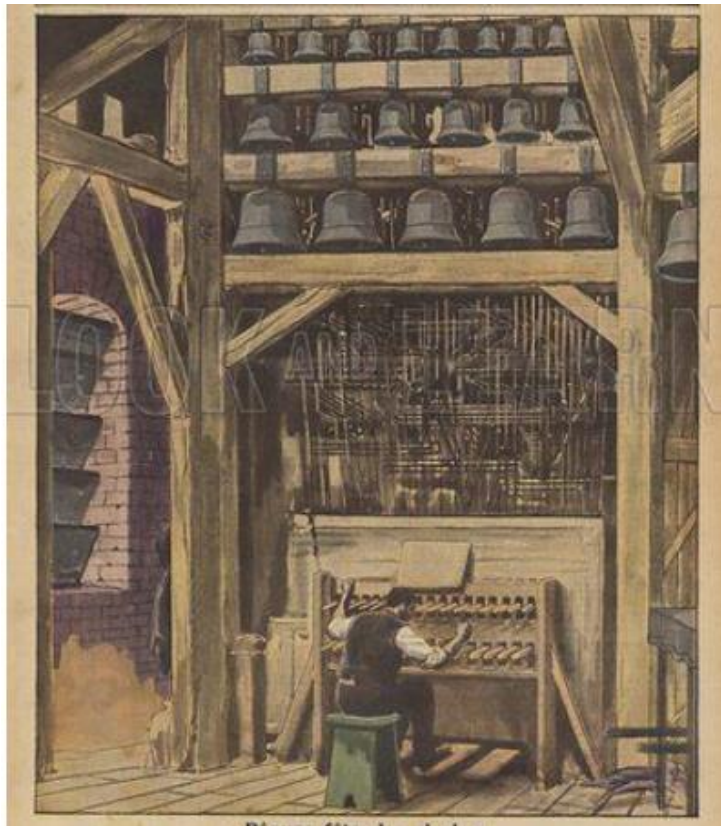
The carillon is the second heaviest of all extant musical instruments after pipe organs. The largest in the world is at the Palace of Mafra in Portugal with 120 bells, while one of the heaviest is at the Riverside Church in New York City. This contains 74 bells with a total weight of 100 tons. Carillons are found in buildings around the world and not just central Europe, which traditionally is associated with the instrument. Originally they were used as alarm beacons for the community, but have since developed into what is known as the *Flanders Carillon Culture* which has been recognised by UNESCO.

European origins

The carillon is thought to have originated in Flanders. The earliest mention being in the city archives at Oudenaarde in 1510. Throughout the next two centuries more than 200 carillons are thought to have been installed in buildings across the Low Countries. Typically they are found in churches and municipal buildings and are heard daily. After a period of decline in the 19th century the instrument was revived when the Mechelen Carillon School was founded by Jef Denyn, the city carilloner there, in 1920.



A Bell Ringer Playing A Chime - print from the book *Belgium* painted by Amedee Forester 1908



The Carillonneur taken from *Le Petit Journal*, 12 April 1914 (size not known)

A number of bells were confiscated and melted down during both world wars, but a number of new carillons were created afterwards dedicated to the memory of those killed during the conflicts. The number of bells lost in the First World War is unknown, but reports suggest that in Germany alone 44% of bells were lost – some willingly given in support of the war effort while others were just seized.

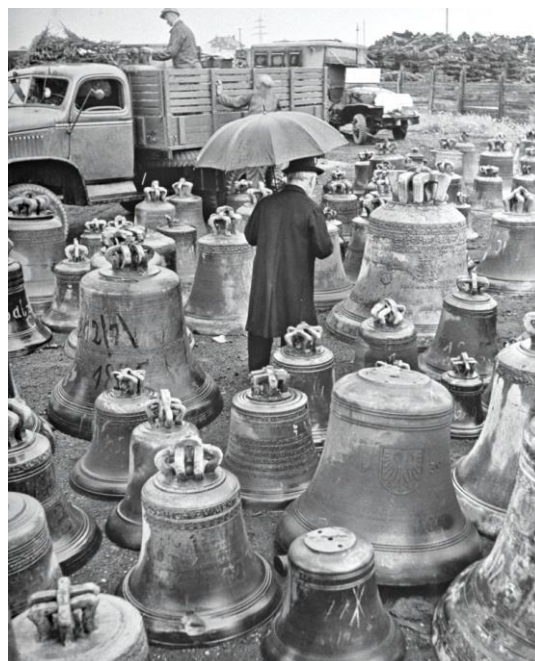


Getting ready to break a bell at Plzni in the Czech Republic in 1917 so the metal can be easily removed

The Second World War brought more comprehensive and devastating destruction. By 1941 the Nazi authorities had started to categorise bells within Germany into four types delineated by age and significance:

- *Group A*: modern bells, cast since 1918 and designated for immediate processing. They comprised 70 per cent of all bells in Germany;
- *Group B*: bells which were deemed more valuable and were to be processed as needed;
- *Group C*: bells still more valuable than B and were to be processed as needed after the less valuable bells. Groups B and C comprised 20 per cent of bells;
- *Group D*: the most valuable and included bells of the Middle Ages and carillons not considered modern. They were generally not to be melted down.

Similar classifications were made for bells of the occupied countries, although the guidelines were only loosely followed. Some regions, such as Alsace-Lorraine which was annexed by Nazi Germany after the defeat of France, or whole countries, including Czechoslovakia and the Netherlands, lost virtually all their bells. Others, such as Norway, Denmark and Luxembourg, were left untouched. So was Vichy France, where the collaborationist government of Marshal Philippe Pétain struck a deal, by claiming desecration of French cultural heritage and offering up the country's bronze statues instead. In reality, Pétain wanted to ingratiate his regime with the Roman Catholic Church. However, the deal, known as *The Vichy Exception*, failed to save every bell.



Confiscated bells that had not been broken up being sorted and returned at the end of the Second World War

Benito Mussolini's fascist government actually forged a pre-war agreement between Italy and the Vatican providing for the "mobilisation" of bells, half of which were to be claimed for war industries. As in Germany, at least one bell designated by local authorities was to remain in every tower. The bells were broken up in Italy and the scrap was sent to Hamburg for processing because Italian smelting plants did not have the capacity to handle the deluge. Many other bells were destroyed in attacks and bombing raids.

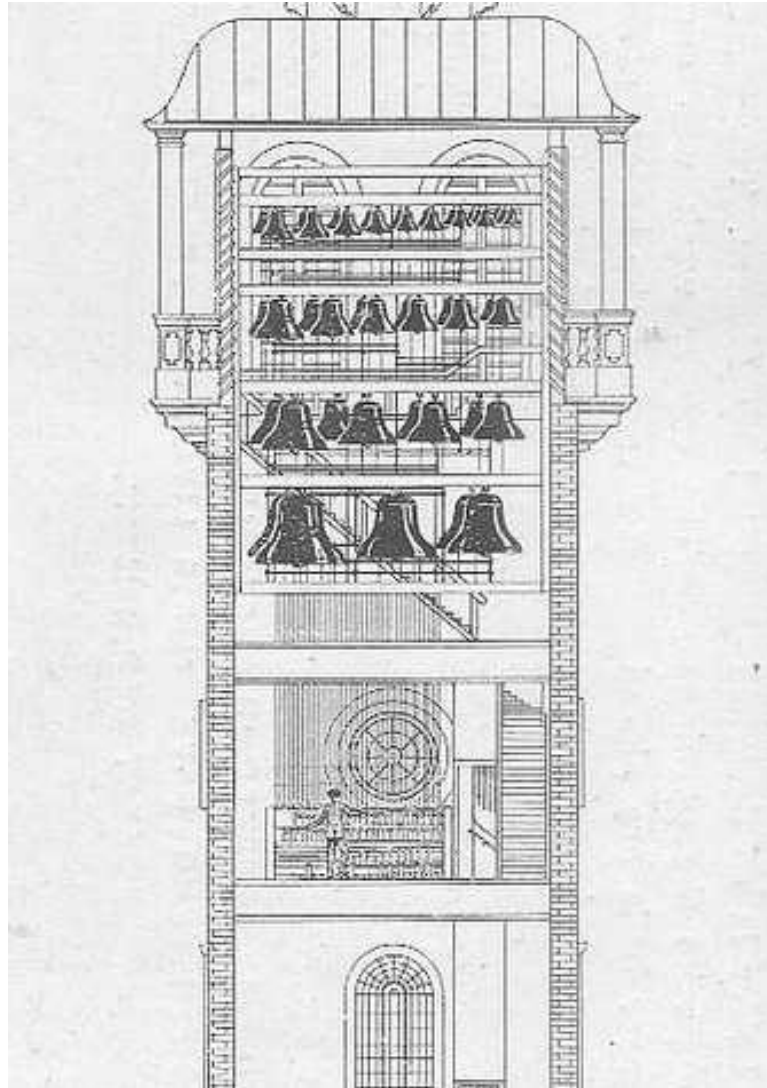
Loughborough Carillon

A famous carillon in the UK is the war memorial at Loughborough. It is situated in Queen's Park and is a well-known landmark, being visible from several miles away. It is 46 metres (152 feet) high.



Early photograph of the tower

Plans were finalised in 1919 and when completed in 1923 it was the first grand carillon in England. The Carillon was designed by Sir Walter Tapper and is now Grade 2 listed. It has 47 bells, all of which were cast at the John Taylor Bellfoundry nearby. The carillon was built by William Moss and Sons Ltd of Loughborough.



Cross section of the tower showing installation - source not known

Details of the Bells in the Carillon are given overleaf.

Loughborough Carillon

Bell	Weight (Cwt-Qrts-Lbs)
1	0-0-14
2	0-0-13
3	0-0-13
4	0-0-12
5	0-0-15
6	0-0-15
7	0-0-13
8	0-0-12
9	0-0-16
10	0-0-18
11	0-0-19
12	0-0-24
13	0-0-27
14	0-1-4
15	0-1-8
16	0-1-15

Bell	Weight (Cwt-Qrts-Lbs)
17	0-1-16
18	0-1-20
19	0-2-9
20	0-2-20
21	0-3-16
22	1-0-2
23	1-0-21
24	1-1-16
25	1-2-23
26	1-3-8
27	2-0-6
28	2-1-10
29	2-3-13
30	3-2-4
31	3-3-25
32	4-3-17

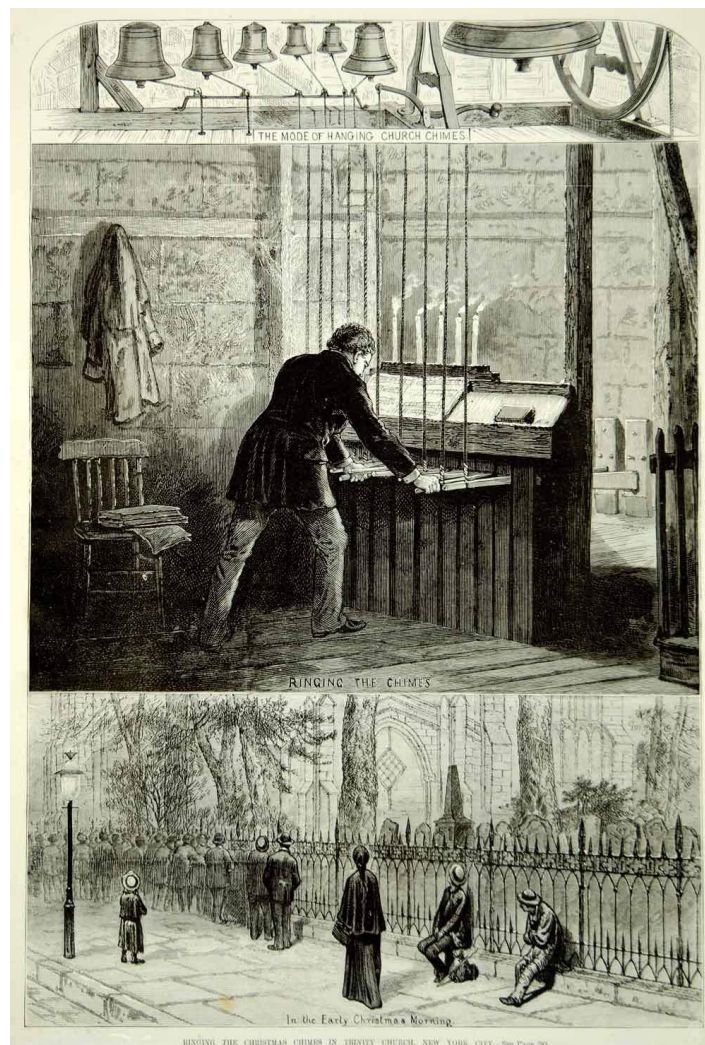
Bell	Weight (Cwt-Qrts-Lbs)
33	5-1-9
34	6-0-14
35	7-1-8
36	8-3-8
37	10-1-24
38	12-1-23
39	15-1-16
40	17-3-21
41	21-2-0
42	25-3-25
43	31-0-0
44	34-1-6
45	40-3-25
46	60-1-6
Bourdon	82-3-16

Trinity Church, New York

Although an early newspaper report in the *Flying Post or the Post Master* (2 January 1701) suggests the original church of Holy Trinity may have had a ring of eight bells, there is no documentary evidence that they were hung for change ringing.

Letters from New York inform us, That there is lately hung up a set of eight Bells, in the chief Church of that City, which is so great a rarity to the Indians, who are fond Lovers of all sorts of Musick, that the Novelty draws multitudes of them to the City to see and hear them: and they go away amazed with the greatness of the English that can effect Things as seem to them so wonderful.

Unfortunately the church and documentary evidence was destroyed by the Great Fire of New York on 20/21 September 1776 during the early days of occupation by British forces in the War of Independence.



Ringling the Christmas Chimes in Trinity Church - New York from *Frank Leslie's Illustrated Newspaper* (1875?) (Wood engraved, 25.0cm by 37.0cm)

It is known that a ring of 8 bells cast in 1797 by Mears at the Whitechapel Bell Foundry was installed in the second Trinity Church building which was constructed after the first church burned down. When that building was demolished in 1839, at least some of the bells appear to have been taken down, stored, and eventually installed in the present building. It is thought these bells could have been rung using an Ellacombe type system, especially as these bells were hung for ringing.

A number of bells have been recast and added to over the years. These include further bells from Mears in 1845 and more recently from Meneely & Company.

Chime	Ring	Cast by	Year
9		Meneely Bell Co.	1909
8	Treble	C & G Mears	1845
7	2	C & G Mears	1845
7 fat		C & G Mears	1849
6	3	T Mears	1797
5	4	C & G Mears	1845
4 sharp		John Taylor & Co.	2006
4	5	T Mears	1797
3	6	T Mears	1797
2	7	C & G Mears	1845
1	8	Meneely Bell Co.	1846

Prior to electricity, the bells were sounded by ringers who climbed halfway up the tower to a small room one floor below the bells. There they would ring the bells by moving a set of wooden handles attached to leather thongs connected to the bell hammers. By 1946 it was proving difficult to get competent ringers and thought the public would prefer to hear tunes rather than changes being rung. So the bells were fixed in one position and electrical connections were made to the clappers. As the New York Herald Tribune reported *'The bells of Trinity Church . . . are now sounded by counterbalance hammers in the first application in the United States of this principle to the ringing of church bells.'*

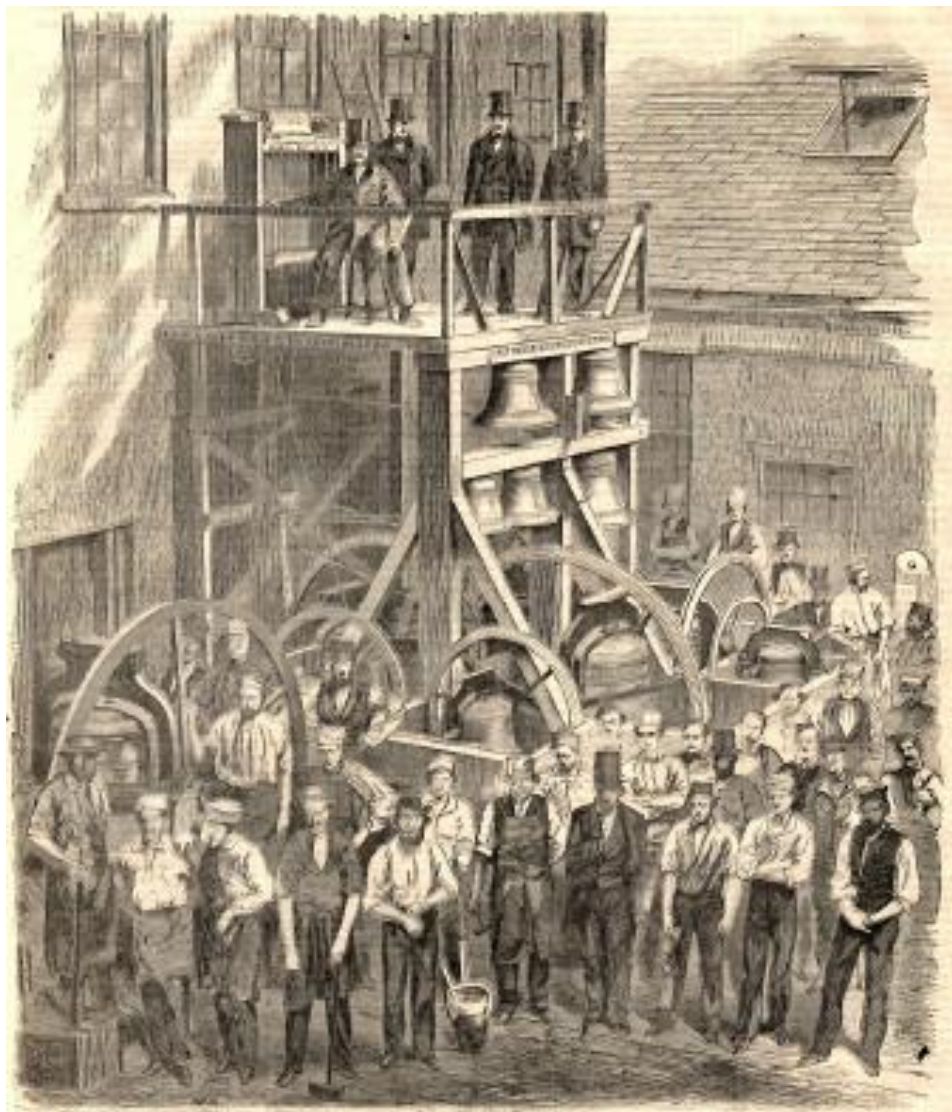
In 1985, after years of not chiming on the half hour, the bells were put on a new relay system with rebuilt electric clapper pushes enabling the mechanism to chime every fifteen minutes. More recently, four of the ten bells were detached so they could again swing freely and produce a greater sound. Following a sabbatical for repairs by Elderhorst Bells of Pennsylvania, a new remote switching device now allows the bell melody and tolling to be turned off during a service.

A new ring of twelve change ringing bells were additionally installed in 2006. They were donated by Martin C Faulkes and cast by the Taylor Bell Foundry at Loughborough. The new

ring has a tenor weighing 23cts 3qtrs and 17lbs. Such a new installation caused concern among local residents, some of whose windows and residences are less than 30 metres at eye level from the bell tower. To resolve the problem a plywood deck has been built over the bells and shutters installed on the inside of the bell chamber's lancet windows. With the shutters and the plywood deck closed, the sound of the bells outside the tower is minimal. The shutters, and hatches in the plywood deck, are opened for public ringing.

Christ Church, Cambridge, Boston

This church houses the Harvard Chime, the name given to the chime of bells cast for the church in anticipation of its 1861 centennial. Richard Henry Dana Jr. and two fellow alumni of Harvard University arranged for the chime's installation and the 13 bells were first rung on Easter Sunday in 1860. Each bell of the chime bears in Latin inscription *Gloria in Excelsis*.



Chime of Thirteen Bells for Christ Church, Cambridge, Massachusetts, Manufactured by Messrs Henry N Hooper & Co., of Boston. Taken from *Harper's Weekly*, 26 May 1860 page 324 (23.0cm by 27.5cm)

Referring in 1893 to the Harvard Chime, Samuel Batchelder wrote *'From the outset the bells were considered as a common object of interest and enjoyment for the whole city, and their intimate connection with the University made it an expressed part of their purpose that they should be rung, not alone on church days but also on all festivals and special occasions of the college, a custom which has continued to the present time.'*

Grace Cathedral, San Francisco

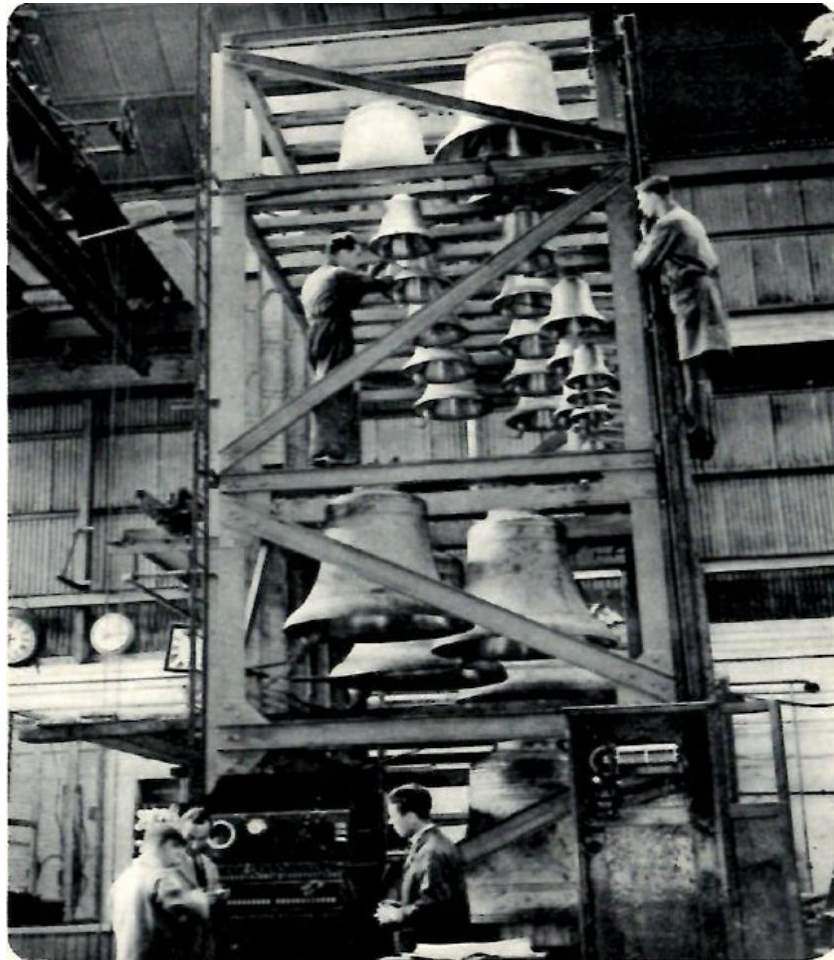
The Cathedral's bell carillon was the gift of Dr Nathaniel T. Coulson (1853-1945), a British-born orphan and seaman, who became a San Francisco dentist and investor. Coulson gave his fortune to build the North or Singing Tower of the Cathedral (1939-1941), and supplied it with a carillon of forty-four bronze bells from the Gillett and Johnston bell foundry in Croydon (cast 1937-1938). During his last years he lived on a dollar a day to realise his goal. He lived to see the tower and carillon dedicated by Dean Thomas Wright in 1943. Coulson wanted his ashes be placed in the tower crypt, but his wish was delayed. In 1990, on the fiftieth anniversary of the bell installation, his ashes were moved from nearby Cypress Lawn columbarium to the new Cathedral Columbarium, located below his carillon.

The carillon was cast and ready well before the tower, so it was arranged to lend it to the 1939-1940 Golden Gate International Exposition (GGIE) on newly-created Treasure Island in San Francisco Bay. The steel cage and bronze bells were placed in the lantern of the soaring Tower of the Sun, the centre piece of the fair.

On Christmas Eve, 1940, the carillon was first heard from the Singing Tower, its new and permanent home. At first the hour ring was heard every hour, but neighbours soon complained. Today the hour is chimed between 9am to 6pm, with the angelus added at noon and 6pm.

The Grace Cathedral carillon is non-traditional, rung electronically rather than mechanically or by hand. It is the oldest and largest non-traditional carillon in the western United States, and one of only two in America made by Gillett and Johnston. The hour ring and tune are rung electronically, but the bells can also be played from a small piano-like console in the nave gallery. Forty three of the bells are 'hung dead' while the clappers move inside each bell. The largest bell, the bourdon bell, is rung by an external disk-shaped hammer. It is the only bell that can also be swung, on a huge wheel, so that its internal clapper strikes the inner surface. The bourdon bell rings the hour and when the last strike is heard, the bell will continue to vibrate for over a minute. At 6 tons, and about 6 feet tall, it is the largest carillon bell in the west. The bells range in weight from 11.75lbs to 6 tons and cover 3½ octaves. The total weight of all the bells is 20.236 tons. Silver coins were said to be have been added to the bell metal during casting, in the now-discredited legend that silver improves a bell's tone. Maintenance of the bells and frame is a long term project. During the latest

renovations in 2010-2011, new clappers and a new keyboard from the Royal Eijsbouts Foundry in the Netherlands were installed.



A Carillon of 34 Bells Cast in Croydon for Grace Cathedral, San Francisco taken from *The illustrated London News*, 3 September 1938, page 388 (8.0cm by 11.0cm)

St Catharine, Dantzig

The first church was probably built of wood in 1185. According to historical and archaeological studies, the nave of the church was built in stone between 1230 and 1240. The church was extensively expanded in the 14th and 15th centuries. Around 1380 the church was supplemented by a low tower, which was raised between 1484 and 1486 and covered with a gable roof. In 1634 the tower was given a baroque helmet designed by Jakob van den Blocke a carpenter from Danzig. In the course of the Reformation the church was taken over by the Protestants in 1525. In 1945 it returned to the Catholic Church.

Around 1675 and 1715 extensive renovations were carried out on the church. During the occupation of Gdańsk by the Napoleonic troops from 1807 to 1813, the church was misused to house the numerous horses, after which it had to be renovated later.

On July 3, 1905, lightning struck and caused a fire which destroyed the top of the tower and the carillon. Witnesses to the catastrophe spoke of large drops of molten metal which they called the *'bronze tears of St. Catherine'*. The renovation of the tower and the reconstruction of the helmet were completed in 1910.

The church building destroyed in 1945 during World War 2 but was reconstructed true to the original. The tower was rebuilt in the 1980s and with it the installation of a new carillon in 1989.



After the completion of the tower construction in 1486, a large newly cast bell was hung in the tower in 1495. In 1575 the church received the first carillon which consisted of 14 bells made in the Netherlands. In 1738, the carillon was renewed with 35 bells (in the pitch C1 to C4), which were again cast in the Netherlands by Nicolaus Derck van Horn. But the sound of the bells was not considered satisfactory so the 15 bells were recast.

In 1905 the church tower burned out due to a lightning strike. In 1910 the carillon was restored with 37 bells that were cast by the Schilling Bell Foundry in Thuringia. They had a total weight of 16,760 kg.

These bells were removed in 1942 to make weapons, but 28 bells escaped melting and were installed in the 36-part carillon of the Marienkirche in Lübeck. In 1989 the carillon of the church was renewed with 37 bells, and in 1998 a further 12 bells were added. These were cast by the Eijsbouts Bell Foundry in Asten. The carillon includes a concert keyboard and an automatic game mechanism that starts every hour on the hour.

The carillon was not affected by the fire that broke out in the roof of the church in 2006. In the same year the glockenspiel was supplemented by the 50th bell with the striking tone B and a weight of 2835 kg. The carillon is cared for by the Gdańsk Historical Museum.

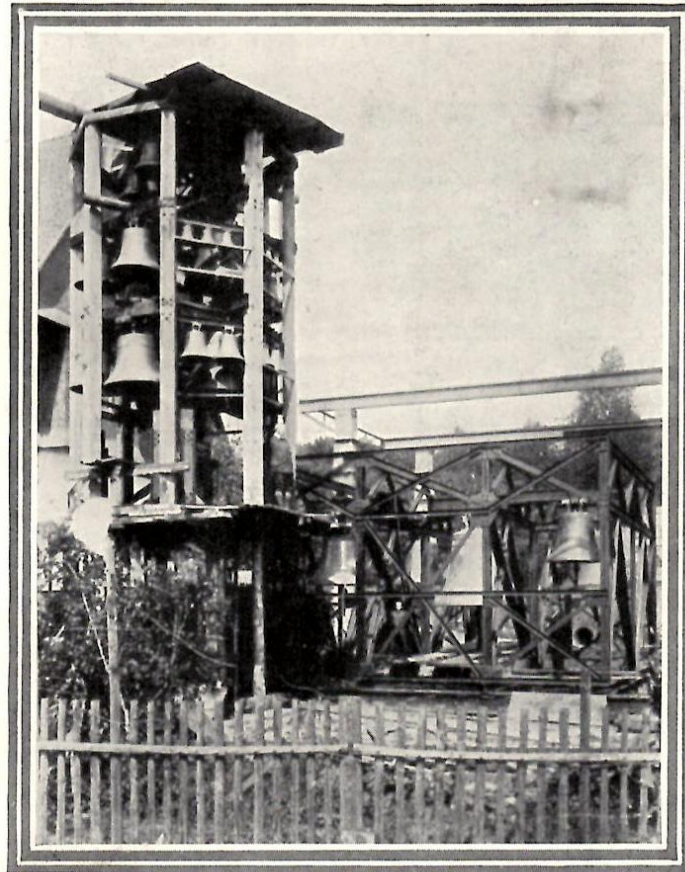


Photo. L.N.A.

Cast by Franz Schilling of Apolda, a remarkable 37-bell carillon cast for St Catharine, Dantzig. Taken from *The Illustrated London News*, 16 September 1911, page 450 (8.8cm by 11.2cm)